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Life and Fertility
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Interdisciplinary approach

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The history of Fertility Awareness Methods

Historia Metod Rozpoznawania Płodności[1]

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Abstract: Fertility Awareness-Based Methods (FABM) are based on the observation of physiologically occurring symptoms, called fertility indicators, which include: cervical mucus, basal body temperature (BBT) and changes in cervical morphology. Observations of clinical symptoms, changing in a woman depending on periodic hormonal fluctuations, were used to determine the first and second phases of the menstrual cycle and the period around ovulation. For many years, FABM have been successfully used by women who would like to plan motherhood in accordance with their beliefs and chosen lifestyle, in an ecological manner, without pharmacological interference or unnecessary medical treatments. FABM have evolved over the centuries and are now a well-documented field of procreation medicine. Initially, FABM were solely used as a tool to plan or postpone conception of a child, while now they are increasingly seen as the effective mean for the diagnosis and treatment of cycle disorders and infertility, as well as monitoring the woman's reproductive health. The aim of this study is to describe the history of FABM development and to present groundbreaking discoveries and people to whom we owe the current state of knowledge about the symptoms of human fertility. We reviewed the medical literature, including historical works which included information on breakthroughs in the field of human fertility. The selection of literature was performed on the basis of original papers as well as review publications in the PubMed and Google Scholar databases with the use of the following keywords: "Fertility Awareness Methods", "Family Planning" and "Pearl index".
Keywords: treatment of infertility and cycle disorders, Fertility Recognition/Awareness-Based Methods, family planning, fertility

Abstrakt: Metody Rozpoznawania Płodności (MRP) opierają się na obserwacji występujących fizjologicznie objawów, nazwanych biowskaźnikami płodności, do których zaliczono: śluz szyjkowy, podstawową temperaturę ciała (PTC) oraz zmiany morfologii/konsystencji szyjki macicy. Obserwacje klinicznych objawów, zmieniających się u kobiety w zależności od okresowych fluktuacji hormonalnych, zostały wykorzystane do wyznaczania pierwszej i drugiej fazy cyklu miesięcznego oraz okresu okołoowulacyjnego. MRP od wielu lat z powodzeniem są wykorzystywane przez kobiety pragnące zaplanować macierzyństwo zgodnie z własnymi przekonaniami i obranym stylem życia, w sposób ekologiczny, bez ingerencji farmakologicznej lub zbędnych zabiegów medycznych. MRP rozwijały się na przestrzeni wieków i obecnie stanowią dobrze udokumentowaną dziedzinę medycyny prokreacji. Początkowo MRP były wykorzystywane jedynie jako narzędzie do planowania lub odkładania poczęcia dziecka, obecnie są coraz częściej postrzegane jako skuteczne narzędzie służące do diagnostyki i leczenia zaburzeń cyklu oraz niepłodności, a także monitorowania stanu zdrowia prokreacyjnego kobiety. Celem pracy jest przybliżenie historii rozwoju MRP, przedstawienie przełomowych odkryć oraz osób, którym zawdzięczamy obecny stan wiedzy na temat objawów ludzkiej płodności. Dokonano przeglądu literatury medycznej, sięgając również do prac historycznych, w których znalazły się informacje na temat przełomowych odkryć w dziedzinie ludzkiej płodności. Doboru piśmiennictwa dokonano na podstawie przeglądu prac oryginalnych i publikacji poglądowych w bazach danych PubMed oraz Google Scholar z zastosowaniem słów kluczowych: „Metody Rozpoznawania Płodności" (ang. Fertility Awareness Methods), „planowanie rodziny" (ang. Family Planning) oraz „wskaźnik Pearla" (ang. Pearl index).
Słowa kluczowe: leczenie niepłodności i zaburzeń cyklu, Metody Rozpoznawania Płodności, planowanie rodziny, płodność

Introduction

The history of following the secrets of human fertility began with the discovery of reproductive cells: the sperm and the egg. The next step to broaden this area of knowledge was to tie the symptoms of the fertile phase with the cyclic changes taking place in the ovary. From the design

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Stacho.pdf

of the first, historical method of determining the fertile and infertile phase of the cycle based exclusively on calculations, through the development of single-index methods rules (based on the observation of one single bioindicator: basal body temperature (BBT) or cervical mucus) to the creation of multi-index methods, several dozen years have passed. From the 1770s, the knowledge about the physiological determinants of fertility significantly expanded. In the last few decades, modern FABM have been developed and objectively verified. The conducted research made it possible to use some FABM not only to assess the period of fertility and infertility in the female cycle, but also to use them in the diagnostic and therapeutic procedure in the case of infertility and in monitoring the health of a woman.

The aim of this work is to present the authors of groundbreaking discoveries and publications to whom we owe the current state of knowledge on human fertility. A review and analysis of the medical literature has been made, as well as historical works presenting the beginnings of human learning about the field of fertility. In order to present the progress of knowledge in this area, selected monographs related to fertility issues and the most up-to-date scientific publications were analyzed. Particular attention was paid to the chronology of breakthroughs and figures who have made milestones in the creation of modern FABM.

1. The progres of the state of knowledge

Theories about human fertility have busied the minds of scholars and sages of various cultures and religions since the dawn of time. For centuries, fertility has been seen in the context of the gift. In the biblical Old Testament, the fertile woman and fertile soil were a sign of God's blessing that mankind was bestowed by the Creator in the Garden of Eden. The Israelites saw the womb of a woman as the soil, and the male seed as the seed containing a small man that grows in a woman's body like a plant. Infertility was considered a curse sent by God (Dynarski, Przybył, 2007).

The periodicity of human fertility was noticed and described by Indian doctors more than 1000 years ago. Chaarak Soranus of Ephesus (2nd century AD) recommended in his book intercourse before menstruation in order to avoid becoming pregnant. In the Talmud strongly emphasixed, however, the necessity to use every possibility of reproduction. Sexual abstinence was recommended for the first 11 days of the menstrual cycle, i.e. the period of menstruation and the beginning of the first phase of the cycle, which are usually the period of infertility. For many centuries, however, humanity did not have any real knowledge of the essence of human reproduction (Obara, Szymankiewicz-Warenik, and Słomko, 1997). For over 1500 years, until the mid-16th century, the ancient conception formulated and described by the Roman physician Claudius Galen (129-200) was dominant, according to which fertilization took place as a result of fusing the sperm of a woman with that of a man, and the development of the embryo created in this way was ensured by menstrual blood.

Breakthroughs in this field turned out to be the discoveries of two Dutch: Antoine van Leeuwenhoek and Reinier de Graaf. Antoine van Leewenhoek was a merchant whose careful observation led to significant discoveries and ultimately to the award of an academic degree in science. In 1671 he constructed the first microscope, and in 1672 Reinier de Graaf used the microscope discovered a year earlier and found out the existence of ovulatory follicles in the ovaries, which were named after him as Graaf's follicles. Five years later, in 1677, medical student Johan Ham, with whom Leeuwenhoek collaborated, saw "little animals" in seminal fluid under a microscope. He supposed, however, that their presence was due to the rotting process of the mucus. Leeuwenhoek was of a different opinion and claimed that they are a normal component of semen and made the first detailed description of them, thanks to which he is considered to be the discoverer of the male sex cell. He was also the first to hypothesize that sperm penetrate the egg and this is how fertilization takes place. This was the reason for a conflict with

the famous scientist of the time, William Harvey, who argued that it is the female "egg" that is the sole source of new human life (Howards, 1997).

Another important event in the history of learning about human fertility was the discovery in 1826 of the existence of a female sex cell in a woman's ovary by Karl Ernst von Baer (Hübner, 2009). In the early nineteenth century, mankind already knew two key cells involved in the fertilization process. However, only understanding that in order for an egg to be fertilized by a sperm cell an appropriate environment is necessary in a woman's genital tract, turned out to be a milestone in understanding the processes that determine the periodicity of human fertility.

The proper environment for the transport of sperm in a woman's reproductive tract and their ability to fertilize occurs cyclically. These facts were first described by William Tyler Smith and Mary Putnam Jacobi. Today, we call the clinical symptoms of fertility, which are the result of changes taking place in the female body related to the ovarian cycle, the fertility indicators. Probably at that time it was not expected that these two discoveries would become the basis for the development of methods for determining the fertile and infertile phases of the female cycle. In 1855, William Tyler Smith, a member of the Royal College of Physicians in London, was the first to describe the mucus produced by the cervix and listed its two most important functions. He argued that the cervical mucus closes the uterine cavity and thus protects it from the influence of the external environment. He compared the uterine cavity separated by the cervical mucus to a "closed bag". In addition, he described the cervical mucus occurring in the fertile phase and gave its very important function, extremely important also in modern reproductive medicine. He found that it is the mucus produced by the cervix that creates the appropriate environment and allows sperm to pass from the vagina to the uterine cavity (Kippley, 2016). Dr. Marion Sims in 1868, describing the test for sperm viability (performed after sexual intercourse) indicated that such a test should be performed when the mucus becomes clear, transparent and resembles raw egg white. She thus hypothesized that it was in the mucus with such features that sperm would survive the longest. This historic discovery has made it useful for determining the viability of a man's sperm in the partner's cervical mucus under the name of the "Postcoital Test" (PCT), also known as the Sims or Sims-Huhner Test. PCT was performed just before the expected ovulation in the mucus with the most fertile features and was used to determine if sperm migrated to the female reproductive system. Its negative result indicated possible problems with either sperm or female mucus, including the likelihood of the presence of adverse immune factors that inactivate sperm.

In current reproductive medicine, where fertility bioindicators are neglected, routine PCT testing is not recommended due to the uncertainty of performing it in the mucus from the periovulatory mucus cycle. However, to this day, it is performed among doctors who understand the purposefulness and legitimacy of carrying out this test in accordance with the principle of assessing sperm motility in the pre-ovulatory mucus, and not with the mucus picked up accidentally (unrelated to the actually approaching ovulation). It serves as an additional indicator of the likelihood of natural conception during normal intercourse. Often, in assisted reproductive clinics, after an incorrect PTC test, infertile couples are offered artificial insemination as an "antidote" to the so-called "hostility of partner's cervical mucus".

All of the following: problems with ovulation, inadequate intercourse technique or cervical infection, as well as incorrectly selected time in the female cycle to conduct this test, limited its credibility and unambiguous assessment. Although the PCT test is currently considered to have only a historical value, it is still used in the diagnostic process in a few infertility treatment centers (Practice Committee of the American Society for Reproductive Medicine, 2015). Cervical mucus has been forgotten for almost 100 years since the Sims time (Billings, Westmore, 1986).

Meanwhile, Mary Putnam Jacobi was the first to point out in the late 1800s that a woman's basal temperature follows a cyclical pattern. She described these physiological changes very accurately: "A woman's body temperature rises for about two weeks before menstruation, lowers during menstruation, and stays low until it starts to rise again". Her book, The Question of Rest for Women during Menstru-

ation, won the Boylston Prize at Harvard University in 1876 and was published in 1877. These two discoveries by Sims and Jacobi show that by the end of the nineteenth century two of the most important indicators for determining the time of fertility and infertility in the female cycle. The 1855 discovery of cervical mucus as a mean enabling the migration of sperm and the 1877 description of an increase of the woman's body temperature following ovulation are certainly the "milestones" of modern FABM (Kippley, 2016).

The exact course of the thermal curve in the monthly cycle and the correct method of temperature measurement was described in 1905 by the Dutch gynecologist Theodor van de Velde. He noticed a relationship between the change in body temperature and the work of the corpus luteum. In his handbook, he recommended that women measure the temperature in order to determine the time of ovulation, which was the basis for the subsequent development of determining the period of highest fertility using the thermal method (Kinle, Małecka-Holerek, 2013).

The principle of variability and also the cyclicality of fertility in the female cycle was noticed and described at the beginning of the 20th century independently by two scientists: the Japanese gynecologist Kyusaku Ogino and the Austrian gynecologist-obstetrician Herman Knaus. They noticed and described a relationship between the timing of ovulation and menstrual bleeding. The cyclicality of these bleeding, physiologically repeated every 28 days, i.e. according to the time corresponding to the variability of the phases of the moon, was related by them and described as a determinant of the fertile and infertile period in a woman's body. However, the results obtained by the researchers differed from one another. Based on his clinical observations, Ogino published a paper on ovulation in Japan in 1923, in which he determined the probable time of ovulation. On the basis of his observations, he concluded that ovulation in the monthly cycle occurs between the 12th and the 16th day, counting from the end of a given cycle, and thus assuming that the luteal phase lasts 12-16 days. Knaus, on the other hand, assumed that ovulation occurs exactly 14 days before the coming menstruation, and only one day earlier in cycles longer than 28 days. Gynecologists created the first historical scientific basis for the cyclic method of birth control by establishing the fertile and infertile days in the course of a woman's sexual cycle (Fijałkowski, 2004).

The formula proposed by Ogino and Knaus aroused interest among contemporary doctors and was perfected by the Dutch: Jan Nikolaus Smulders and Jan Gerhard Holt. It was the basis for the development of the periodic sexual abstinence method described in a book published in the Netherlands in 1930, also known as the Ogino-Knaus method, the rhythm method, the calendar method, or simply the "marriage calendar". Due to the fact that it was based solely on calculations, it worked mainly in women with regular cycles. However, it showed unreliability in the event of postponement of ovulation (Kinle, Małecka-Holerek, 2013).

However, the method proposed by Ogino and Knaus, popularly known as the "marriage calendar", did not work in practice. For scientific reasons which are already clear to us today, these calculations failed, and couples using this method as birth regulations experienced unplanned pregnancies. Although modern medicine has completely rejected calculation methods as a reliable tool for planning or avoiding pregnancy, unfortunately also among medical practitioners and health care professionals, the term "marriage calendar" is misused on a par with FABM to this day. This causes a lot of confusion and is often a reason to criticize the use of cycle observation by means of BBT and mucus observations to determine the actual "fertility window", as well as abandoning FABM in the case of diagnosis and treatment of infertility and cycle disorders, feeling that they are inadequate and unchecked. It should be noted, however, that modern FABM based on the observation of fertility bioindicators are scientifically developed and well documented. Such a situation regarding the incorrect use of terminology and equating modern methods with the archaic calendar method results in a negative approach to the use of FABM in modern medicine (Targan et al., 2018).

As already described, life quickly verified the failure of the so-called "marriage calendar", which was based on the assumptions of Ogino and Knaus.

Therefore, a few years later, this method, called the "Ogino-Knaus method" after both discoverers, was replaced by more modern, closer to today's FABM, methods of family planning. Undoubtedly, an interesting example of this phenomenon is the attitude of a German priest, resulting from a practical approach to family planning. In giving pastoral advice to couples who were experiencing the hardships of unplanned pregnancies, Father Wilhelm Hillebrand, citing van de Velde's research, advised women to measure their temperature every day, rather than using unreliable calculations. In 1959, this observant priest received an honorary doctorate from the University of Cologne, Germany, and became known as the "father of the thermal method". It is thanks to him that modern FABMs based on the first clinical trials began to develop intensively. Father Hillebrand consulted all the collected charts with doctors, including Gerhard Karl Döring, who used them to create the rule for determining the infertile days before ovulation, known as the Döring rule. It is used in some FABMs to this day.

In 1945, Mary Burton and B.P. Wiesner presented a breakthrough in recognizing fertility phases based on body temperature. They found that the fertile days in the course of a woman's monthly cycle should be determined on the basis of waking temperature, which is, as we understand it today, measured under BMR (basal metabolic rate) conditions, and not on the basis of previously used casual temperature measurement, i.e. measurement during the day, regardless of the time of day (Kinle, Małecka-Holerek, 2013).

1962 marked yet another discovery in the history of learning about naturally occurring fertility symptoms was the description of changes in the topography and consistency of the cervix in the course of a woman's menstrual cycle, by Edward Keefe and Vaclav Insler. These scientists have demonstrated the possibility of self-observation of the cervix in order to identify the phases of a woman's sexual cycle. Currently, monthly cervical changes are used as a fertility bioindicator in symptothermal methods which also take into account changes in basal body temperature and cervical mucus. Scientists observed that in the first days of the cycle, the cervix is positioned low in the vagina, its feel is described as "hard" (for pragmatic purposes: like the tip of the nose), and that its outer opening is closed. The closer to the period of fertility, the more it rises, becomes progressively softer (from the educational materials for patients: like an ear lobe or lower lip of the mouth), its external opening gradually dilates. The last day with the cervix positioned highest, being the softest and open, was called the cervical peak day. After ovulation, the cervix hardens under the influence of progesterone, closes and returns to its original form and position. A speculum examination during ovulation shows that on the 7-9th day of the cycle (in the case of a 28-day cycle), clear mucus appears in the dilated external cervix. An open neck filled with glassy, slippery, transparent mucus resembles the "pupil of a fish eye" (Obara, Szymankiewicz-Warenik and Słomko, 1997). This phenomenon was used in the so-called Insler test, which was used to clinically evaluate the quality of cervical mucus. Four parameters were scored in the test: cervical external dilation, mucus amount, its ductility and crystallization. The obtained result translated into the assessment of the influence of the tested mucus on sperm penetration (Insler et al., 1972).

In 1964, the Australian neurologist John Billings and his wife Evelyn, based on the observation of her monthly cycles and the fluctuations in vaginal discharge, together with the collected observations of the cycles of other women, formulated the principles of observing cervical mucus as the only indicator of the fertility phase in female cycle. More in-depth analyzes of vaginal discharge were subsequently performed based on a study by a couple of Billings on changes in the characteristics of cervical mucus over the menstrual cycle. In 1965, Prof. Josef Rötzer from Austria proposed to combine the observation of cervical mucus with the daily measurement of body temperature, thus creating the first symptothermal method, the so-called Rötzer method (Fijałkowski, 2004).

At the end of the 1950s, a gynecologist and biophysicist, prof. Eric Odeblad and his colleagues at the University of Umea in Sweden began pioneering research into the biological and physical properties of cervical mucus using an electron microscope.

They showed that during the menstrual cycle, different types of mucus with different functions are produced in separate parts of the cervix, and its secretion is controlled by the sex hormones estrogen and progesterone (Billings, Westmore, 1986). Odeblad was the first to distinguish the cervix as a separate organ, emphasizing the complexity of its function and sensitivity to internal factors, such as e.g. hormonal or external changes, such as infections (Odeblad, 1994). The above-mentioned studies by this Swedish gynecologist constitute the basis for the use in clinical practice of the assessment of vaginal discharge and recorded according to standardized methods, and on this basis for the diagnosis and therapy of infertility.

In 1967, the World Health Organization (WHO) issued a report confirming the effectiveness of the FABM. In five places around the world, 869 women of reproductive age were surveyed, differing significantly in terms of living conditions, level of education and socioeconomic status. It turned out that regardless of these factors, as many as 93% of the surveyed women were able to identify the symptom of fertile mucus just before ovulation during the observation of their cycle. Subsequent detailed analyzes of the studies cited here have shown the potentially high effectiveness of observing mucus symptoms in the context of postponing or planning the conception of a child. The probability of pregnancy during intercourse outside the fertile phase was determined to be 0.004, which means a very low risk of unplanned pregnancy (WHO, 1967).

An important event that had a significant impact on the development of science in the field of FABM was the publication by Pope Paul VI in 1968 of the encyclical "Humanae vitae" (On moral principles in the field of transmitting human life). The Pope asked people of science to develop a method of family planning, which, based on the understanding and use of physiological phenomena occurring in the woman's body, would give the spouses the opportunity to make decisions about planning or postponing the conception of a child. This call was answered by a young adept of medical art – Dr. Thomas Hilgers from Omaha, Nebraska (USA). As a practicing gynecologist-obstetrician, he created a team that began research on fertility at the Pope Paul VI Institute for the Study of Human Reproduction he founded. At the same time, he worked at Creighton University School of Medicine, where he became a member of the American Society of Reproductive Surgeons. Hilgers began an in-depth analysis of vaginal discharge based on previous studies of changes in cervical mucus properties during the menstrual cycle conducted by the Billings couple (Czerniak, 2017). He and his team developed a new FABM called the Creighton Model FertilityCare System (CrMS) after Creighton University. This standardized tool for observing the menstrual cycle was based on a woman's system of assessing symptoms such as cervical mucus, vaginal discharge, intensity of menstrual bleeding, occurrence of periodic and inter-menstrual spotting and soiling. The observed symptoms are recorded on a form specially created for this purpose, giving them appropriate symbols and colors. Women learn the assessment and notification system during individual training with CrMS instructors. Cycle observation using CrMS is the basis of a diagnostic and therapeutic algorithm for disorders of the menstrual cycle and infertility, the so-called Naprotechnology (NaProTECHNOLOGY – Natural Procreative Technology) (Dereń, Woźniak, Simińska, 2016). In 2004, the textbook "The Medical and Surgical Practice of NaProTECHNOLOGY" was published for the first time, and in 2011 reissued, which is a summary of many years of work and research by Hilgers and his team (Czerniak, 2017).

FABM are divided into single-indicator and multi-indicator methods. The single-index methods include the strict thermal method based only on the measurement of the basal body temperature (BBT) and the Billings and CrMS ovulation method, in which the determination of the fertility phases is based only on the observation of the cervical mucus. The multi-index methods include the extended thermal method and symptothermal methods in various studies: Polish modification – by Teresa Kramarek, Austrian modification – by Josef Rötzer, American modification – by John and Sheila Kippley as well as the multi-index method of double checking, also known as the English method. The recently published

method of observing the monthly cycle is the two-factor method called InVivo. It was developed by Dr. Aleksandra Kicińska together with her team as part of research on the female cycle among patients at the infertility and cycle disorders Treatment Center in cooperation with the Medical University of Gdańsk, Poland. The InVivo Fertility Recognition Method is used primarily in the process of diagnosis and therapy of women with infertility and menstrual cycle disorders. It is based on the measurement of BBT and the assessment of vaginal secretions on the basis of a "picture dictionary" created especially for this purpose. The picture dictionary is an organized and precisely described collection of pictures of vaginal discharge. This is the first two-factor method in which a standardized description of cervical mucus was developed based on photos of vaginal discharge collected during clinical examinations, so that the record of this symptom, on a specially created card, was unambiguous and precise. The novelty of the InVivo method consists in the first ever FABM combination of an in-depth observation of mucus according to a pictorial dictionary with the course of the BBT curve. None of the above-mentioned methods – Billings or Hilgers, relates the changes, growth and course of the cycle or mucus cycles in each and every female cycle to fluctuations in the temperature curve and, depending on their coincidence, considering a given mucus cycle as the actual cycle of follicle growth that leads to ovulation (Kicińska, Stachowska, Wierzba, 2020).

2. FABM Effectiveness

The Pearl Index is used to determine the effectiveness of methods of preventing pregnancy, parenting planning or the FABM effectiveness. It is a tool designed to estimate the number of unplanned pregnancies among 100 women using a given method of contraception for one year. In the case of an ideal method of using a contraceptive as prescribed, the so-called perfect use for the symptothermal method is 0.4, which gives a result comparable to the effectiveness of the use of contraceptive pills (Pearl Index at perfect use 0.3) (WHO, 2016). A more reliable indicator of unplanned pregnancies for FABM is the Pearl Index with the so-called typical use, i.e. a situation where the user's error of a given measure or method is taken into account. For one of the most commonly used FABM – symptothermal method, this indicator is, according to many studies conducted, among others in Europe and India from 1% to 3% (Pallone, Bergus, 2009). On the other hand, the rate of unplanned pregnancies after one year of FABM use according to the research conducted by Hassoun in the case of perfect use is 0.4% for the symptothermal method, 3% for the Billings ovulation method, 4% for the two-day method and 5% for the standard day method. For typical use, the ratio is 8% (Hassoun, 2018).

Factors increasing the effectiveness of a given FABM include the appropriate education of the couple, both the woman and the man, before starting their use in order to postpone conception. With the proper involvement of the couple and daily observations of fertility bio-indicators, the effectiveness of the symptothermal method can be as high as 99% (NHS, 2021). The awareness of the need for periodic sexual abstinence when choosing FABM as a means of family planning or birth control always concerns the decisions of both partners, spouses. However, this is not a negative aspect, because psychological studies have shown that couples using FABM are more conscious of their actions, pregnancy and conception of a child are their joint decision, and the relationships of these couples turn out to be more durable (Unseld et al., 2017).

Still, the prevalence of FABM use is low (4.6% of users) and has remained stable over the years (Hassoun, 2018). This is because most physicians are currently unaware of the FABM effectiveness, leaving couples unaware of this family planning option (Manhart et al., 2013). In order to improve the knowledge of health care workers, WHO published in 1993 a special manual "Natural Family Planning– what health care workers should know about" (Kinle, 2012), and in 2018, "Family Planning: A Global Handbook for Providers", which gathered all the knowledge on all possible ways of family planning (WHO, 2018).

3. Advantages and disadvantages of FABM

The opinions of the users of these methods form a valuable reference on the FABM application. On their basis, we present a summary of conclusions.

Women using FABM list the following advantages of these methods:

- help you learn about your own body as well as your fertility;
- can be used to identify fertile days by both women who are planning pregnancy and women who want to postpone conception;
- allow couples to respect their religious or cultural beliefs related to conceiving a child (WHO, 2018);
- do not require pharmacotherapy, therefore their use is not associated with the risk of side effects;
- thanks to daily careful observation of fertility bioindicators, women using FABM notice disturbing symptoms from their genital system earlier than in the case of not following them, which may help identify disease onset or progress, including cancer, which means reporting to a clinician sooner than otherwise;
- couples using FABM report better interpersonal communication and accountability related to the emergence of unplanned conception;
- there are no medical contraindications to their use;
- they do not require the participation of medical personnel or medical supervision during their use (Liji, 2019);
- they are cheap (the only tools needed are: a thermometer, a notebook for observations and the cost of completing the course with a qualified instructor);
- the need to involve both partners in understanding the symptoms of fertility and mutual consent to temporary sexual abstinence leads to the strengthening of ties among the majority of couples using them (Department of Health, 2022).

The difficulties associated with the use of FABM and their disadvantages include:

- the need for mutual consent to periodic sexual abstinence – both for men and women;
- the need for several months of training and close supervision by the instructor in the first phase before couples can independently use FABM as a reliable tool to predict fertile and infertile days;
- some difficulty in applying FABM rules in the case of irregular cycles (however, this does not exclude the possibility of using these methods in dysregulated, abnormal cycles or in chronically ill people taking medications that affect the image of fertility indicators);
- require investing time and effort in the observation of fertility bioindicators, which may cause additional difficulties for very active women (Liji, 2019);
- require regularity in the daily observation of fertility bioindicators;
- acute or chronic stress, illness, travel, inappropriate lifestyle and medication can interfere with the symptoms of fertility indicators (NHS, 2021);
- increased body temperature / fever in various diseases, infections in the genitourinary system, especially the vagina, may affect the cervical mucus image and the BBT curve, and thus make it difficult to determine the phases of the cycle and the fertility / infertility period (Department of Health, 2022).

An interesting proposition and the possibility of eliminating some of the disadvantages as well as a way to increase the comfort of using FABM are new information technologies. These are various electronic devices and applications that facilitate the recording of the observed fertility bio-indicators (Judáková, 2020). The undoubted advantage of these devices is their easy and female-friendly use, e.g. BBT measuring devices are designed in the form of attractive gadgets, and they measure at the same time and do not require interrupting sleep. However, only those applications which collect data and generate it in graphical form allowing the user to interpret it independently are recommended and they include, forms with a BBT chart and the mucus cycle. Some IT software, through the analysis of previous cycles, may suggest the probable day of the beginning and end of fertile days, but by showing a clear form of visualization of the entered data, they allow the

user to make the final decision on the determination of the fertile and infertile phase either on their own or with the help of a qualified instructor (Berglund Scherwitzl et al., 2016).

However, the algorithms used by applications supporting FABM, unfortunately, often replace the need for users to analyze their fertility data themselves, and thus increase the likelihood of failure. This is due to certain assumptions based on the statistics of the obtained data, and not on the actual, currently running cycle, which may be different from the others. For this reason, the estimation of the ovulation date by a given application often misses the actual time of its occurrence. This leads to incorrect determination of the fertile and infertile phase in the user of a given application, and thus reduces its effectiveness. Reduced effectiveness of the so-called modern technologies will also occur in the case of short cycles (less than 23 days), long cycles (more than 37 days), as well as in the postpartum cycles, after the use of contraception or in the premenopause period.

Summary

The history of FABM is closely related to the progress of medicine and the knowledge of human procreation. The scientific basis for learning about human fertility began with the discovery of the reproductive cells – the sperm in 1677 and the ovum in 1826. Another important element was the observation and description of specific clinical symptoms, natural fertility indicators allowing the diagnosis of fertile and infertile phases in the monthly cycle. Fertility bioindicators used in different FABM include cyclic changes in basal body temperature, changes in the appearance of cervical mucus and changes in the cervix. Before the use of the term FABM in medicine for the clinical purpose of describing cyclical changes in fertility indicators, the term Natural Family Planning (NFP) was first used. This is due to the undoubted contribution to the development of these organizational methods and people involved in the search for such solutions for the regulation of conception that would not raise moral objection in the area of procreation. The names NFP and Responsible Parenting focus on family planning and have a much broader meaning than FABM. FABM is mainly a tool that can be used in family planning as the so-called "Natural contraception" meanwhile, NFP is a lifestyle in harmony with fertility and treating it with respect as an integral part of health and every human being, especially in the prenatal phase, with respect and dignity.

As the NFP developed, the awareness about the usefulness of information gathered from daily observations and notes of fertility indicators prepared by a woman progressively increased in both groups, the female patients as well as medical personnel of midwives and physicians. We are currently observing the increase of use of modern FABM in the reproductive medicine. It has been noticed that cycle observation cards, but only those carried out professionally and reliably, can constitute an invaluable supplement to a medical history concerning fertility disorders. The abnormalities and disorders of the cycle are reflected in specially developed forms, filled in under the supervision of a qualified instructor on the basis of daily observations of fertility indicators carried out by women according to standardized methods. Modern FABM, based on conscious fertility, according to WHO can be used to recognize fertility by both, women who want to become pregnant, as well as to avoid pregnancy. In addition, their use allows women to learn about the physiology of their body, react earlier to disturbing symptoms and, in addition, do not give any side effects (Polis, Jones, 2018).

The first method of birth control proposed in history was the Ogino-Knaus method, or "marriage calendar". It is worth noting, however, that the principles of this method do not fall within the WHO definition of FABM. This definition says that FABM are methods of planning or avoiding pregnancy that consist of observing the symptoms and signs of the fertility or infertility phase of the menstrual cycle, without intercourse in the fertile period, if the pregnancy is not planned, and not on the calculations themselves (Targan et al., 2018). Therefore, as mentioned earlier, the term FABM is incorrectly equated with the so-called "marriage calendar". In social media, as well as in medical publications, information about a high Pearl index in

women who used methods of preventing unplanned pregnancy based on their own observations of selected physiological fertility indicators is often cited. A significant number of authors of these reports do not distinguish the traditional thermal and symptom-thermal method from the "calendar" method, the effectiveness of which is lower than that of the more complex and standardized FABM. The implication of this unfortunate confusion is that physicians are reluctant to promote them and patients are reluctant to use them. Research show that the knowledge of people involved in health care in the field of FABM is quite low, and the main source of this knowledge is school or university education (Bączek, Manista, Tataj-Puzyna, 2017). In view of such a situation, it seems necessary that the knowledge of medical university students, as well as medical practitioners, midwives and nurses, should be much greater in this respect. The survey research carried out show that there is a need to raise the knowledge and awareness of fertility and the methods of its recognition among people from the health care department. This requires the verification of curricula, extending their scope and improving the quality of education in the area of FABM during studies at medical universities (Targan et al., 2018).

For many years, FABM have only been used for responsible parenting planning and the identification of fertility stages in order to postpone conception of a child. Currently, professionally conducted cycle observation forms are a valuable source of information on the reproductive health of a woman, and are also used in the process of diagnosis and treatment of menstrual disorders or infertility. They are primarily used for the proper targeting of diagnostics, in accordance with the observed disturbances in fertility bio-indicators, and for determining the appropriate day of hormonal tests, in accordance with the patient's individual cycle, as well as the correct initiation of treatment with hormones of the first and second phase of the cycle (Kicińska, Stachowska and Wierzba, 2020; Danis , Kurz, Covert, 2017).

The dynamic development of reproductive medicine based on the observation of fertility bio-indicators according to the standardized FABM is a new challenge and an interesting subject for healthcare professionals to learn about. Infertility is a growing medical, social and demographic problem in today's culture of Europe and highly developed countries. According to estimates, the problem of infertility affects approximately 20% of couples of reproductive age. In Poland, about one million couples are struggling with it (PTMRiE and PTGP, 2018). For this reason, conducting an interdisciplinary treatment of reproductive health disorders with the use of modern methods of repair surgery along with the use of hormonal, immunological and pharmacological measures, but always based on the patient's individual cycle, as observed in FABM, creates the possibility of an effective and accessible method of management for many patients.

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The Sources of The Personalistic Concept of Fertility

Źródła personalistycznej koncepcji płodności[1]

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Abstract: Human fertility is a broad concept, encompassing the human biological, mental, and spiritual spheres. It can be referred to procreation as the multiplication of the number of beings or it can be considered in the aspect of the human ontic structure, taking into account the ontic founds of the soul. Fertility was also understood as the ability to transmit life in the sense of the function of an organic body or a spiritual element. Finally, the issue of fertility was related to the mutual relations of parents and their children, and its understanding was broadened to include the context of transcendence. The purpose of this study is to reflect on the concept of human fertility that underlies the personalistic view of human fertility. In connection with this goal, the research problem was formulated in the form of the question: "What were the origins of the understanding of fertility of a person?" In the research work, the method of text analysis and the method of historicism was used. As a result of the study, it was possible to distinguish and outline the pre-philosophical approach to fertility, as well as ancient, medieval, modern, and contemporary concepts concerning fertility. Their review shows that human fertility was considered in the context of human sexuality. Moreover, the materialistic concepts related to the monistic vision of man were accompanied by the understanding of fertility as the ability to procreate, while the dualistic concepts, assuming the presence of the spiritual element, attributed to it the ability to animate the material body. The hylomorphic concept of the human structure, proper to the philosophy of St. Thomas Aquinas and supplemented with a reference to individual existence was presented in the context of the approach to Aristotle's understanding of the soul, along with his discussion of human procreation as a special case of animal reproduction, and then supplemented with a personal context in the contemporary sense. An attempt was made to answer the research question, but the issue was not discussed exhaustively, which leaves room for further research.
Keywords: fertility, person, procreation, life, soul

Abstrakt: Płodność człowieka jest pojęciem szerokim, obejmującym ludzką sferę biologiczną, psychiczną i duchową. Może być ona odnoszona do samej prokreacji jako powielania liczby istot albo rozważana w aspekcie ludzkiej struktury bytowej z uwzględnieniem podstawy ontycznej, jaką stanowi dusza. Płodność bywała też ujmowana jako zdolność do przekazywania życia w znaczeniu funkcji ciała organicznego lub elementu duchowego. Wreszcie kwestia płodności była odnoszona do relacji wzajemnych rodziców i ich dzieci, jej rozumienie zostało poszerzone o kontekst transcendencji. Poddanie namysłowi koncepcji płodności ludzkiej, jakie leżały u podstaw personalistycznego ujęcia płodności człowieka stanowi cel tego badania. W związku z tak postawionym celem został sformułowany problem badawczy w postaci pytania: "Jak kształtowało się pojmowanie płodności człowieka jako osoby?" W pracy badawczej posłużono się metodą analizy tekstu i metodą historyzmu. W wyniku badania udało się wyodrębnić i ukazać w zarysie przedfilozoficzne ujmowanie płodności, jak również dotyczące płodności koncepcje starożytne, średniowieczne, nowożytne i współczesne. Z ich przeglądu wynika, że płodność ludzka była rozważana w kontekście płciowości człowieka. Ponadto koncepcjom materialistycznym, wiążącym się z monistyczną wizją człowieka towarzyszyło ujmowania płodności jako zdolności do rozmnażania, natomiast koncepcje dualistyczne, zakładające obecność pierwiastka duchowego, to jemu przypisywały zdolność ożywiania materialnego ciała. Koncepcja hylomorficzna struktury bytowej człowieka, właściwa filozofii św. Tomasza z Akwinu i uzupełniona o odniesienie do jednostkowego istnienia została ukazana w kontekście ujęcia duszy Arystotelesa, wraz z jego omówieniem prokreacji człowieka jako szczególnego przypadku rozmnażania zwierząt, a następnie uzupełniona o kontekst osobowy w rozumieniu współczesnym. Próba odpowiedzi na pytanie badawcze została udzielona, jednak zagadnienie nie zostało omówione wyczerpująco, co pozostawia pole dla dalszych badań.
Słowa kluczowe: płodność, osoba, prokreacja, życie, dusza

Introduction

The goal of this research is to present the historical development of the concept of human fertility in a personalistic paradigm. In reference to that goal, a question can be asked: 'How did the concept of human fertility evolve in the personal realm?'

The issue of human fertility can be reflected very broadly and thus be an object to research activity in the humanities, but also in biological and social science. Fertility may refer to the either biological, psychic, or spiritual realm. Among many philosoph-

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Horbow.pdf

ical concepts of human fertility those seem especially significant which define fertility as the ability to reproduce species or reproduction[2], or as the ability to give over a lifetime. It seems that reproduction and giving over life are equated just within some of the concepts and it relates to the vision of a man that is a part of those. Fertility understood in a personalistic manner goes beyond mere generating offspring; it is also about the relationship between parents and children, and about transcendence.

The oldest preserved literary artworks that mention generating offspring place fertility in the context of sexuality. Hesiod of Ascra in his *Theogony* presented the origins of gods in chronological order. There were heaven and earth among gods, and the first to be born was "Chaos' (Kubok, 1998, 24). In the epic *Women Catalogue*, he presented the history of families that originate from relationships between gods and mortal women. It is noteworthy that sexuality in Greek mythology was understood more broadly than mere procreation: not only Hera – the mother was considered a goddess, but also brave Athena – because of her prudence (Schmidt, 2006, 283). In Gilgamesh, the story tells about giving the gift of immortality to spouses and parents, so that they could reach eternal happiness: "Utnapishtin was a man – but now, Utnapishtim and his wife are godlike, are like us"[3]. Since getting immortal, Utnapishtim retained his masculine characteristics, and his wife – feminine.

1. Ancient philosophy on the issue

Ionian philosophers had a yet different concept of human nature. Thales of Miletus believed in immortality, and he extended it to inanimate objects (Laertius, Ks.1 Par 24). Ionians perceived life as the ability to move, which is a force inseparable from matter. The soul was also shaped with matter, and the soul was a rational element: something that thinks(*nous*) (Tatarkiewicz, 2014, 26). Therefore, it can be said that a human was perceived by them in a monistic paradigm. Sexuality was ascribed to the matter as physical sexual features that take part in reproduction. Those physical features activate the reflection of a rational element, but it does not have a reference to the being. Nevertheless, Ionians were interested in another aspect of sexuality – its bipolar diversity could be, for Anaximander, a cause of development that follows from mutual neutralization; for Heraclitus – commutativity of things (Tatarkiewicz, 2014, 29-32).

According to Parmenides, proper development of the bodily shape requires „right measure" (*condicio*) which is a combination of distinct potentials (*virtutes*) of a man and a woman that are present in the parents' blood. Otherwise, if those powers neutralized each other while interconnecting, the body would be destroyed and a new human would never be generated. According to Parmenides, these are both parents – and not only the father – that give the baby 'a semen', and they both equally contribute in generation.[4]

Orphism came up with the distinction of a specific element that is decisive about human identity. According to this concept, a divine origin that individualizes and constitutes a human identity of *Daimonion* (that, in turn, originated from Titans' ash) is accompanied by the ability to move from one body to another at the moment of birth (metempsychosis). *Daimonion*, in a way, joined the body that was given birth. Next, after the series of purifying activities and repentance that served to expiate the sins, *Daimonion* could be freed from the body and join Dionisio. Orphism 'disregards the body which is the prison of the soul' (Reale, 2012, 49); it distincts and withstands spiritual element and material body – so it is dualistic. And the soul could be interpreted as the force that animates the body – if life is identified with the movement.

Socrates, and then Plato, are unlike the atomists in their theory of parents' role in generation of a new life. For Socrates, only the soul is a real human'; he identified it with 'conscious, able to learn and moral self' (Reale, 2012, 228). Plato, partly referring to

2 Cf *Płodność*, Encyklopedia popularna PWN, 2017, p. 787.
3 Cf. *Gilgamesz*, translation R. Stiller, ed. Vis-á-vis Etiuda, Kraków 2011, p. 86.
4 *Die Fragmente der Vorsokratiker*, hrsg. H. Diels, W. Kranz, Bd.1-3, Berlin 1951-1952, 28 B 18.

orphic theory, understood a human as a soul that was made by the demiurge – 'a wandering spirit' that is not permanently attached to one body. This platonic soul was only undetermined sexually, but also by the genre since it could also incarnate animals. It was a substance *in se* (by Aristotelian categories), a subject, and a cause of movement. Division of men and women was connected to the body: sexuality is present in a human body and as such it belongs fully to the material world. It is a phenomenon (*epiphenomenon*) that is indispensable in the process of human reproduction, but still completely irrelevant to ontic identity. Plato believed that an unrighteous man would be reborn as a woman in the second generation(Reale, 2012, 235); he also believed that woman is in every aspect weaker than man (Platon 455D). at the same time, he noticed that among men there are stronger and weaker, and so there is diversity among them. That there are different roles for a man and a woman when it comes to the act of procreation –was quite obvious to Plato. Nevertheless, he advocated equal treatment of men and women in all other spheres of life as a soul can be incarnated in a man and also in a woman. He did not attach much importance to a specific body as it is only an oyster-like 'shell' for a soul. The only job that he considered different for a man and a woman was in generating and then the upbringing of children. In his *State*, he recommended that women took state positions since they are forty whole men can do it starting from their thirties.

The essential aspect of sexuality can be seen in an anecdote that was jokingly told by one of *Symposium* members, Aristophanes. In his story, people originally consisted of two halves and there were three genders: one was a blend of two masculine elements and it represented the sun; the second one consisted of two feminine halves and it represented earth, and the third one was hermaphroditic represented by the moon. Gods decided to weaken people and therefore divided everyone in half; since then, every incomplete half longs for long–lost completion, and the sexual act is the only way they can feel the connection. This story does not relate to the roles of man and woman as parents probably because Plato distinguished the act of procreation from the act of giving over a life: for him, an act of procreation was not as important as the act of giving over a life that is an animation of the body by the soul.

Yet another concept of fertility can be found in Aristotle's teaching. It is connected with the manner in which he understands the soul, and especially with the definition that says that the soul is the first act of natural (organic) body that is able to live" (*De anima*. II, 1 [412a 35]). At the same time, he thoroughly discusses human fertility as reproduction in the context of the mother and father's role in procreation in his treatise *On Generation Of Animals*. Remarks and conclusions that can be found in it can also refer to people as Aristotle counted a human as one of the animals (living beings) in the first place, and only later did he add that there is a feature that distinguishes a human from other animals – namely, rationality. For Aristotle, the male is a norm of a given species, and the female is here out of necessity, "if the male cannot govern the matter because he is so young of for a different cause of this kind" (Aristotle 767 b 8-10). In division into males and females, Aristotle saw, in the first place, two different roles that they take on them during fertilization. He noted that males and females are different because they have different organs that represent 'primary' features of the two sexes, but to him, it was not only differently constructed body. This is the male who passes substantial form – which is a soul – to the descendant. Female provides the matter of ovum. Aristotle claims that; the body of new – born comes from the female while their soul – from the male as the soul is an essence of a given body' (Aristotle 738b 25-27). It pertains to all animals of distinct genders that give birth to similar animals. The inability to produce semen was a characteristic of a female (Aristotle 728 a 18-20). It is noteworthy that this concept that clearly links reproduction with giving over a life seems to assume that a male represents not only a movement that is shaping up the essence but also an active part in the very process of giving birth. A male is an animal that is able to 'give birth in the other'; a female, on the other hand, is capable of 'giving birth in herself. The dissimilarity between males and females is present in fetal life already. Aristotle pointed out that a female fetus needs more time to develop than the

male one (Aristotle 775 a 9-22). Sexual determination appears as early as at the stage of individualization of particular representatives of the species, namely particular persons; it does not pertain to 'genre' as such, i.e. to the form of a human. The principle of individualization is, for Aristotle, not soul, being a form, but the matter of the semen. Thus, sexuality in Aristotelian teaching is not about humanity (which is defined by rationality), but rather about animality, materiality, and biology. The soul as such cannot be a principle of determination of a man as a man or woman. Nevertheless, since the generation of a new man requires not two identical individuals of one species, but very particular selves – this man and that woman – the descendant is by necessity individual self. Hence, the soul also has to be indirectly engaged in the determination of a child's sexuality – even if sexuality is not a part of the structure of the soul, being just an attribute.

2. Medieval reflections on fertility

In the medieval era, thinking of fertility was very much influenced by Christian religion that defines man and woman on the basis of descriptions from *Genesis*, lines of *Song of Songs,* and the *New Testament* which presents a fully personalistic vision of humans. The distinction between man and woman is present in the Bible from the very beginning – Genesis says that 'So God created man in his own image, in the image of God created he him; male and female created he them.' (Gen 1:27) Hence, since the moment of creation, a man and a woman are very different from each other – otherwise, it would make no sense to create two people instead of one. And only together, as a mutual completion, a man and a woman may be an image of God. God blesses both of them together, telling them to be fertile, to be parents, and to govern all creation. (Gen 1:28). It is noteworthy that this distinction between male and female is only mentioned in reference to humans: creating them, God made them men and women, blessing their fertility and giving them jobs that can only be done when they cooperate (populate the earth and govern the creation). It is only about humans that "men and women" were mentioned in the context of fertility and procreation – other species were not referred to as such although of course there are many species that are distinct by gender. Sex is one of the features that transcend the kingdom of animals and hence it points to the personal character of a human being. When it comes to generating a new life, we can see the indispensability of both men and women in fulfilling the highest human calling. Bible says:

'shall a man leave his father and his mother, and shall cleave unto his wife; and they shall be one flesh'.[5] (Gen 2:24). To become one flesh, which is necessary to fulfill the human calling, a man and a woman must be indispensable, mutually – complementary parts. At the same time, both a man and a woman at the very moment of procreation have to be fully developed ontically; if their sex conditions fulfilling of their calling, then it must be a fundamental characteristic, connected directly with the soul. In the course of procreation, both parents participate as a man and a woman in creating a new life, which is ultimately given by God. So, sexuality in its essence is purposeful, and its purpose expresses in mutual love, maternity, and paternity, shaping the world around and becoming an image of God in this world.

St. Augustine in his reflection on sexuality was inspired mainly by the Book of Genesis[6]; nevertheless, he interpreted the fact of creating a man and a woman in the context of their ontic structure. He pointed out that during the process of Creation "man was not referred to: by the <<species>> as there was only one, of which also a woman was created. There are not many species of a human (...) that would allow us to say: <<by the species>>,

5 King James Biblie online, https://www.kingjamesbibleonline.org (access: 30.07.2022).

6 'And the LORD God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs, and closed up the flesh instead thereof And the rib, which the LORD God had taken from man, made he a woman, and brought her unto the man. And Adam said, This *is* now bone of my bones, and flesh of my flesh: she shall be called Woman, because she was taken out of Man. Therefore shall a man leave his father and his mother, and shall cleave unto his wife: and they shall be one flesh. And they were both naked, the man and his wife, and were not ashamed'.(Gen 2:21 – 25), KJV.

as we could say generally, to discern them from similar ones, being originally from this same semen" (Augustine, 1980, 157; Gen 1:24-25). In another place, he writes that "internal human" [7] was not created before the human body was created, but that the body and the soul were created at the same time; then, he emphasizes that a man and a woman are only different by the body (Augustine, 1980, 163). Every human is given his sexuality by God, and undisputable differences between men and women as to the process of generating children are so permanent that even after the Resurrection everybody will have his sexuality restored. However "by mental functions and rational intelligence a woman is equal to a man, by the sex she is subjected to a man just as the urge to act should be subjected to reason that shows the right way of acting (Augustine, 1980, 205). He divided virtues into masculine and feminine: and even human reason is a kind of blend similar to marriage: contemplative reason represents a husband, and practical reason – a wife (Augustine, 1980, 63).

Saint Hieronymus of Strydom was of a quite different opinion. He believed that after the Resurrection, everyone will take on the body of a man as it is more perfect than a feminine body – or that the bodies of the redeemed will be asexual. In his commentary on Letter to Ephesians, he wrote about the difference between a man and a woman – that this difference, namely, is present only when the woman is a mother. In this case, she is as distinct from a man as the body is distinct from the soul. But, when she recognizes Christ as her goal, and she decides to start serving Him and not her children, she will be called a man and she will deserve ascension to the state of a man (Hieronymuslib. III, cap. V). It is noteworthy that praising a man in Hieronymus' works is a part of his message to women where he talks about the virtue of virginity. In his *Letter to Eustochium, Paula's daughter On Preserving Virginity*, he wrote: 'I praise wedding, I praise marriage – since virgins are born there. (...) Saint Apostle says: *Now about virgins: I have no command from the Lord*. He preserved his chastity not following command, but of his own will.' (Hieronimus of Strydon, 94; Cor 7: 25). And when Hieronimus encouraged women to remain virgins, he showed them feminity that goes beyond the corporal realm. He wrote to Eustochium: 'Eve was a virgin in paradise; only after she put on animal skins did she start to live with her husband. Your land is a paradise. Preserve what you were born into and say: Oh, my soul, to your rest.' (Hieronimus of Strydon, 93; Ps 116:7)

Albert the Great's concept of fertility was strictly connected with his position in the debate over universals and it was inspired by Aristotle. Albertus distinguished two natures: universal and particular. Universal nature was of general character and it was ascribed to the genre. Its purpose, which was to preserve the species, is the main reason of a woman's existence. Woman, representing the matter (potential), requires her completion that is a form – an act of dominion, being a man. In Albertus' opinion, a man is primarily driven by reason – and as such, he is predestined to acquire cardinal virtues; woman, on the other hand, is driven by emotions and wants (Uliński, 2001, 70).

St. Thomas of Aquinas, being a Christian thinker, was inspired by his contemporary Albert the Great and by Aristotle whose teachings were a fundament for their reflection on the nature of being. As opposed to Averroism, he believed that every human possesses an individual soul that is permanently ascribed to him. Referring to theology, he also argued that fertility is linked to human soul. His reflection on sex he placed in an eschatological context and proved that sexuality, which is indispensable for procreation, will be restored after the Resurrection. Aquinas referred to the fact of fertility not only in the context of a mere act of procreation and giving birth, but also in connection with the love that is between the spouses; as he noticed, a human should only love reasonable creatures. A man should love his wife since they are one flesh. So, love for a wife should be stronger, but the relationship with parents should be filled with even greater respect (St. Thomas of Aquinas, 16, q.26, a. 5, a.11).

7 Identified with human soul – authors' reference

3. Modern and contemporary discussions on fertility

Throughout modernity, theological aspect of philosophical analyses of fertility was replaced by sociological and biological context, similar to Ionians' concept of the soul which is a kind of matter, or Plato's belief in 'wandering' spirit, not connected with a body. According to Descartes, a human is *res cogitans*, which is basically the mind (whose subject is a brain); body is chaotic matter, arbitrarily driven by the mind. And so, sexuality that is proper to human body cannot pose a fundament to human identity – it is just an attribute, and fertility is a question of reproduction and giving birth to corporal offspring. In this way, Descartes referred to Plato's perception of the soul.

John Locke placed fertility in the context of family and both parents; participation in procreation as well as upbringing. In Locke's opinion, when a married couple starts a family, they 'acquire each other's bodies to fulfill the task of having children and bring them up, since 'God, giving a gift, gifted the world as a common good not only to Adam but to the whole of mankind' (Locke, 1992, 323).

Immanuel Kant, when speaking of interpersonal relation – and relation of man and wife is certainly a case of such – noticed that the other person is seen from my perspective – this person is someone to me, and I am someone to them. He described transcendental 'I' as transcendentally free. He also pointed out that first person perspective is always connected with responsibility in a semantic way. He acknowledged personal realm of a person, but was rather inclined towards consciousness as a criterion of a person. Modern thinkers that believed in dualistic concept of being in the most part did not deal with fertility which, according to them, belonged in corporal realm.

It is worth bringing up sociological position of Hegel who pointed out that dialectical opposition of genders is manifested not only biologically, but also sociologically and ethically; mother, from ethical point of view, raises the children, and the father commits himself in the service for a nation. (Uliński, 2001, 157). What Hegel emphasized the most was that this maternal obligation should not be interfered with feelings or emotional bond, but should be fulfilled because of a husband as a husband and descendant as a descendant. Similarly, getting married should be an act in service of fertility and multiplying the number of state's citizens and it should be under no circumstanced preceded by feelings between future spouses. A man, on the other hand, should do his job for the state with no personal issues (Hegel, 1969, 26).

4. Fertility in personalism

Contemporary understanding of fertility seems to arise from some of the stances discussed here before that perceive the relation of fertility and a human as a biological, psychological, sociological, or cultural feature; approach to life and to the issue of giving over life and concept of the soul. There are three main positions on human sexuality: biological determinism, social constructivism, and personalistic orientation. Biological determinism, as a monistic concept, emphasizes the corporality of a human, and hence perceives fertility as a manifestation of reproduction of mankind that takes two people while one of them is morphologically a man, and the second – a woman, both being sexually binary. The soul (mind) is at times reduced to the function of the biological brain, and the life – to the psychical and chemical process. In this paradigm, then, fertility is understood as reproducing the species. Social constructivism that is based on the dualistic vision of a man seems to propound separation of fertility from defining the gender of parents and child, so here the most crucial issue is the act of reproduction – a new human will define themselves.

In personalistic orientation, the perception of fertility seems to determine the personal character of a human. Acknowledging human dignity embraces also the sexual realm. Fertility is an integral part of the ontic fundament of a human, i.e. their soul. In this context, it is noteworthy to bring about the concept of the soul by St. Thomas of Aquinas. To him, the soul is, by its nature, a being, i.e. substance that exists independently, but at the same time is incomplete (*sub-*

stantia incompleta). In order to reach its completion, it requires a body, so this is the body that provides the soul with its species; species is, however, determined here not only by the soul but also by the body. Species, then, are also provided by the body. A soul is an act, and the act is chronologically, ontically, and epistemologically earlier than potency; therefore, in order to be a human soul (and not, for example, an angelic soul), a soul has to remain in relationship to the body from the very beginning. The soul not only shapes the body but also creates it, so it is the body together with the soul that individualizes and provides a human with species. And a human exists in no other way than being either a man or a woman. Looking at this issue from an anthropological perspective, it is important to add that the soul not only organizes the matter that is able to live, as Aristotle wrote, but also provides it with existence, since it is the first actuality of the organic body that has life potentially, but also the first actuality of existence of human as a being. Act of existence is always an individual and individualizing act. Unlike Aristotle (who believed that matter individualizes form), Aquinas maintained that matter provides a form (the soul) with species. Soul itself, therefore, being the first actuality of life, individualizes matter (the body) to be a man or a woman. And so, the principle of being a human – woman, or a human – man, has to be of sexual nature. In his teaching, st. Thomas was inspired by Aristotle's *De Anima*. Having Aristotle's remark ('nature does not act in vain, and does not miss anything that is necessary') as his starting point, he acknowledges that 'every being, that has a principle of life inside of itself, has also organs that are adapted to this principle, and body organs correspond to the parts of the soul.' (St. Thomas of Aquinas 633). Soul, forming the body – therefore its parts – acts like this since the parts are deposited in it.

Free will, which characterizes a man as a person (Chudy, 2005) enables people to make sexual decisions in a process that goes beyond instinct, which makes human sexual drive different from a sexual force that drives animals. K. Wojtyła argues, that ability to direct sexual drive 'in the context of nuptial love is what helps to reach its natural purpose. Sexual drive is aimed at mankind's preservation, which is always connected with the existence of a new person – a child being the fruit of love of a married man and woman. The will turns to that purpose and by aware fulfillment of this goal, it struggles to extend its creative force' (Wojtyła, 2015, 122). Consequently, the will always characterizes a human as a man or as a woman; then, the act of will that is directed toward good is different in the case of men and women. The source and principle of existence and action of a human as a person is a soul, hence sexuality penetrates the whole human person. A. Maryniarczyk puts it in the following words: 'to be a person, is to be an individual and indivisible subject (substance) of rational and sexual nature. Human persons fulfill themselves as men or women' (Maryniarczyk, 2019, 67). If a human person is an integral blend of body and soul, then the whole human is sexual: the body as well as the soul that actualizes it.

John Paul II referred to human sexuality many times, and he always understood sexuality as a personal attribute of a human, since 'the fact that man and woman are persons does not change the fact that they are also man and woman' (Wojtyła, 2015, 45). In his reflection on sexuality, the pope referred to human nature as proper to every human being. He noted that even if because of some disease or other unfortunate incident the reason does not manifest fully, the person still remains rational; in the same way, a person is sexual, even if their sexuality does not manifest fully because of disease, accident, or some other condition. And so, the drive that penetrates the whole reality and is present in all realms of life constitutes the property of the whole human being. At the same time, K. Wojtyła emphasizes the fact of distinctness of human drive. He argues that the drive is 'an attribute of human being that is reflected in action and finds its expression in action' (Wojtyła, 2015, 44). Although the drive penetrates and encompasses the whole human being, it does not have the power to determine a person to act (unlike it is with animals). Man is a subject of action and the author of action that is connected with sexuality; human sex penetrates the personal realm of a human, so it is different from animal sexuality since a person transcends the kingdom of animals. Sexual drive for a human is 'something developed – stable and

necessary, and not acquired and accidental'; it is of existential character because it is connected with a human coming into existence. Human exists as a person, who is 'a source of self – determination which is reflected action' (Wojtyła, 2015, 46). If a human person is able to act morally in his sexual activity, it means that sexuality is not merely a biological or sensual issue, but it penetrates all spheres of human activity, the whole human as a person. A person is able to act beyond their instinct, thanks to which they can choose means and adapt them to their purposes.

In this perspective, the definition formulated by K. Wojtyła, according to which human drive is a 'certain natural, congenital to everyone direction of action, which drives the entire being from the inside and which improves it' (Wojtyła, 2015, 45) allows interpretation in which this improvement is understood as growth in being a man or a woman – if the sexual drive is obviously connected with human sexuality. What is more, sexual drive both for men and women has a natural tendency to transform into love, and love penetrates life of a whole human being (Wojtyła, 2015, 47).

Without fertility taken into account, a human would not be able to actualize fully as a man or a woman by interpersonal love which results in giving birth to a new life in love. The soul of a newborn man comes directly from God by the power of the act of creation (Gen 2, 7) – which means it is not a result of procreation – but is also in possession of its own act of being; as St. Thomas wrote, 'what possesses *esse* by itself, cannot arise or be destroyed in any other way, just by itself'[8]. This is also the reason why, as E. Gilson points out, the soul cannot arise by giving birth (no creature can make actual existence start happening); it can only be created by God. Nevertheless, a human soul shares the same act of being that it received from God with the body that they received from parents: a man and a woman, as a fruit of their fertility (Gilson, 1965).

Human sexuality is a reason of love of the second person, interpersonal love that is – according to the pope's formula – positive personalistic norm: 'A person is a being of such kind that the only proper relation to them is love' (Wojtyła, 2015, 32). Love is in this context the highest manifestation of human sexuality. A. Sarmiento writes: 'when we talk about <<humanization>> or <<personalization>> of sexuality, we want to find the expression of a fact that sexual activity should be placed in the context of a person who is a being directed toward good and love' (Sarmiento, 2002, 25).

Today there are different concepts of the role of sex in personalism. This diversity follows from the fact that there are many different personalistic trends. J.M. Murry, referring to N. Bierdiayev's concept, understood sex as a way to revive Christianity in a mystical way. That would involve people discovering a bond between them and God in their own hearts, drawing the life force from the ongoing revival of a man by God. To make this happen, Murry proposed in his 'Adam and Eve' the renewal of religion b the renewal of faith in love. Aside from the vertical dimension, he understood this love exclusively by interpersonal relationships between two people in marriage, claiming that all other relationships are unreliable and prone to failure. He was quite radical in his view; being a protestant, he propounded the abolition of celibacy. He was also against the dogma of virgin maternity of Lady Mary. On the other hand, he criticized protestant Puritanism (Coates, 1949, 221-227). Roger Scruton argued that persons are distinct from the rest of nature by responsibility, and this characteristic is connected with rationality – personal beings are aware of their actions, so they can either perform or refrain from a given action. Love for the person of distinct sex is manifested and fully realized in arising of a new life. Parents love their children as a whole–they do not love a child as a body in the material realm. R Scruton puts it as follows: 'I love my child as an embodiment of my child, and not the body' (Scruton, 2009, 275).

All in all, as follows from the presentation of different historical concepts of a human in the context of sexuality and procreation, the connection between sexuality and the ontic basis of the human person is fundamental to the issue of sexuality in Christian

8 St. Thomas Aquinas, *Summa Theologiae*. I, 75, 6.

personalism. The ontic basis of the human person is – let us remind that – the soul. The context of fertility and children from a personalistic perspective completes the act of creation; it is also reflected in the Christian understanding of love as the only proper relation to the person. Love finds its realization in the interpersonal relationships of man and woman, and also in parents – newborn child relations. Broader reference to how the understanding of internal relations in a family shaped in the history of Christian personalism would go beyond this paper and thus it requires further research.

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The Catholic Church and the ministry of "spiritual birth-giving" in the field of sexuality

Kościół Katolicki a posługa „rodzenia duchowego" w obszarze seksualności[1]

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Abstract: In view of the omnipresent contemporary crisis of truth, it seems a purposeful and valuable activity to bring closer, clarify, as well as to correct or rectify the vision of the Catholic Church's teaching on the treatment of a human as a sexual being. The article is aimed at making an attempt to present selected elements of the teachings of the Catholic Church on gender and sexuality, considering the ways in which sexual education is understood and identifying persons who are most accountable for that area of education. The inquiry is conducted from the standpoint of an educator. The source literature for this study consists of selected documents of the Catholic Church. Some other studies on that topic were also analysed. On the basis of the document analysis, it may be concluded that the Catholic Church assigns a lot of importance to the issues of gender and sexuality, as well as sexual education. Such education should be based on the integral vision of the human being. It is emphasized that this sphere should be considered in the context of the development of the whole human being, whose fundamental task in life is love understood as a gift of self. Sexual education is therefore tantamount to education to love. It involves assisting children and youth in their search for the answers to the most important questions concerning the sense and purpose of life, as well as the ideas and values which determine the trajectory of human existence on the Earth. An element of this education is both the introduction of young people to the issues related in a strict sense to the biological functioning of a person as a being endowed with a sex, and to the formation of views and attitudes towards oneself and other people. Due to the strength and primordiality of the natural family bonds, this responsible task is most often delegated to parents. It is parents who are to the greatest degree responsible for the formation of children to whom they have passed on their lives. All other educational institutions should conform to the principle of subsidiarity and should respect the precedence of parental rights and obligations. The ministry of "spiritual birth-giving" in the delicate sphere of gender and sexuality is a task of parents, who are the most important educators. All parents are obliged to undertake that difficult task, which requires the creation of a climate of trust, closeness and mutual respect in the family, as well as of gentleness and respect for children's intimate sphere. It is essential to pass all information in a clear way and to make it reach children in proper time.
Keywords: Catholic Church, sexuality, sexual education, mutual gift

Abstrakt: Wobec wszechobecnego współcześnie kryzysu prawdy celowym i wartościowym działaniem wydaje się przybliżenie, wyjaśnienie, a także sprostowanie czy też odkłamanie wizji nauczania Kościoła Katolickiego dotyczącego ujmowania człowieka jako istoty seksualnej. Celem niniejszego artykułu jest podjęcie próby przedstawienia wybranych elementów nauczania Kościoła Katolickiego dotyczącego płciowości i seksualności, rozważenie sposobu pojmowania wychowania seksualnego oraz wskazanie osób w największym stopniu odpowiedzialnych za ten obszar wychowania. Dociekania prowadzone są z punktu widzenia pedagoga. Literaturę źródłową niniejszego opracowania stanowią wybrane dokumenty Kościoła Katolickiego. Analizie zostały również poddane opracowania podejmujące wskazaną tematykę. Na podstawie dokonanej analizy dokumentów można stwierdzić, że Kościół Katolicki przywiązuje ogromną wagę do kwestii związanych z płciowością i seksualnością oraz wychowaniem seksualnym. Powinno być ono oparte na integralnej wizji człowieka. Podkreśla się konieczność osadzenia tej sfery w kontekście rozwoju całego człowieka, którego podstawowym zadaniem życiowym jest miłość rozumiana jako dar z siebie. Wychowanie seksualne jest więc równoznaczne z wychowaniem do miłości. Polega na towarzyszeniu dzieciom i młodzieży w poszukiwaniach odpowiedzi na najważniejsze pytania dotyczące sensu i celu życia, ideałów i wartości, które wyznaczają trajektorię bytowania człowieka na ziemi. Elementem wskazanego wychowania jest zarówno wprowadzanie młodych ludzi w kwestie związane w ścisłym znaczeniu z biologicznym funkcjonowaniem człowieka jako istoty obdarzonej płcią, jak i kształtowanie poglądów i postaw wobec samego siebie i wobec innych. Ze względu na siłę i pierwotność naturalnych więzi rodzinnych to odpowiedzialne zadanie przekazuje się przede wszystkim rodzicom. Są oni w największym stopniu odpowiedzialni za formację dzieci, którym przekazali życie. Wszystkie inne instytucje wychowawcze powinny przyjmować do wiadomości zasadę pomocniczości i uznawać nadrzędność praw i obowiązków rodziców. Posługa „rodzenia duchowego" w delikatnej sferze płciowości i seksualności stanowi więc zadanie rodziców, będących najważniejszymi wychowawcami. Wszyscy rodzice zobowiązani są do podjęcia tego trudnego zadania, wymagającego stworzenia w rodzinie klimatu zaufania, bliskości i wzajemnego szacunku, jak również delikatności i poszanowania sfery intymnej dzieci. Istotnym jest, aby wszelkie informacje były przekazywane w sposób jasny i docierały do dzieci w odpowiednim czasie.
Słowa kluczowe: Kościół Katolicki, seksualność, wychowanie seksualne, wzajemny dar

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Introduction

Mieczysław Łobocki points out that "education enters various spheres of reality with which boys and girls meet every day or may meet in the near or slightly further future. These spheres constitute a peculiar kind of education, which is usually called its specific area" (Łobocki, 2009, p. 257). Therefore, what is dealt with in the theory of education is, among other things, moral, aesthetic, patriotic, mental, religious and health education. One of educational areas is also sexual education.

It is also sometimes called "pro-family education", "education for family life", "education for love" (Łobocki, 2009, p. 269). The use of the aforementioned terminology is aimed at avoiding "unnecessary associations with the term *sexual education*, i.e. including only the biological aspects of human sexuality, stripped of all moral connotations" (Łobocki, 2009, p. 269). The point is not to raise the suggestion that sex life is not related to any moral evaluation (Łobocki, 2009, p. 269). Sexual education as "shaping socially and morally desirable attitudes towards human sexuality" differs from "sexual awareness", which is only the transmission of knowledge about human sexual life (Łobocki, 2009, p. 270; Długołęcka, 2006, p. 237).

The presented article is an attempt to present selected elements of the Catholic Church teaching on gender and sexuality, to consider the way of understanding sexual education and to indicate the people most responsible for this area of education. The research will be conducted from the educator's point of view. The source literature for this study will consist of selected documents of the Catholic Church. Some studies on the indicated topics will also be analyzed. The factor that prompts to take up the issues related to sexual education as perceived by the Catholic Church is the conviction expressed by John Paul II regarding the crisis of truth. In his *List do Rodzin [Letter to Families]*, the Polish Pope expressed his conviction that it was a crisis of truth which was dealt with nowadays, expressed primarily through a crisis of notions. "Do such concepts as: *love, freedom, a sincere gift*, and even the very concept of a *person* and therefore also a *person's rights* – really mean what they express?"; "If the truth about freedom, about the communion of persons in marriage and family regains its splendour, then the civilization of love can be realized" (Jan Paweł II, 2021, n. 13). The splendour of the truth is important "by contrast, because the development of modern civilization is related to scientific and technological progress often in a one-sided way. This regards a purely positivist character of this development. A fruit of cognitive positivism is agnosticism when it comes to theory, and when it comes to action and morality – utilitarianism. (...) *Utilitarianism* is a civilization of effect and use – a civilization of *things*, not *people*; a civilization in which people become objects of use, just as things are used" (Jan Paweł II, 2021, n. 13).

The proposal of the Catholic Church concerning the treatment of gender and sexuality as well as sexual education as education to love is faced with incomprehension today. Opponents of the Church's approach to one of the most delicate spheres of human life see it almost exclusively as "a heavy yoke, prohibitions, shackles that must be rejected for the sake of human freedom and happiness" (Wiśniewska-Roszkowska, p. 94). Such a situation may stem from the negligence in the manners of speaking about the indicated issues. While the Church has always spoken consistently about the understanding of the body and gender, the people of the Church have done a lot of wrong, presenting a fearful or repressive approach to sexuality: either ignoring these problems in silence or limiting their statements to prohibitions (Persona Humana Declaration, 1990, 5; West, 2009, p. 24). These considerations are intended to bring closer, to explain and, in a sense, to correct and refute the vision of the Catholic Church teaching on gender, sexuality and sexual education.

1. Gender and sexuality in the teaching of the Catholic Church

Rev. Maciej Olczyk (2013) points out that both the adjectives *sexual* and *gender* and the nouns *gender* and *sexuality* are often used interchangeably. However,

the terms *sex* and *gender* are not synonyms. For Rev. Wojciech Bołoz (2003), it should be assumed that sex "refers to love understood as a manifestation of sexual drive experienced at the bodily level. Sexual activity implies the activation of the sexual organs". Gender "means that sphere of a human being that permeates their entire existence and determines that they can live as a man or a woman" (Bołoz, 2003, p. 14-16; Olczyk, 2013, p. 223). Thus, the concept of gender is broader and "is not exhausted in the biological or genital dimension. It refers to the holistic approach to a person in their bodily, psychological and spiritual dimensions and reaches the fullness when it expresses love that is a mutual personal gift of a man and a woman lasting until death" (Bołoz, 2003, p. 14-16; Olczyk, 2013, p. 223). Gender, as one of the ways of a person expressing themselves, is therefore a kind of basis for sexuality, i.e. mutual love expressed in a physical way.

As in every field, also in the area of gender and sexuality, the primary source of the Church's teaching is God's truth about the human being and God's love for humanity (Dziewiecki, 2011, p. 18-19), as told in the Holy Bible. There are words in Genesis which as if constitute the basis of the whole teaching on the human being as a gender-endowed being: "God created mankind in his image, (...) male and female he created them" (Genesis 1:27). The above words are complemented by the Creator's command addressed to the first people: "Be fruitful and increase in number" (Genesis 1:28). The Catechism of the Catholic Church draws attention to the importance of the creation of a human being as a gender possessing being and states that "gender affects all spheres of the human person in the unity of their body and soul. It concerns especially affection, the ability to love and procreate, and – more generally – the ability to establish bonds of communion with other people. (...) Physical, moral and spiritual differentiation and complementarity are aimed at the good of marriage and the development of family life" (Catechism of the Catholic Church 2332, 2333). Sexuality becomes truly human in the context of the person-to-person relationship and the mutual gift of a man and a woman. Importantly, this gift should be total and unlimited in time (Catechism of the Catholic Church, 2337). What seems an extremely important text that requires exploration from the perspective of the research undertaken in this study is the document of the Pontifical Council for the Family, published in 1995, entitled *Ludzka płciowość: prawda i znaczenie [The Truth and Meaning of Human Sexuality]*. It seems right to quote some selected fragments of the above-mentioned text: "Man is called to love and to self-giving in his bodily and spiritual unity. Femininity and masculinity are complementary gifts, so human sexuality is a part that integrates the concrete ability to love that God has inscribed in man and woman" (*Ludzka płciowość...,* 2010, n. 10, p. 112-); "This capacity for love as self-giving is thus "*incarnated"* in the nuptial meaning of the body, which bears the imprint of the person's masculinity and femininity" (*Ludzka płciowość...,* 2010, n. 10, p. 113); "Human sexuality is thus a good, part of that created gift which God saw as being "*very good*", when he created the human person in his image and likeness (...) As it is a way of relating and being open to others, sexuality has love as its intrinsic end, more precisely, love as donation and acceptance, love as giving and receiving" (*Ludzka płciowość...,* 2010, n. 11, p. 113). It is easy to notice that, on the basis of Revelation, the Church strongly emphasizes not only the perception of a human as a sexual being, but also the relationality of the human person, which develops in the context of being with another person of the same personal dignity, but realizing their humanity in different ways: male or female (Catechism of the Catholic Church, 2334, 2335). It also seems important to pay attention to the location of gender in the context of a mutual gift, fulfilled in a marriage which is a total and lifelong relationship, aimed at giving and receiving love: "When love is lived out in marriage, it includes and surpasses friendship. Love between a man and woman is achieved when they give themselves totally, each in turn according to their own masculinity and femininity, founding on the marriage covenant that communion of persons where God has willed that human life be conceived, grow and develop. To this married love, and to this love alone, belongs sexual giving, which "is realized in a truly human way only if it is an integral part of the love by which a man

and a woman commit themselves totally to one another until death" (*Ludzka płciowość...,* 2010, n.14, p. 115). The call to mutual love is therefore the essence of human vocation. It is supposed to be a love embracing both the body and the soul, maturing in the heart and will, and embracing "the person in their entire physical, mental and spiritual whole" (Jan Paweł II, 1981).

Love, as the postulative basis of all mutual human references, excludes a utilitarian approach, only love is the opposite of using a person "as a means to an end or as a tool of one's own action" (Wojtyła, 2015, p. 31-32). It is worth noting that the possible use of a person, also in the area of sexuality, may also apply to oneself. For this reason the Church teaches that the body itself must not be used contrary to its proper calling. A good illustration of this approach are the titles of Daniel Ange's books: "Your Body Created for Love" and "Your Body Created for Life" (published in 2004). Catholic sexual ethics emphasizes the dignity and value of every human being (a person deserves only love) and excludes any objectification of the human person, even if it takes place with their consent. The recognition of human subjectivity is the foundation for a positive approach to the personalistic norm: "what I am not allowed to do in relation to myself, I am not allowed to do for the same right and for the same reasons in relation to any other self. (...). Only by affirming another human being for themselves, I meet the truth about myself" (Sztaba, 2012, p. 297). A human being is considered to be a bodily and spiritual unity: they are not only the body, nor only the spirit, they are a whole: an embodied spirit, that is, the soul that expresses itself through the body and the body formed by the immortal spirit (Jan Paweł II, 2000, n. 11). Whatever action within the body, both resulting from the relation to the other person and towards oneself, affects the whole person, "sexuality affects all spheres of the human person in the unity of their body and soul" (Catechism of the Catholic Church, 2332).

Although the teaching of the Catholic Church on the approach to issues of gender and sexuality has not changed throughout history, it is worth noting a change observed for several decades in the way of talking about the indicated issues. Father Marek Urban points out that "the Church has been maturing for centuries to speak out publicly on the issues of sexuality (...) Maybe now is the time when the fight for a human takes place around the truth about their sexuality and its proper use" (Urban, 2011, p. 13). The same author believes that "the Church is still learning how to talk about the essence and beauty of sex and sexuality to contemporary people" (Urban, 2011, p. 13). Instead of the manichaeism of negating the value of all matter, including the human body, for several decades there have been voices describing human sexuality in the most positive terms. The most important representative of the new language of the Church is John Paul II and his theology of the body. In his experience, this author was obliged to respond to the demands of the so-called sexual revolution of the 1960s. He proposed a view on sexuality that would exclude the question (present in the previous preaching of the Church): "What am I not allowed to do?" in order to seek an answer to the question: "How can I express my physical love in a way that suits my dignity as a person?" (Urban, 2011, p. 14). What is dealt here is the replacement of legalism with freedom. The Pope asks questions about the essence of sexuality, what the truth about love-triggering sex is, why the human was created as a man and a woman (West, 2009, p. 25). The Holy Father John Paul II, while still a Krakow priest, had the opportunity to get to know different shades of human love. As a result, he competently dealt with the subject of love relationships, the body and sexuality, "he did not treat a human as an organism, but as a person who has a body and a spirit, and assigns sexuality the role of a language to express the deepest layers of their humanity" (Skrzypczak, 2015, p. 5). John Paul II was aware of the need to explain to the believers the contents of Revelation and the teaching of the Church so far. Delighted by the beauty of every human body, he drew attention to its relational nature: "The human body is not only a somatic basis for sexual reactions, but is also a means of expression for the whole person, for a person who expresses the self through their *body language*. This *language* has a significant interpersonal meaning, especially when it comes to the relationship between a man and woman" (Jan Paweł II, 2020, p. 427). The Polish Pope emphasized the value of the

communion of spouses, expressed in the fullest way through sex life, which is the crowning of mutual love and a sign of the sacrament of marriage. He wrote: "true love, love internally complete, is the one in which we choose a person for their own self, that is, the one in which a man chooses a woman, and a woman chooses a man not only as a sexual partner, but as a person whom they want to give their life to" ; "It is love that makes a person fulfil themselves through the sincere gift of self. For love is giving and receiving a gift. It cannot be bought or sold. It can be only given to each other as a gift" (John Paul II, 2021, n.11). It can be noted that John Paul II, while lecturing on theology of the body, which was considered a time bomb, strongly emphasized the need to enhance the evaluation of the human body. Whereas the supporters of Manichaeism framed the body and sex in terms of anti-value, then the aforementioned author taught that it is a "not-enough-value" (Jan Paweł II, 2020, p. 178). Thus, what is dealt here is the affirmation of a human being as a corporeal and spiritual being, without deciding which of these aspects is better, because they are inseparable (Grzelak, 2009, p. 333).

The successor of John Paul II – the Holy Father Benedict XVI – also clearly expressed the need to treat the human body with respect and warned against rejecting the body and treating the human being only in spiritual terms. "If a human strives to be only a spirit and wants to discard the body as only animal inheritance, then the spirit and the body lose their dignity. And if, on the other hand, a human being renounces the spirit and, therefore, considers matter and body as the only reality, that person loses their greatness in the same way" (Benedykt XVI, 2005, n. 5). Pope Benedict XVI draws attention to the danger of falling into angelism on the one hand, which consists in perceiving a human as a spirit residing or imprisoned in the body, and on the other – animalism, promoting bodily pleasure as the highest human fulfilment, encouraging unrestrained indulgence in one's erotic needs (West, 2011, p. 53-54). As Christopher West points out, "both approaches result from the lack of integration of spirituality and sexuality" (West, 2011, p. 55). The author of the encyclical *Deus caritas est* admits that in the past Christianity tended to oppose corporeality (Benedykt XVI, 2005, n. 5). It is worth noting, however, that it is unauthorized to confuse "the reasoning of the Church with the reasoning of people who are in the Church. The Church's reasoning has always defended the body and marital love against the attacks of various heresies. Unfortunately, the official condemnation of such movements as Manichaeism, Gnosticism and Jansenism – which despise the body and sexuality – apparently had less influence on Christians than the heresies themselves" (West, 2011, p. 58). Benedict XVI also drew attention to the reciprocity of the gift of spouses: "whoever wants to offer love must receive it as a gift as well" (Benedykt XVI, 2005, n. 7).

Following the example of his predecessors, Pope Francis reaffirms and recalls the teaching of the Second Vatican Council, according to which marriage is first and foremost a "profound communion of life and love" (Konstytucja duszpasterska o Kościele, 1967, n. 48). In *Amoris Laetitia,* he reminds us that sexuality is neither a reward nor an element of entertainment. It is "an interpersonal language where the other person is taken seriously, with their sacred and inviolable value" (Franciszek, 2016, n. 151). The erotic dimension of love, according to Francis, is not an evil or a burden that should be tolerated for the good of the family, but is a gift from God embellishing the meeting of spouses, "the realization of pure, exclusive affirmation" (Franciszek, 2016, n. 152). The proper use of sexuality also shows the greatness of the human heart and is a factor that triggers happiness (Franciszek, 2016, n. 152). "Sexuality inseparably serves this marital friendship because it aims to ensure that the other person lives to the full" (Franciszek, 2016, n. 156). The Holy Father Francis warns against using sexuality solely for one's own self, satisfying one's own desires and drives, that is, against the poisoning "use it and throw it away" spirit (Franciszek, 2026, n. 153). Marital sex life should never be a source of suffering and manipulation (Franciszek, 2016, n. 154), as this would contradict the basic function of sexuality, which is showing and accepting love. Therefore, people should be defended against the false perspective of sex without love, which is often associated with the sphere of violence, exploitation and harm (Olczyk, 2013, p. 240).

Summarizing this part of the discussion, it should be stated that in the teaching of the Catholic Church, sexuality is subordinated to the marital love of a man and a woman (Catechism of the Catholic Church, 2360). Sexuality is understood in terms of a gift from God to a human being who is both a spiritual and a corporeal being. At the same time, due attention is paid to the communicative aspect of sexuality: it is the most intimate way of expressing and receiving marital love, which is incarnate love (Dziewiecki, 2011, p. 26, 99). "The existence of a human as a man and a woman has a bond-forming, complementary, spousal and procreative meaning. Gender distinctiveness is indispensable for the unity of the two that carries the physical, mental, social and spiritual life" (Dudziak, 2017, p. 23). It seems important to note that the Church's respect for marital sex life is also expressed in the fact that excluding such sex life is synonymous to declaring the marriage annulment (Dziewiecki, 2011, p. 99).

It is obvious that gender differences are a condition for the existence of mankind. However, the procreative meaning of the marriage act is not the only one pointed out by the Catholic Church Magisterium. The openness to the possibility of conceiving a child must be in harmony with the spouses' attitude to the deepening (through physical closeness) of their mutual relationship. These two aspects of marital sex life, the procreative and the bond-creating one, are a condition for experiencing sexuality in a way planned by the Creator. Therefore, physical love is an act of worship to God of two people bound by marriage (Urban, 2011, p. 13). The statements of the Catholic Church emphasize the importance of gender and sexuality and treat these spheres as the God's reality that requires an integral approach.

2. Sexual education in the teaching of the Catholic Church

"Integration in the field of gender means accepting and understanding one's gender, as well as mature functioning in personal and social life as a woman or a man. (...) Sexuality is a very complex area of human life and affects all its dimensions. For this reason, it cannot be isolated from the whole of education. On the contrary, sexual education should be integrated with shaping the full human personality" (Pokrywka, 2010, p. 305). The Catholic Church seriously treats a person's ability to direct the power of their sexuality and to consciously and reasonably acquire freedom from drives and instincts (Dziewiecki, 2011, p. 99). The connections between the sexual dimension of a person and their ethical values imply such an approach to education that would lead "to a knowledge of moral principles and recognition of them as a necessary and valuable guarantee of responsible personal growth in the field of human sexuality" (Jan Paweł II, 2000, n. 37) . Therefore, it is purposeful both to open up the human person to the skill of self-education and to "provide motivation to undertake the effort of such self-education" (Meissner, 2017, p. 11).

The basis of all sexual education should be the conviction that issues related to human gender and sexuality are sacred (*Ludzka płciowość...,* 2010, n. 122, p. 163). Participation in social life allows one to state that for many people these aspects of human life are considered a godless reality. The Manichean approach to the body as a contaminated (because material) reality is interconnected with some trends resulting from the so-called sexual revolution, which leads to reification, that is, the objectification of a human and, at the same time, the deification of their sexual sphere. John Paul II described this approach as the *new Manichaeism*, in which neither "the body lives by the spirit, nor the spirit gives life to the body" (John Paul II, 2021, n.16). Thus, what is dealt here is a radical separation of the physical and spiritual reality. The human ceases to be a spiritual-physical unity, that is, ceases to be a person and a subject, and becomes only an object, similar to "all other bodies in nature" (John Paul II, 2021, n. 16). Believers as well can either completely ignore the issues related to educating a person as a being endowed with gender and sexuality, or "silently" adopt the trends of contemporary culture, suggesting the isolation of these spaces from the rest of human experience. It seems that in the practice of life of a large group of Catholic believers there is a lack of healthy *eternal* admiration (John Paul II, 2021, n. 16) and the joy-

ful acceptance of human corporality as a gift of the Creator. This results not only in relegating gender and sexuality to the sphere of profanum, but also in unreflective acceptance of the propositions offered by the *civilization of use* (Jan Paweł II, 2021, n. 13) and the consent to permissive sexual education.

In its teaching, the Catholic Church warns against the trivialization of human sexuality, which cannot be a form of entertainment (Jan Paweł II, 2000, n. 37; Benedykt XVI, 2009, n. 44). Consequently, sex education cannot be reduced to informing without referring to moral principles, i.e. introducing children and young people to experiencing pleasure, which may lead to the loss of serenity and to corruption (Jan Paweł II, 2000, n. 37). The lack of reference to the goals of gender and sexuality and to the world of values results in treating sexual activity only as a source of pleasure and emotional satisfaction. Gender and sexuality are "presented as *duly belonging* to a person, and therefore not only do not require steering, but are simply uncontrollable, driven by emotions" (Meissner, 2017, p. 13). Such a presentation of sexual activity: in terms of actions not related to rational and free decision-making by a human, is sometimes called "muzzle education" (Olczyk, 2013, p. 238-239). It proposes only "*mechanical*, not *personal* preventive solutions against the effects of sexual behaviour" (Olczyk, 2013, p. 238-239). In this approach, the most important is the knowledge about the reproductive consequences of sexual intercourse and about sexually transmitted diseases (Ryś, 1999, p. 484-485; Szymański, 1999, p. 122). There is no issue of self-control. This approach results in generating an attitude of resignation, permissiveness or even decadence among young people (Olczyk, 2013, p. 238). The Catholic Church is against teaching how to prevent pregnancy "while encouraging to break taboos and to experiment in order to increase personal sexual satisfaction" (Olczyk, 2013, p. 243). Such an attitude of the Church does not result from the negative attitude of the Church to the issues related to sexuality, but from real care for the quality of human life, which has its structure and purpose. No man ever wants to be an object of abuse. Everyone, on the other hand, strives for love. Sex education cannot therefore be reduced to the "genital level" (the term used by Pope Francis) "thus degrading the person, but is to serve the development of true love and mature personality (...) of the pupil" (Sztaba, 2014). It is supposed to be "positive and prudent" and "clear and subtle" (*Ludzka płciowość...*, 2010, n. 125, p. 164) education to love understood as a gift of self: "sexuality is in fact the wealth of the whole person – of the body, feelings and the soul – revealing its deep meaning in leading a person to make a gift of self in love" (Jan Paweł II, 2000, n. 37).

Therefore, as perceived by the Catholic Church, sex education consists in educating the sexual impulse in the process of getting to know oneself and in developing the ability to control oneself (Franciszek, 2016, n. 280), which are aimed at a joyful meeting with other people and their mutual enrichment. Gender distinctiveness is indispensable for the unity of two complementary people (Dudziak, 2017, p. 23). Existence in a feminine or masculine way causes lack of self-sufficiency of a person and, at the same time, causes striving for a relationship with another, completely different human being. The task of educators is therefore to help young people "in accepting their body as it was created" (Franciszek, 2016, n. 285), in appreciating one's body in its femininity or masculinity (Franciszek, 2016, n. 285). Pope Francis also draws attention to the need to cultivate healthy modesty, which is a natural defence of a person against objectification (Francis, 2016, n. 282). Sex education is aimed at learners' becoming free and responsible subjects of their own activities. As mentioned above, in the teaching of the Catholic Church there is a conviction that sexuality is in the service of love and the main place of fulfilling mutual love between a woman and a man is marriage and the family. Thus, it is good to approach the issues related to sexual education not in terms of young people's expectations from sexual life, but rather in terms of their expectations from family life and everything that they can bring to it (Meissner, 2017, p. 15).

The view expressed by Kinga Wiśniewska-Roszkowska, according to whom three elements can be distinguished in sex education, seems to be an appropriate summary of this fragment in the discussion. The first is appropriate awareness ("the instruction concerning both the bodily sex-reproductive sphere

(...) and the mental and moral order in this area"). The second part of sex education is shaping a child's views. The third element is developing the ability to properly manage the sexual sphere while developing both a culture of feelings, as well as willpower and the ability to control drives and passions (Wiśniewska-Roszkowska, 1998, p. 24). Educators focus on the human body, which is always a sign of a person, and their effort is directed towards the rational and free integration of the bodily sexuality with the spiritual sphere of the person (Heinsch, Kochel, 2021, p. 198).

3. The ministry of "spiritual birth-giving" in the field of sexuality

The fact of passing a life down to a child implies not only the right, but also the obligation to bring up the child in accordance with the system of values that is closest to the parents. This is confirmed by both Polish constitutional provisions and the acts of international law of which the Republic of Poland is a party (Prucnal-Wójcik, 2018, p. 206-207). *The Declaration on Christian Education* of the Second Vatican Council states that "As they have given life to their children, parents have the utmost obligation to educate their children and must therefore be recognized as their first and principal educators. This educational task is so important that it would be difficult to replace it if it was missing" (Deklaracja o wychowaniu chrześcijańskim, 1967, n.3). The Catechism of the Catholic Church confirms the aforementioned obligation: "The fruitfulness of marital love also includes the fruits of moral, spiritual and supernatural life which, through education, parents pass on to their children" (Catechism of the Catholic Church, 1653). John Paul II complements these statements of the Church and emphasizes that "the right and duty of parents to educate is *essential* and as such is related to the transmission of human life itself; it is *primal and has priority* over the educational tasks of other people, because of the uniqueness of the relationship of love between parents and children; it *excludes substitution and is inalienable*, therefore it cannot be completely transferred to others or appropriated by others" (Jan Paweł II, 2000, n. 36); Therefore, parents are the first and most important educators of their children. Upbringing is a simple consequence of the fact that life is passed on in the biological sense and is synonymous to "spiritual birth" (Jan Paweł II, 2021, n. 16).

Upbringing in a family is understood in the Church in terms of service. John Paul II used the term "educational service of parents", which should "focus on the culture of sexual life so that it would be truly and fully personal" (Jan Paweł II, 2000, n. 37). At this point, it is worth emphasizing that the Catholic Church strongly highlights the need to respect the principle of subsidiarity. According to it, "the larger communities should provide supplementary aid to smaller communities, and all of them together to a human person. This help has two aspects: the negative and positive. The negative one consists in respecting the initiative, competence and responsibility of individuals and smaller groups, i.e. refraining from helping in those matters in which they are self-sufficient. The positive aspect is providing help where it is needed. This most often concerns the so-called help for self-help, i.e. single and relatively effective help so that individuals or smaller communities can continue to develop on their own" (Bełch, 2020, p. 155). In the field of sexual education, it is particularly necessary that it takes place "under the watchful eye of the parents", and that the school and other educational institutions should be controlled by parents and should act "in the same spirit that animates the parents" (Jan Paweł II, 2000, n. 37). Therefore, teachers and educators of children and youth need to be aware that they work in an institution that supports but does not relieve parents in their duties. It is worth emphasizing that the belief in the priority role of parents in children's sexual education is also close to some researchers who do not identify directly with the teaching of the Catholic Church (Długołęcka, 2006, p. 254).

The recognition of sex education in the teaching of the Catholic Church in the categories of parental rights and duties results not only from the primordial nature of the relationship between parents and children, but also from the awareness of the strength of this natural relationship. In one of the

texts addressed to parents on this issue, there are the following words: "You are the most suitable person for this task, because you know your children better than anyone else. You probably know them better than they know themselves. You see their flaws and advantages, you can recognize their level of maturity (or its lack), and you have competences that they often do not have – you have experience and can predict how their sexual activities today may shape the rest of their lives. You have the power! Take advantage of it!" (Evert, Stefanick, 2020, p. 8). The parents' right to and duty of sexual education means showing their children "the true meaning of human sexuality" (Skreczko, 1999, p. 10). It is also parents' responsibility to educate their children about the moral principles necessary to develop as a gender possessing being. If it is recognized that sexual education consists of both sexual awareness and shaping appropriate attitudes towards one's own gender, sexuality and sexual activity (Długołęcka, 2006, p. 237), the work aimed at supporting parents in taking up their educational tasks seems right. Alicja Długołęcka, referring to the research results, states that "parents recognize their role in the sexual education of their children, however, they often feel unprepared to fulfil this task" (Długołęcka, 2006, p. 241). The mentioned author also draws attention to the lack of open conversations in homes about matters related to sexuality (Długołęcka, 2006, p. 254). Children are sometimes left to themselves. Parents avoid talking. In many families, sexuality "is not the subject of a child's conversation with parents", "does not harmoniously enter into the whole of the child's experiences", which may result in the fact that it constitutes an area that causes anxiety or problems (Meissner, 2015, p. 8). It is indicated that parents should be able to pass down the world of values to their children, and not limit contacts with the child to orders and bans (Meissner, 2015, p. 8). A ban, as Wanda Półtawska writes, "has no power to form an attitude, probably only in the case when it comes from the person themselves" (Półtawska, 2011, p. 192). It is extremely important that gender issues are approached from the positive side as a value and that all provided information is adjusted to the child's perceptual abilities (Ryś, 1999, p. 486).

The Church, in its teaching on sex education in the family, in the document *Ludzka płciowość: prawda i znaczenie*, identifies four principles that should be taken into account by parents. The first of them draws attention to the fact that each child is unique and unrepeatable and should receive an individual formation. Loving parents, as the people who know their children best, are able to choose the most appropriate moment to provide the information. The teaching of the Church emphasizes the need to communicate everything related to intimacy, both in the biological and emotional aspect, through a personal dialogue "with love and trust". It is recommended that such talks should be conducted with parents who are of the same gender as the child: mothers should talk to their daughters, and fathers to sons. Of course, there may be a situation in raising a child in an incomplete family. Then, asking for help is suggested from a trusted person of the same sex as the child (Ludzka płciowość..., 2010, n. 67, p. 142). The second principle pertaining to sex education stresses the requirement that all explanations should always have a moral dimension. Catholic parents are expected to pay attention to the positive value of chastity and the related ability to love people in marriage, in the consecrated life, or in celibacy. It is emphasized that chastity should be treated in positive terms and presented in the context of giving. "Instead of taking something away, chastity has something to offer to young people (Evert, Stefanick, 2020, p. 16); "It teaches (...) how to overcome selfishness in order to be free and love truly" (Evert, Stefanick, 2020, p. 16). All repressiveness is rejected: reprimands or orders that may be perceived by children as a fruit of a parental fear "of social repercussions or of the public opinion". The Church suggests that parents should rather convince their children "on a rational level as well as on the level of faith, and therefore with a positive and high understanding of the dignity of the person." Thanks to this, children can more clearly feel the parental love "concerned about their own good" (Ludzka płciowość..., 2010, n. 68-69, p. 142-143). The third rule concerning sex education emphasizes the necessity to provide all information about human sexuality in the broader context of education to love. Therefore, what is out of question is the mere

conveying information that is not linked to objective moral principles. In the teaching of the Church, there is a conviction that "parents should always present positive models and appropriate ways of engaging their own vital energies, and teach the importance of friendship and solidarity." In particularly difficult situations, parents are also recommended to seek help from specialists, preferably "with a Christian orientation" (*Ludzka płciowość...*, 2010, n. 70-74, p. 143-145). The last, fourth rule related to sexual education highlights the need to provide information "with the utmost gentleness, but in a clear and timely manner" (*Ludzka płciowość...*, 2010, n. 75-76, p. 145-146). It is important that the parents' words are neither too blunt nor too vague. Both passing on too many details, especially to too young children, and delaying children's access to information are considered unreasonable (*Ludzka płciowość...*, 2010, n. 75-76, p. 145-146). Pope Francis also points out that information on gender and sexuality should reach children "in a timely manner and in a manner appropriate to the experienced stage" (Franciszek, 2016, n. 281). Children should not be permeated "with data without developing a critical sense in the face of an invasion of proposition, in the face of uncontrolled pornography and overstimulation that can mutilate their sexuality" (Franciszek, 2016, n. 281). Maria Ryś emphasizes that it is extremely important for parents to answer all the child's questions truthfully and in an atmosphere of trust. This is possible when children can observe their parents who follow the truths they preach. The effectiveness of upbringing largely depends on the example of the parents' lives and their testimonies (Ryś, 1999, p. 486). Observation of parents is the basis for children of shaping their ideas and expectations from themselves and others (Długołęcka, 2006, p. 254-255). Introducing children to the area of thinking about gender and sexuality in the family should be marked by a dual concern of parents: on the one hand, it is to be "anticipatory and critical upbringing, and on the other – bold exposing the wrong actions of the authorities", which would abuse and deform the sensitivity of children and adolescents (*Ludzka płciowość...*, 2010, p. 131-132). Both attitudes are unacceptable: the parents' fearful attitude resulting from perceiving their own sex life in a negative and fearful manner, and the too liberal attitude. The latter consists in over-focusing on the sexual sphere, in separating it from experiencing love and responsibility (Skreczko, 1999, p. 487).

The document of the Pontifical Council for the Family, mentioned many times in this study, also contains specific guidelines for parents who undertake the responsibility of sexual education of their children. One of them is the recommendation to associate with other parents to defend their values and to oppose harmful forms of upbringing. The next guidelines concern parents' familiarization with the content and methods of sex education at school or other non-family institutions, including the parents' presence in classes. The last directive deals with the careful monitoring of all forms of non-family sex education. The teaching of the Church obliges parents to withdraw their children from classes that they find harmful (*Ludzka płciowość...*, 2010, n. 114-117, p. 161-162).

Summing up, it should be stated that sex education in the family is aimed at the sexual integration of children and adolescents, achieved primarily through participation in family life, obtaining information about gender and sexuality from their parents, open communication without prudery, providing children with a sense of emotional security, parents' gentleness and respect for the intimate sphere of their children (cf .: Skreczko, 1999, p. 487). In other words, all this pertains to the serious and honest treatment by parents of this sphere of education (Ryś, 1999, p. 486).

Conclusions

The teaching of the Catholic Church not only emphasizes the need for sexual education, but also attributes a lot of significance to the fact that this education should be carried out in a manner respecting human dignity. Acknowledging the primacy of family ties, the Church grants parents the right and obligation to undertake the ministry of "spiritual birth-giving" in the area related to gender and sexuality. The documents of the Catholic Church emphasize the need for sexual education, based on an integral vision of the human being. They also emphasize the need to place this sphere in the context of the development

of the whole human being. Recognition of the adult generation's need to undertake sexual education is related to treating a person as a being whose basic life task is love, understood as giving to other people everything that constitutes their own humanity. This is also related to accepting the social nature of the human person, focused on building and maintaining lasting relationships with another human being. As Józef Augustyn points out, "the role of sexuality is not limited to physical action, and the essence of sexuality significantly exceeds the genital sphere itself" (Augustyn, 2015, p. 71). Sexual education can be defined as education to love related to "the most important problems of human life – its sense and purpose, ideals and values" (Ryś, 1999, p. 485). This view of sex education results from accepting humanity as a mystery, as a form of being with others and for others, as a relationship. Sex education should always be understood in its broad sense: as accompanying a young person in their search for answers to the most important questions, as education to love. It is worth emphasizing that sexual education prepares a young person for self-education, for taking responsibility for their life (Ryś, 1999, p. 486). Apart from the information on issues of human gender and sexuality, the formation of a whole, full human being is dealt with here – a human whose sexual life can therefore be poetry rather than a craft (Pawlukiewicz, 2019).

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Analysis of cycle observation sheets in a group of women of reproductive age

Analiza kart obserwacji cykli w grupie kobiet w wieku prokreacyjnym[1]

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Abstract: *Background:* Knowledge concerning the value of menstrual cycle observation and its use to monitor reproductive health is underestimated and limited in women's health promotion, education and health care. The American College of Obstetricians and Gynecologists and the Academy of Pediatrics recommend that observations of a developing cycle should start as early as during puberty in order to pre-screen girls for the risk of fertility disorders such as polycystic ovary syndrome. With numerous reports of fertility issues on the rise, such a simple tool as self-observation of the menstrual cycle becomes particularly useful as it provides an insight into the natural rhythm of fertility and, in the case of abnormalities, i.e. any deviations from its normal course, reduces the time until the first medical consultation. In Poland, there are several non-governmental and non-profit organisations which, through certified teachers of fertility awareness methods, can professionally support the educational process of adolescents and adults as well as health care professionals in the field of fertility awareness, health education, and natural family planning. *Aim:* The aim of the presented study was to analyse 105 menstrual cycle observation sheets among Polish women who did not use contraception in accordance with the principles of the symptothermal double-check method. *Method:* The study was performed using the documentation analysis method, with 105 menstrual cycle observation sheets and the SPSS Statistics software suite, version 25. The level considered statistically significant was $p < 0.05$. *Results:* The average age of the studied women was 29 years. The majority of them, i.e. more than 58%, were unmarried and childless (79.1%). The average length of the menstrual cycle was 28.6 days. The average duration of the luteal phase was nearly 13 days. The average number of days of highly fertile mucus was nearly 4 days. The average length of cycles in women over 35 years of age was 28.88 days, while in women under 35 years of age 28.48 days. The age of onset of the first menstrual period ranged between 10 and 17 years of age. *Conclusions:* The studied group of women was homogeneous in terms of the adopted eligibility criteria, i.e. they had typical cycles and did not use contraceptive methods. The examined parameters of the menstrual cycle – the average length of the cycle, the course of the luteal phase, and the average duration of highly fertile mucus – satisfied the criteria of a normal cycle according to the symptothermal double-check method.
Keywords: menstrual cycle, fertility awareness methods, reproductive health.

Abstrakt: *Wstęp:* Wiedza dotycząca wartości obserwacji cyklu miesiączkowego oraz jej wykorzystania do monitorowania stanu zdrowia prokreacyjnego jest niedoceniana i ograniczona w zakresie edukacji prozdrowotnej kobiet oraz służby zdrowia. Amerykańskie Towarzystwo Położników i Ginekologów oraz Akademia Pediatrii , komitet ds. młodzieży rekomenduje rozpoczęcie obserwacje kształtującego się cyklu już w okresie dojrzewania celem wstępnego przesiewu dziewcząt , z grup ryzyka zaburzeń płodności np. zespołu policystycznych jajników. Wobec licznych doniesień dotyczących narastania problemów z płodnością tak proste narzędzie jak samoobserwacja cyklu miesiączkowego staje się szczególnie przydatna do poznania naturalnego rytmu płodności a w przypadku nieprawidłowości tj. odbiegania od przebiegu typowego skraca czas do pierwszej konsultacji lekarskiej. W Polsce istniej kilka pozarządowych niedochodowych organizacji, które poprzez dyplomowanych nauczycieli metod rozpoznawania płodności mogą profesjonalnie wspierać nauczanie młodzieży, dorosłych oraz zainteresowanych osób pracujących w służbie zdrowia w zakresie rozpoznawania płodności , edukacji prozdrowotnej oraz naturalnego planowania rodziny. *Celem* prezentowanej pracy było analiza 105 kart obserwacji cykli miesiączkowych u polskich kobiet nie stosujących antykoncepcji zgodnie z zasadami metody objawowo-termicznej podwójnego sprawdzenia. *Metoda:* Badanie wykonano przy użyciu metody analizy dokumentacji, 105 kart obserwacji

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Piaseck.pdf

cykli miesiączkowych z użyciem pakietu statystycznego SPSS Statistics w wersji 25. Za istotny statystycznie przyjęto poziom p < 0,05. *Wyniki:* Średni wiek badanych kobiet wynosił 29 lat. Większość badanych kobiet tj. ponad 58% było niezamężna i bezdzietna (79,1%). Średnia długość cyklu miesiączkowego wynosiła: 28,6 dni. Średni czas trwania fazy lutealnej wyniósł niemal 13 dni. Średnia długość dni występowania śluzu wysoce płodnego wyniosła blisko 4 dni. Średnia długość cykli kobiet powyżej 35 r. ż. wyniosła: 28,88 dni, natomiast u kobiet poniżej 35 r. ż. 28,48 dni. Wiek wystąpienia pierwszej miesiączki badanych kobiet wahał się pomiędzy 10-tym a 17-tym rokiem życia. *Wnioski:* Badana grupa kobiet była jednolita pod względem przyjętych kryteriów kwalifikacji tzn. posiadała cykle typowe i nie stosowała metod antykoncepcji. Zbadane parametry cyklu miesiączkowego tj.: średnia długość cyklu , przebieg fazy lutealnej oraz średnia długość występowania śluzu wysoce płodnego spełniały kryteria prawidłowego cyklu wg metody objawowo- termicznej podwójnego sprawdzenia.
Słowa kluczowe: cykl miesiączkowy, metody rozpoznawania płodności, zdrowie prokreacyjne

1. Introduction

During self-observation of menstrual cycle, the woman follows the fertility determination method of her choice based on a record of specific biomarkers (indicators, fertility symptoms). In this way, the cycle observation sheet can become a useful tool in the physician's daily work as well as an element of prevention of reproductive health disorders (Ślizień-Kuczapska, Smyczyńska, Rabijewski, 2020). In 1965, Josef Rötzer, having analysed females' menstrual cycles from different periods of their lives, was the first one to propose the so-called "sympto-thermal", multivariate method (Napiórkowska-Orkisz, Babińska, 2017). In 1988, the World Health Organization (WHO) published a guide to natural family planning (NPR) (World Health Organization, Geneva: Natural Family Planning: a guide to provision of services, 1988). As a definition of the concept of natural family planning, the WHO employed methods based on the consideration of the cyclical phases of fertility and infertility of a human couple. Fertility awareness allows a couple to engage in sexual intimacy in a responsible manner and in good conscience, taking into account their actual reproductive plans. NPR therefore provides options for those who are not interested in mechanical or pharmaceutical contraceptive methods or are prevented from using them due to specific contraindications.

For couples who follow the principles of cycle observation, sexual intercourse always remains an "intact act" (Fijałkowski, 2004).

In the case of the sympto-thermal method used as a means of conception prevention, its effectiveness exceeds 99% and with its correct (accurate) use, the Pearl index equals 0.4. When the method is used in a typical, error-laden (method error, teaching error, and user error) manner, the Pearl index reaches 1.8 (Duane, Stanford, Porucznik, Vigil, 2022).

It needs to be stressed, however, that in order to achieve such high effectiveness of NPR and to understand one's own fertility, the woman should contact a qualified and certified NPR teacher. For years, the Polish Association of Natural Family Planning Teachers (PSNNPR) has been offering various forms of education, including with the use of online means of communication and publicity campaigns[2].

According to WHO recommendations, natural family planning methods should be incorporated into health-promotion programmes for adolescents and adults and, most importantly, into regular training programmes for medical personnel (Troszyński, 2009).

Currently, the term "fertility awareness method" (FAM) is often used interchangeably with NPR. However, it is important to emphasise the wider significance of NPR, in particular with regard to adopting attitudes of responsible parenthood and the so-called "fertility lifestyle". FAM terminology is especially notable for facilitating the possibility of monitoring women's gynaecological health and might be a valuable aid in daily medical practice.

According to the definition offered in the guidebook, edited by Professor Michał Troszyński (2009), the menstrual cycle is a series of cyclical changes in the female body, occurring from the first day of menstruation up to and including the last day before the next menstrual bleeding (Kuźmiak, Szymaniak, 2014). The duration of a menstrual cycle depends on the woman's individual characteristics (Szymański, 2004) and, on average, is usually 26-28 days. 21-day cycles are considered to be short (Skręt, 2009), while cycles continuing for 26-30 days and more than 31

2 for example: www.pogaduchyozdrowiu.psnnpr.com

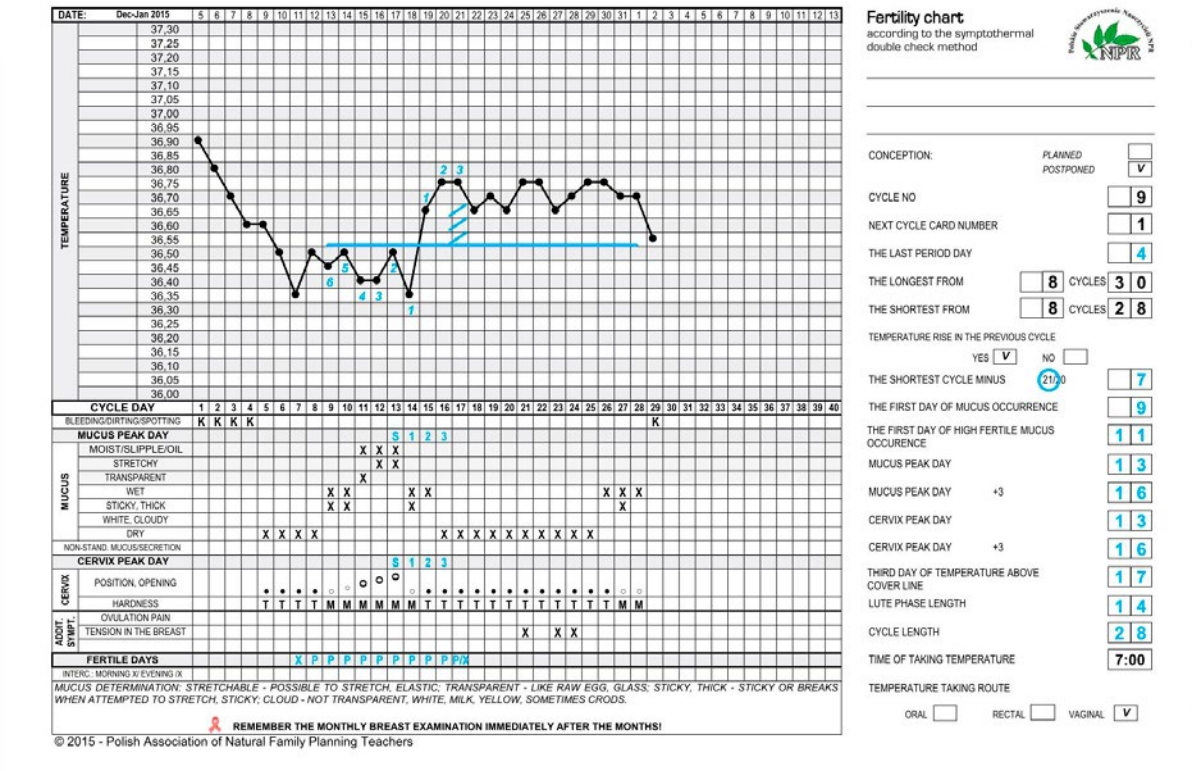

Figure 1. Typical menstrual cycle

days are of moderate and long duration, respectively (Jabłoński, Niewiadomska, 2014). In most women, cycle length tends to fluctuate to a certain extent. However, if the difference in the length of cycles from one month to the next does not exceed 5 days, such cycles are considered regular (Skręt, 2009). Normal menstrual bleeding lasts from 3 to 5 days and involves the removal of necrotic fragments of the functional part of the endometrium, which are excreted during menstruation (Bruska, 2003).

The primary biomarkers (Ślizień-Kuczapska, Smyczyńska, Rabijewski, 2020) of fertility in the double-check FAM, which can be examined in every woman's cycle, include basal body temperature (BBT), cervical mucus, and cervical position (Kuźmiak, Szymaniak 2014); these are subject to cyclical changes induced by ovarian hormones. The last of these symptoms is not observed in women who have not yet engaged in sexual activity (Kinle, Szymaniak, 2009). All major bio-indicators of fertility should be measured or analysed in accordance with specific rules. They are recorded on a standardised sheet in paper or electronic format (Kuźmiak, Szymaniak, Walczak, 2014). Accordingly, the cycle sheet should include the following information: in the morning – the BBT symptom; in the evening, after a whole-day observation – status of the cervical mucus; and once a day at any fixed time – self-examination of the cervix for changes (Kuźmiak, Szymaniak, Walczak, 2014).

The menstrual cycle typically exhibits a correlation of the main fertility symptoms: surge in BBT, the peak of cervical mucus, and the cervix peak (Kinle, Szymaniak, 2009). The occurrence of a correlation between fertility biomarkers means that the surge in BBT, the peak of the cervical mucus symptom, and the cervix peak occurred on the same day or the maximum interval between these symptoms did not exceed 3 days (Kuźmiak, Szymaniak 2014). A typical menstrual cycle is presented in Figure 1 (Cerańska-Goszczyńska, Ślizień-Kuczapska, Kinle, Walczak, 2015).

The ovulatory (typical) menstrual cycle begins and ends with a higher-temperature phase separated by a lower-temperature phase (Kinle, Szymaniak, 2009). The first part of the higher-temperature phase occurs during bleeding (Cerańska-Goszczyńska, Ślizień-Kuczapska, Kinle, Walczak, 2015). The second

part is called the "corpus luteum" or "luteal" phase (Kinle, Szymaniak, 2009) and should fall between 10 and 16 days (American Society for Reproductive Medicine, Birmingham, Alabama: Diagnosis and treatment of luteal phase deficiency: a committee opinion, 2021; Kinle, Szymaniak, 2009; Szymański, 2009). Its length does not usually vary between cycles. The first biomarker of fertility, the surge in BBT, involves an increase in basal body temperature – from lower to higher temperatures – occurring over a 24-hour period and is correlated with other symptoms (Kinle, Szymaniak, 2009).

The second bio-indicator of fertility is cervical mucus. Initially, the mucus has cloudy, viscous and glutinous consistency giving the woman a sensation of wetness in the vaginal vestibule – these are the characteristics of "less fertile mucus". As ovulation approaches, oestrogen levels go up and the mucus assumes the characteristics of "highly fertile mucus" – it becomes stretchy, transparent, glossy and shiny, resembling raw egg white. The associated sensation is that of wetness, slipperiness and oiliness in the vaginal vestibule. The peak of the mucus symptom is the day on which the features of highly fertile mucus occur for the last time before a rapid change in its quality and its complete disappearance (Kinle, Szymaniak, 2009).

The third key symptom of fertility is the repositioning of the height and texture of the cervix. The woman may check this symptom by self-examining the cervix and changes to its position, the degree of dilation, and the texture of its external outlet. The cervix peak is the last day when the cervix is at its highest position, most dilated and softest (Kinle, Szymaniak, 2009).

The woman's fertility during her menstrual cycle is considered to end on the third evening after the day of the BBT surge and the mucus or cervix peak. The deciding factor here is the last unaltered indicator (Cerańska-Goszczyńska, 2009).

On the basis of more than 30 years of work of the Polish Association of Natural Family Planning Teachers (PSNNPR) with women recording their cycle observations, the following criteria have been identified with respect to typical FAM double-check cycles:

- normal duration of the cycle,
- normal course of menstrual bleeding,
- normal development of the mucus symptom,
- normal biphasic BBT pattern,
- minimum 10 days of the luteal phase,
- convergence of the main fertility indicators,
- limited menstrual complaints, e.g. premenstrual syndrome (PMS), menstrual pain.

The present work addresses most of the above-mentioned parameters which meet the criteria of a typical cycle.

The aim of the study was to analyse 105 menstrual cycle observation sheets of Polish women who did not use contraception as prescribed by the sympto-thermal double-check method.

2. Method

The study used the documentation analysis method. Documentation for the study was obtained with the permission of the Polish Association of Natural Family Planning Teachers (PSNNPR). It covered seven years – from 2015 to 2022. A total of 56 women from the Lubelskie and Wielkopolskie voivodeships were included in the analysis. Ultimately, the statistical analysis covered 43 women who did not use any form of contraception and had typical menstrual cycles, i.e. were not in puberty, postpartum or menopause and were not breastfeeding. Every respondent kept track of her monthly cycle on three sheets for the sympto-thermal double-check method. The women had three complete observation sheets for a total of 129 sheets. In line with the adopted criteria, the following observation sheets were excluded: no. I – 10 sheets, no. II – 12 sheets, and no. III – 2 sheets. Eventually, 105 sheets submitted by the respondents were found eligible for the study. In order to ensure consistency across the studied group, all eligible sheets had to meet the following criteria: at least two main fertility biomarkers recorded (BBT – biphasic temperature pattern, notes on the observation of mucus), normal luteal phase, length of bleeding, and correlation of fertility symptoms.

Collecting such a large number of research sheets proved time-consuming as the documentation came from candidate method teachers whose task was to provide training on the sympto-thermal double-check method to three women from different backgrounds. Consequently, only those sheets that had been correctly filled in and met the criteria prescribed for typical cycles were admitted for statistical analysis. Sheets with deficiencies and atypical cycles were excluded from the study.

For the purposes of statistical analyses, the SPSS Statistics software suite, version 25, was used. The Shapiro–Wilk test allowed the verification of differences between the obtained result distributions and the normal distribution. The Mann-Whitney U test was utilised to compare cycle length between groups of women under and over 35 years of age. The level deemed statistically significant was $p < 0.05$. The results obtained are presented graphically in tables, bar charts and pie charts.

3. Results

The age of the women in our study ranged from 17 to 42 years, with the mean age of 29 years (Chart 1).

There were 25 (58.14%) unmarried women in our study and 18 (41.86%) respondents declared that they were married (Chart 2).

The percentage of women without children was 79.1% (n=34). Out of nine respondents with children, one respondent had six children, one respondent had four children, three respondents had three children, two respondents had two children, and other two had one child each (Chart 3).

Collectively presented were the characteristics of typical menstrual cycles of the respondents based on three menstrual cycle observation sheets using the sympto-thermal double-check method. On average, monthly bleeding lasted more than five days. The shortest bleeding continued for three days and the longest had a duration of eight days. The first mucus occurred around day 9 of the cycle, with highly fertile mucus on day 13 and the peak of the mucus symptom on day 16. On average, the day of peak mucus + 3 days was the 19th day of the cycle.

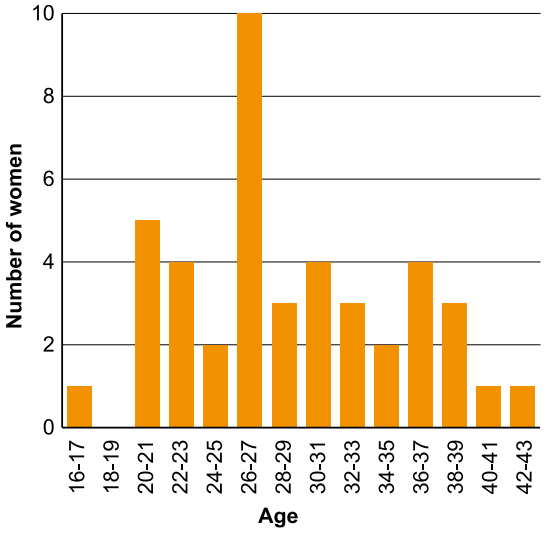

Chart 1. Age of respondent women

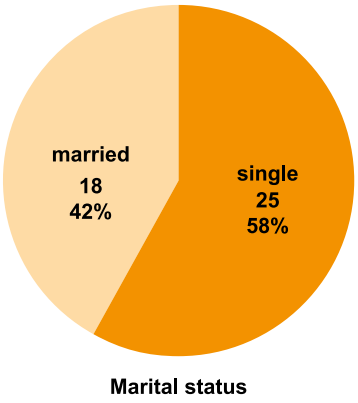

Chart 2. Marital status of respondent women

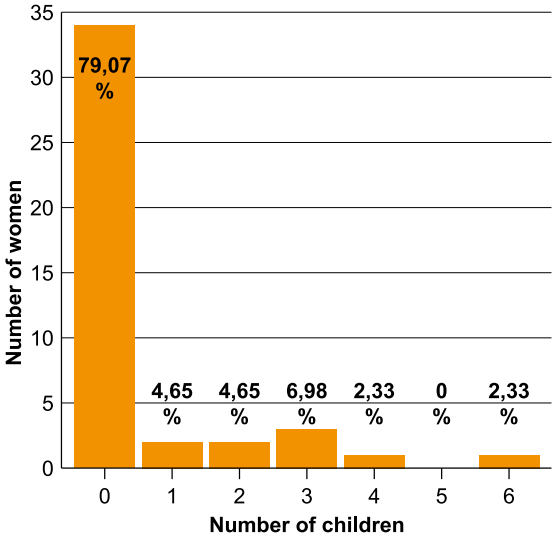

Chart 3. Number of children among respondent women

Table 1. Characteristics of typical menstrual cycles of respondent women in three observations carried out with the sympto-thermal double-check method (Shapiro–Wilka Test)

Property	Number of the menstrual cycle observation sheet																		I-III
	I						II						III						
	n	M	SD	min	max	Test S-W p	n	M	SD	min	max	Test S-W p	n	M	SD	min	max	Test S-W p	M
Last day of menstruation	33	5,55	1,03	4	8	0,001	31	5,65	1,14	4	8	0,004	41	5,40	0,96	3	7	0,001	5,53
Day of occurrence of first mucus	33	9,00	1,87	5	13	0,189	31	8,74	2,13	5	13	0,101	41	9,29	2,33	6	17	0,002	9,01
Day of occurrence of highly fertile mucus	33	12,94	3,43	7	22	0,064	31	13,26	2,90	8	23	0,011	41	12,95	3,66	7	29	0,000	13,38
Day of occurrence of peak mucus symptom	33	15,91	3,60	9	24	0,088	31	16,45	3,62	11	26	0,016	41	15,93	3,72	11	30	0,000	16,09
Day of occurrence of mucus symptom + 3 days	33	18,91	3,60	12	27	0,088	31	19,45	3,62	14	29	0,016	41	18,93	3,72	14	33	0,000	19,09
First day of temperature above the overlap line	33	16,97	3,42	11	26	0,034	31	17,19	3,45	13	27	0,001	41	16,83	3,11	12	29	0,000	16,99
Third day of temperature above the overlap line	33	18,67	3,02	13	28	0,150	31	19,19	3,45	15	29	0,001	41	18,83	3,11	14	31	0,000	18,89
Length of luteal phase	33	12,88	1,75	10	16	0,116	31	12,71	1,77	9	15	0,013	41	12,41	1,52	10	16	0,034	12,66
Length of cycle	33	28,39	2,84	23	38	0,007	31	28,90	2,66	25	36	0,080	41	28,39	3,15	24	42	0,000	28,56
Days of occurrence of less fertile mucus	33	8,52	5,24	3	21	0,000	31	8,16	5,15	2	21	0,003	41	7,93	5,80	1	29	0,000	8,20
Days of occurrence of highly fertile mucus	33	3,79	1,80	1	7	0,003	31	4,00	1,65	2	8	0,019	41	3,90	1,85	1	11	0,000	3,89
Number of days of absolute infertility	33	8,79	2,20	4	13	0,145	31	8,71	2,08	4	12	0,168	41	8,83	1,69	5	13	0,130	8,77

n – number of observations; M – mean; SD – standard deviation ; S-W –Shapiro–Wilka test

The first day of temperature above the overlap line was usually the 17th day of the cycle, while the third day of temperature above the overlap line was usually the 19th day of the cycle. The luteal phase lasted almost 13 days, the cycle length was about 28 days, and less fertile and highly fertile mucus occurred for 8 days and almost 4 days, respectively. The Shapiro–Wilk test revealed a number of statistically significant differences between the obtained result distributions and normal distribution. These differences were mostly found in the third and second measurements. Their absence in the third measurement only concerned the number of days of relative infertility and, in the case of the second measurement, also the day of the first mucus and the length of the cycle. As regards the first measurement, statistically significant differences in result distributions, as compared to normal distribution, were found in the last day of menstruation, the first day of temperature above the overlap line, the length of the cycle, and days of less fertile and highly fertile mucus (Table 1).

The biomarker of cervical changes was tested by only three women in sheet I, six women in sheet II and eight women in sheet III of cycle observation.

Table 2. Age of respondents versus mean lengths of menstrual cycle in individual observation sheets

Number of cycle n		I		II		III		I-III
		n	M	n	M	n	M	M
Mean cycle length in women aged over 35		7	28.14	6	30.17	9	28.33	28.88
Mean cycle length in women aged below 35		26	28.46	25	28.60	32	28.40	28.48
No data		10	-	12	-	2	-	-
Mann–Whitney U test	U	88.00		59.50		104.00		
	p	0.887		0.757		0.385		

n – number of observations; M – mean

On average, peak cervical symptom in sheet I occurred on day 11, in sheet II – on day 13, and in sheet III – on the 14th day of the cycle.

The mean lengths of the menstrual cycle, broken down by the respondents' age, were presented in the three sheets of menstrual cycle observation carried out with the sympto-thermal double-check method. In our study, the mean cycle length in women over 35 years of age was 28.88 days, while in women under 35 years of age it was 28.48 days. The analysis carried out did not show any statistically significant differences between younger and older women in successive measurements in terms of length of the monthly cycle (Table 2).

The results showed that, based on fertility biomarkers recorded in the observations sheets, the following factors, among other things, can be assessed: the regularity of biphasic menstrual cycles, duration of the different stages of the menstrual cycle, and the correlation of these bio-indicators. The observation sheets can therefore be used to endocrinologically diagnose the course of the cycle, as well as to determine the right day for hormonal tests.

4. Discussion

Although research on the analysis of observation sheets for the sympto-thermal method to double-check menstrual cycles was interesting, the literature on this subject is still very scarce. No mentions were found in the literature on any other research of this type with a similar group of respondents, i.e. one that would reflect the results obtained by the authors in the statistical analysis. For this reason, the researchers selectively compared the data with the available literature.

Documented records of 105 menstrual cycles were submitted for analysis by 43 women. The studies cited here were ranked according to their time of publication. Consequently, a 1983 study by the World Health Organization (WHO) was conducted among 725 women from whom 6 472 cycles were obtained (World Health Organization: A prospective multicentre trial of the ovulation method of natural family planning, 1983). In a study from 2000, the research group comprised 441 women and the number of menstrual cycles reached 1427 (Deluga, 2000). The 2002 study was based on an analysis of 108 menstrual cycles of 53 women (Fehring, 2002). The study from 2006 involved 141 women who monitored between 3 and 13 menstrual cycles (Fehring, Schneider, Raviele, 2006). The authors of work from 2012 conducted their research among 31 women with regular menstrual cycles (Tawara, Tamura, Suganuma, Kanayama, 2012). An assessment of surveyed women's knowledge of the menstrual cycle and ovulation was presented in 2016 in a study involving 125 women (Ayoola, Zandee, Adams, 2016). A study from 2017 examined 284 women and analysed 1635 cycles (Crawford, Pritchard, Herring, 2017). The 2021 study was conducted with the participation of five women who provided data on 30 cycles (Worsfold, Marriott, Johnson, Harper, 2021). In the same year, 528 women participated in a study with 2488 cycles analysed (Najmabadi, Schliep, Simonsen, Porucznik,

Egger, Stanford, 2021). In the majority of papers, the number of female respondents was larger than the group included in the our own analysis. However, two studies by Tawara and Fehring involved similarly sized groups: 31 and 53 participants, respectively.

The age range of the women in our study was between 17 and 42 years, with the mean age of 29 years. Deluga's study involved women aged between 18 and 49 (Deluga, 2000). In his study, Fehring described women with the mean age of 32 years (Fehring, 2002). Tawara et al. conducted their study with the participation of women with the mean age of 32 years (Tawara, et al., 2012). Respondents in the study by Najmabadi et al. were women aged between 18 and 40 years (Najmabadi, et al., 2021). The study by Crawford et al. involved women between the ages of 30 and 44 (Crawford, et al., 2017). In the study by Ayoola et al., the authors presented results obtained among women aged between 18 and 51 (Ayoola, et al., 2016). The women studied by Fehring et al. had the mean age of 29 years (Fehring, et al., 2006). The last presented results of age analysis are identical to those in our study.

In our study, 25 (58.14%) women were not married and 18 (41.86%) declared that they were married. In the study by Najmabadi et al., 320 women (60.6%) were married and 50 (9.5%) were unmarried (Najmabadi, et al., 2021). Ayoola et al. conducted a study in which 73 (58.4%) of the respondents were not married and 52 (41.6%) were married (Ayoola, et al., 2016). The results of our study are therefore closest to those obtained in the last above-mentioned research as regards the percentage of women who were unmarried.

In our study, the percentage of women without children was 79.1% (n=34). Such respondents in the study by Najmabadi et al. made up 70.8% (n=374) of the study group (Najmabadi, et al., 2021). In the study by Ayool et al., an opposite correlation was observed. The minority (13.6% / n=17) of respondents had no offspring and 69.6% (n=87) had one or more children, with 16.8% (n=21) of women having more than three children (Ayoola, et al., 2016). This difference most likely resulted from the fact that the study was conducted on another continent with the participation of women of different races.

The average duration of the luteal phase in our study was nearly 13 days. The same time frame was reported in Deluga's research as the average time of the luteal phase (Deluga, 2000). Fehring's research, in turn, showed an average of 12 days. The length of the luteal phase in the study by Najmabadi et al. averaged 11 days (Najmabadi, et al., 2021). In another study by Crawford et al., the luteal phase had the length of 14 days (Crawford, et al., 2017). In view of the fact that duration of the luteal phase, according to the sympto-thermal double-checking method, cannot be shorter than 10 days and longer than 16 (Szymański, 2009), the number of days of this phase provided in the literature cited here aligned with the norm across all the analysed studies.

The mean length of the menstrual cycle in our own research was 28.6 days. Almost identical results were obtained in Deluga's study, where the menstrual cycle had the mean length of 28.5 days (Deluga, 2000). In Fehring's results, the mean length of menstrual cycles was 29.4 days (Fehring, 2002). 28.4 days was the length recorded by Tawara (Tawara, et al., 2012). In the study by Worsfold et al. conducted on a very small group, one woman reported regular menstrual cycles lasting 28 days, one woman had irregular cycles with the mean length of 31 days, and in three other women cycles varied from 23 to 33 days on average (Worsfold, et al., 2021). In the WHO study, the average duration of menstrual cycles was 28.5 days (World Health Organization: A prospective multicentre trial of the ovulation method of natural family planning, 1983). The mean length of menstrual cycles in the study by Fehring et al. was 28.9 days (Fehring, et al., 2006). The analysis of the mean length of cycles in Deluga's and WHO studies has proven to reflect most closely the results of our study. In contrast, the results obtained by individual authors did not differ significantly from the mean recorded in our study.

The mean duration of highly fertile mucus in our study approached 4 days. In the study by Worsfold et al., highly fertile mucus continued for 6 days (Worsfold, et al., 2021). In the study by Najmabadi et al., the average number of days of highly fertile mucus per cycle during a year was 6.4 days (Najmabadi, et al., 2021). It follows from the results of

individual authors' research presented in this paper that, compared to our study, highly fertile mucus remained 2 days longer.

In our study, the mean cycle length in women over 35 years of age was 28.88 days, while in women under 35 years of age it was 28.48 days. According to Deluga, the woman's age plays an important role as far as the length of menstrual cycles is concerned, and the length of typical menstrual cycles varies in women depending on their age group. In her study, she found that menstrual cycles are shorter in women over the age of 35. The mean cycle length in the case of women aged over 35 was 27.9 days and 28.9 days for those under 35 (Deluga, 2000). Our own studies did not reveal a similar relationship, perhaps because due to the number of interviewed women.

The age at which the respondents reported to have had their first menarche ranged from 10 to 17 years. In the study by Najmabadi et al., this age was between 11 and 14 years (Najmabadi, et al., 2021). According to Pachecka, the age range for the first menarche varies from 10 to 16 years and is mainly dependent on genetic and environmental factors as well as the level of nutrition. Mental and physical stress may contribute to delayed menarche, which means that, e.g. female dancers and athletes are likely to experience pubescence later, with the onset of the first menstrual period at 19-20 years of age (Pachecka, 2009). Only one woman in our study declared a delayed onset of the first menstruation which occurred when she was 17.

The observation of menstrual cycles and their analysis in the study group confirmed the possibility of identifying and classifying cycles in accordance with specific (in this case typical) criteria. The rationale for conducting observations in this situation may be to confirm good reproductive health, i.e. the presence of hormonal homeostasis between the 1st (follicular) and the 2nd (luteal) phases of the cycle, which allows a mature woman to achieve emotional balance as well as mental and physical well-being. At the same time, for married women, determining the time of highest fertility in order to plan or postpone conception is simple and promotes dialogue and effective communication between spouses. However, given the increasingly-prominent issue of fertility disorders and abnormal menstrual cycles, the usefulness of knowledge and health awareness in this area should be adequately emphasised. Professor Vigil points out that 3 or more cycles per year that do not meet the aforementioned criteria for typical cycles or 2 disturbed cycles occurring successively should be considered abnormal and be the subject of further medical consultation. At the same time, around 30% of regular cycles are non-ovulatory (Vigil, Lyon, Flores, Rioseco, et al., 2017). Here, an indispensable role is to be played by a professionally trained teacher of the method in question, who can also serve as a 'liaison' between the patient (client) and the physician (Szymaniak, Ślizień-Kuczapska, 2016; Ślizień-Kuczapska, Żukowska-Rubik, Sys, 2018).

In conclusion, this study provides an opportunity to classify cycles according to the characteristics of specific biomarkers and thus supports the confirmation of reproductive health or the early recognition of possible deviations and abnormalities and their treatment. The sympto-thermal double-check method belongs to the family of multivariate methods and is based on the scientific research of Dr Anna Flynn and Prof. John Kelly from the Maternity Hospital in Birmingham. As has been demonstrated, it can serve the above-mentioned purposes (Flynn, Brooks, 1990). In addition, cycle observation sheets are a functional tool for individuals interested in pursuing responsible family planning which aligns with their reproductive plans, regardless of their personal values, beliefs or place of residence. The cycle observation sheet, by providing insight into normal or disturbed operation of female reproductive health, reduces the time until the first medical consultation held in the event of any irregularities in the cycle, aids the addition of clients/patients to co-partnership in the diagnostic and therapeutic process, increases precision in the ordering and interpretation of tests throughout the cycle, and helps track progress in the restoration of normal reproductive functions of the female body. These tasks require a certified NFP teacher who combines knowledge and experience with personal support for spouses using natural family planning and fertility recognition methods.

The researchers believe that this type of work needs to be expanded and further analysed.

Conclusions

The study group was homogeneous in terms of the eligibility criteria for the analysis of observed menstrual cycles defined as typical, i.e. characterised by normal mean cycle length and bleeding, normal length and course of the luteal phase determined by the biphasic BBT curve, normal mucus development pattern and convergence of fertility indices. This study indicates the need for further broadening of knowledge regarding the implementation of this type of research based on observable fertility bio-indicators.

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Attitudes of prospective spouses towards moral principles regulating procreative behaviours[1]

Postawy narzeczonych wobec norm moralnych regulujących zachowania prokreacyjne[2]

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Abstract: The ability to transmit life is a precious gift for both spouses and society as a whole. This gift is protected by moral principles pointing to the need to reject anything that goes against responsible parenting. However, it can be noticed that when some people appreciate the ability to procreate and live in harmony with their own sexuality and fertility, others fight it. They do not recognize fertile and infertile days of the cycle, but eliminate fertility through contraceptives and even allow abortion. In the case of problems with conceiving, some decide to undergo in vitro fertilization considering neither instrumentalization and medicalisation of procreation nor the death of a number of embryos associated with the procedures undertaken nor the possible negative health effects. The article consists of three parts. It recalls passages from the Holy Scripture and numerous documents of the Catholic Church on procreation and moral principles in the field of transmitting human life. In this way, it answers the question 'how should it be?'. The answer to the question 'how is it?' becomes possible through survey leveraging a questionnaire prepared specifically for this purpose: *Attitudes towards marriage and family morality*. The respondents were people preparing for marriage as part of courses organized by parishes in villages around Lublin. It would seem that the inhabitants of smaller towns pay more attention to the opinions of others than the anonymous inhabitants of cities, with is conducive to maintaining moral norms and living in accordance with them. However, the polls of a large part of the respondents indicate serious discrepancies between the guidelines of the Catholic Church and the attitudes expressed. Although the vast majority define themselves as 'believers' and 'definitely believers', more than half of them perform religious practices: 'irregularly,' 'on special occasions' or not at all. Many people reveal preferences in the area of procreation that are inconsistent with the moral principles proclaimed by the Church. This situation requires an answer to the question: "what needs to be done so that it is as it should be?" An opportunity and hope for improvement is a program implemented within the framework of the pre-marriage course, as well as the knowledge, skills and commitment of the priests and family life counsellors who lead it. It is also necessary to extend this responsibility to the whole of society, especially authority figures, i.e. parents, educators, teachers, journalists and other groups responsible for moral and family-oriented education.
Keywords: fiancés, engaged couples, moral norms, responsible parenting

Abstrakt: Zdolność przekazywania życia to cenny dar zarówno dla małżonków, jak i całego społeczeństwa. Dar ten chronią zasady moralne wskazujące na potrzebę odrzucenia wszystkiego, co sprzeciwia się odpowiedzialnemu rodzicielstwu. Zauważyć jednak można, że gdy jedni doceniają możliwości prokreacyjne i żyją w zgodzie z własną płciowością i płodnością, inni z nią walczą. Nie rozpoznają dni płodnych i niepłodnych w cyklu, lecz eliminują płodność poprzez środki antykoncepcyjne, a nawet dopuszczają aborcję. W przypadku problemów z poczęciem, niektórzy decydują się na zapłodnienie in vitro, nie bacząc na instrumentalizację i medykalizację prokreacji, ani na śmierć części embrionów wpisaną w podjęte procedury, ani na możliwe negatywne skutki zdrowotne. Składający się z trzech części artykuł przypomina fragmenty Pisma Świętego i liczne dokumenty Kościoła katolickiego na temat prokreacji i zasad moralnych w dziedzinie przekazywania życia ludzkiego. W ten sposób odpowiada na pytanie „jak być powinno". Odpowiedź na pytanie „jak jest" staje się możliwa dzięki przeprowadzeniu badań, specjalnie dla tego celu opracowaną, ankietą: *Postawy wobec moralności małżeńsko-rodzinnej*. Respondentami były osoby przygotowujące się do małżeństwa w ramach kursów organizowanych przez parafie w podlubelskich wioskach. Wydawać, by się mogło że mieszkańcy mniejszych miejscowości, bardziej zważają na opinie innych, niż anonimowi mieszkańcy miast, a to sprzyja zachowywaniu norm moralnych i życiu zgodnie z nimi. Ankiety znacznej części badanych wskazują jednak na poważne rozbieżności pomiędzy wskazaniami Kościoła katolickiego, a wyrażanymi postawami. Mimo, że zdecydowana większość określa siebie jako ludzi „wierzących" i „zdecydowanie wierzących", to ponad połowa z nich, praktyki religijne spełnia: „nieregularnie", „od wielkiego święta", lub wcale. Wiele osób ujawnia odniesienia wobec prokreacji niezgodne z zasadami moralnymi głoszonymi przez Kościół. Sytuacja ta wymaga odpowiedzi na pytanie: „co zrobić, aby było tak, jak być powinno"? Szansą i nadzieją naprawy jest program realizowany w ramach kursu przedmałżeńskiego, a także wiedza, umiejętności i zaangażowanie prowadzących go duszpasterzy i doradców życia rodzinnego. Konieczne jest również rozszerzenie tej odpowiedzialności na całe społeczeństwo, zwłaszcza autorytety wychowujące, czyli: rodziców, wychowawców, nauczycieli, dziennikarzy i inne grupy odpowiedzialne za wychowanie moralne i prorodzinne.
Słowa kluczowe: narzeczeni, normy moralne, odpowiedzialne rodzicielstwo

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2 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Dudzia.pdf

Introduction

Marriage is a vocation and realization of a community of life and love (Vatican Council II, 1965, KDK 48). It is the foundation of a future family when out of the unity of husband and wife a new human is conceived and born Conjugal love and procreation are two essential elements of marriage. "The matrimonial covenant, by which a man and a woman establish between themselves a partnership of the whole of life and which is ordered by its nature to the good of the spouses and the procreation and education of offspring, has been raised by Christ the Lord to the dignity of a sacrament between the baptized"(Code of Canon Law, 1982, Can. 1055, § 1). The good of spouses requires that they establish: an interpersonal relationship based on dialogue, understanding and empathy. The spouses should take care of both the sphere of intimate life and the one of spiritual growth. They must take into account intellectual, emotional, physical, economic and social development, both their own and their spouse's (Król, 2018). Having become parents, spouses should be aware that their duty to their children is not only to give birth to them physically: at the most appropriate time, with pre-concept and prenatal care, but also psychological and spiritual begetting through proper upbringing. The essential tasks of spouses and future parents require appropriate preparation, described in detail in subsequent Instructions (Polish Bishops' Conference, 1969, 1975, 1989). This preparation should take into account the following spheres: physical, mental, spiritual, social, economic, educational, moral, religious, preventive and organizational. The necessity of intensive and conscientious preparation is justified by the fact that the marital community is by definition durable and covers the whole life (Braun-Gałkowska, 1984, p. 57). It is also, in addition to solitary, priestly and religious life, one of the paths of sanctification leading to eternal life. As a community it should be: faithful, exclusive and indissoluble, alien to betrayal and divorce, preventing the trivialization of human sexuality, or interfering with, manipulating and disturbing fertility. The Directory for the Pastoral Care of Families divides preparation for marriage into further, closer and immediate (Conference of the Polish Episcopate, 2003, No. 18-33). It concerns: – family influence on a small child; – the impact of school and other educating authorities on a large child and a teenager; – as well as premarital catecheses and meetings at a Catholic Family Life Clinic in which adult prospective spouses participate.

It seems that when asked about marriage preparation, many brides will talk about: the date of the wedding, wedding halls available to rent, finding a suitable band, the prices of elegant outfits and inviting guests, rather than: understanding the meaning of the sacrament of marriage, experiencing the liturgy, building the marital bond, the development of the ability to love and the ways of expressing love, the planned number of children, shaping the educational environment in the family, or recognizing fertility. According to research and the experience of family life counsellors from Catholic Family Life Clinics, many Catholics coming to premarital education did not read Paul VI's encyclical *Humanae Vitae*. *On the Regulation of Birth* (in Polish translation: *On Moral Principles in the Field of Transmitting Human Life*) (Furtak, 2011, Katarzyńska, 2020). Probably, there is still a large group of prospective spouses who only have the first opportunity to learn the principles of observing symptoms and interpreting fertility indicators at the church clinic. It is possible that a significant number of people preparing for marriage were subjected to the pressure of contraceptive advertisements disseminated by secular circles much earlier. Perhaps some of them, under the influence of women who cause street riots and of liberal media, have assimilated arguments for the right to kill an unborn baby in various life situations, e.g. because of health or legal reasons. Others are inclined to approve of IVF and, despite belonging to the Catholic Church, they cannot explain why it is morally unacceptable.

Finding out about the attitudes towards procreation exhibited by fiancé and fiancée is possible through specific questions asked in a survey form developed for the purpose of this article. According to the paradigm used in pastoral theology, the obtained results, i.e. the statement 'how it is', can be compared with the moral principles in the field of

transmitting human life, that is, with 'what it should be'. This, in turn, will give the answer 'what needs to be done so that it is as it should be?' (Przygoda, 2009, 31-43). This knowledge is needed in theoretical and practical, individual and social, temporal and eternal dimensions. It may be useful to fiancés, spouses, parents, and those who help to prepare for marriage and family life.

Studying the positions of engaged couples towards procreation is a process consisting of three elements:

- recalling the moral principles in the field of transmitting life;
- obtaining and presenting opinions collected in an anonymous survey:
- providing possible tips on shaping moral attitudes in the field of procreation.

The above-mentioned issues will be the content of the following paragraphs. The conclusion will make it possible to draw attention to the most important takeaways from the research and pastoral indications, and the Bibliography will give readers a hint about publications expanding their knowledge on the most interesting issues.

1. Moral principles in the field of transmitting life

The issue of responsible parenthood was first and most extensively described in the encyclical Humanae vitae (Paul VI, 1968) on this subject. However, this theme was already taken up in the first centuries of Christianity, e.g. by Basil the Great (330-379), John Chrysostom (born before 350 and died in 407) and Saint Augustine (354-430). The fundamental basis of the moral issues proclaimed by early Christian authors was the Holy Scripture. In it, they also looked for a grounds for their position on abortion and contraception.

In both the Old and New Testament, human life was treated as a sacred gift from God (*Holy Bible,* 1980, Genesis 3:20; Ex 23:26; Ps 139: 13-16; 2Mch 7: 22-23; Luke 1:15 and 44), which must not be destroyed. The description in the Book of Exodus shows that the accidental hitting of a pregnant woman leading to a miscarriage was to be punished with a fine (*Holy Bible,* 1980, Ex 21, 22). The Greek translation of the Old Testament, known as the Septuagint, made in the 3rd century BC, distinguished between the views of a formed and unformed foetus at that time, and applied not only to an adult, but also to a formed foetus, the principle of 'life for life, eye for eye, tooth for tooth' (*Holy Bible,* 1980, Ex 21, 23).

The critical stance on contraception can be found in the Scripture story of Onan, who practised *coitus interruptus*, or interrupted intercourse (Genesis 38: 6-10). Avoiding fertilization by pouring semen on the ground was considered a shameful act and a grave sin: 'What he did was evil in the eyes of the Lord' (Genesis 38:10). The sinfulness of this sexual act could, however, be understood not only as the prohibition of contraception, but as the avoidance of compliance with the law of the levirate.

Patrologist Stanisław Longosz states that the clear condemnation of contraception is visible in the commentary of John Chrysostom to the Letter to the Romans (Longosz, 2007, 292-293). The golden-mouthed archbishop of Constantinople warns against adultery in the form of marital adultery and prostitution, which may result in contraception and abortion. He is also opposed to contraceptives and abortives when they are used in marriage. He also criticizes the behavior of people who 'make their nature barren' and mutilate themselves through sterilization (Jan Chryzostom, 2000, 345). Such an act may be tantamount to suggesting that 'the Creator made a mistake that must be corrected, which is an insult to God and an invention of the devil' (Longosz, 2007, 294-295). Both men and women *are to blame for abortion*. *In case of men that is because by sexually exploiting women who are able to 'produce offspring' they prepare them for 'murder'*. They make the female womb, 'the source of fertility', <the cradle of death> (Jan Chryzostom, 1998, 534-536).

An unequivocal objection to inducing miscarriages was expressed by the bishop of Caesarea of Cappadocia, Basil the Great (330-379): '*a woman who intentionally destroys a foetus is punishable as for murder. And it is not up to us to investigate carefully whether the fetus was already shaped or still shapeless [...]. Such women who*

provide the means of causing miscarriage are murderers, as are those who take poisonous substances and kill the foetus' (St Basil, 1972, 187 191).

The same was understood by Marcus Minucius Felix, a Roman writer *of African origin* and Christian apologist from the 2nd / 3rd century AD, who wrote: *Women who, while drinking medicine, destroy the fetus of a future life in the womb, commit infanticide' (*Minucius Felix, 2001, 64*).*

Saint Augustine (354-430), in his work *On Marriage and Virginity*, stated unequivocally: *Debauched this cruelty, or rather cruel debauchery, often goes so far as to use poisons against fertilization, and when they fail, it destroys the conceived fetus in the womb by some means and removes it'* (Augustine De nuptiis et concupiscientia., Cap. XV).

Continuing the previous teaching against the unethical counteracting of procreation, Pope Pius XI speaks in the encyclical *Casti Connubii* (1930). With the consent of both spouses, <honest abstinence> is allowed, and not *'honest abstinence' is allowed and not 'violating the natural act'* (Pius XI, 1930, II, 1).

In the 14th number of the encyclical *Humanae vitae*, Paul VI informs that direct deprivation of fertility, whether permanent or temporary, of both man and woman, and all measures to prevent conception, whether taken before, during or after the intercourse, must be rejected (Paul VI, 1968, 14). If there are good reasons for postponing conception, whether physical (health) or mental or other external circumstances, '*spouses are allowed to take into account the natural cyclicality inherent in reproductive functions and to have intercourse only in periods of infertility*'. Such regulation of conception is ethical and takes place without breaking moral principles (Paul VI, 1968, 16).

The Catechism of the Catholic Church points out that '*spouses called to give life share in the creative power and fatherhood of God*' (CCC, 1994, 2367). The transmission of life and the raising of children is a mission in which the husband and wife are co-workers and expressers of the love of God the Creator. Therefore, they should carry out their task 'with a sense of human and Christian responsibility' (ibidem). Conception regulation based on the recognition of fertile and infertile days in the cycle and periodic abstinence 'is consistent with the objective criteria of morality' (CCC, 1994, 2370). On the other hand, sterilization and contraception are clearly defined as morally unacceptable measures (CCC, 1994, 2399). 'For justifiable reasons, the spouses may wish to postpone the birth of their children' (CCC1994, 2368). However, this must not result from selfishness, but is to be 'in accord with the righteous generosity of responsible parenthood' and in keeping with 'the objective criteria of morality' (ibidem).

The protection of the life of every human being, also in the embryonic stage of development, is ensured by the fifth commandment of the Decalogue 'You shall not kill' (Holy Scripture, 1980, Ex 20, 13; Dt 5:17).

Church's objection to the killing of a child developing in its mother's womb can be read in the document of the Congregation for the Doctrine of the Faith *Quaestio de abortu procurato*, approved by Paul VI, stating that: 'Life should be cared for and nurtured, both at the beginning and in different stages of development' (Congregation for the Doctrine of the Faith, 1974, II, 6). Laws enacted by people that allow killing must not destroy the law of God who is Love (Scripture, 1980, 1 Jn 4: 7) and, as the encyclical Evangelium Vitae emphasizes, God who is the Lord of life (John Paul II, 1995, 39). 'Man's life comes from God, it is his gift, his image and reflection, participation in his life-giving breath. That is why God is the only Lord of this life, man cannot have it at his disposal (ibidem). The arguments for life result from science, faith and morality as well as reason. 'It is not always easy to follow the voice of conscience in keeping God's law, especially as it can entail inconvenience and heavy sacrifice. It, sometimes, takes heroic bravery to remain faithful to moral standards. However, it must be clearly stated that constant fidelity to a true and honest conscience is the way to the authentic development of the human person' (Congregation for the Doctrine of the Faith, 1974, 24).

Another document referring to the gift of life the *Donum Vitae* Declaration, approved by John Paul II, emphasizes that: 'No one, under any circumstances, can claim the right to directly destroy an innocent human being' (Congregation for the Doctrine of

the Faith, 1987, Introduction, 5). This issue is also clarified in the *Catechism of the Catholic Church*: ‹Human life is sacred because from the very beginning it requires› God's creative action and remains forever in a special relationship with the Creator', its only destination (CCC, 1994, 2258). Doubts, since when are you a human? are addressed by genetics, embryology, psychology and prenatal pedagogy. This is unambiguously explained in the aforementioned *Quaestio de abortu procurato* declaration, in the chapter Scientific Arguments: 'From the moment the egg is fertilized, a life begins that is not that of a father or a mother, but that of a new, living human being that develops independently of them' (Congregation for the Doctrine of the Faith, 1974, 12). ‹From the moment of conception, human life should be respected and protected in an absolute way. From the very first moment of his existence, a human being should be granted the rights of a person, including the inviolable right of every innocent being to life' (CCC, 1994, 2270, cf. Congregation for the Doctrine of the Faith, Instr. *Donum vitae*, I, 1). This position was confirmed in the *Charter of the Rights of the Family*, recognizing that "Human life, from the very moment of conception, must absolutely be cared for and respected'. On the other hand, 'abortion is a direct violation of the fundamental right of every human being–the right to life' (CRF, 1983, art. 4). At the Second Vatican Council, the *Pastoral Constitution on the Church* stated that 'human life, once conceived, should be protected with the utmost care, and abortion, like infanticide, should be considered a disgusting crime' (KDK, 1965, 51). The *Catechism of the Catholic Church* affirms that: 'From the beginning, the Church claimed that any induced termination of pregnancy was a moral evil. Teaching on the subject has not changed and remains the same. Direct termination of pregnancy, that is, intended as an end or measure, is deeply contrary to the moral law' (CCC, 1994, 2271). In the next issue of the Catechism, this act is called a serious offense and a crime against human life, for which the penalty of excommunication is imposed (CCC, 1994, 2271).

Since the birth of Louise Brown's 'first test tube baby' in 1978, IVF has become very popular, with an estimated 8 million babies born in this way (Stachura, 2021). Some people describe the procedure of in vitro fertilization as a 'miracle of medicine'and 'a chance for the infertile', without making its moral evaluation. In this context, it is worth noting that not everything technically possible is ethically acceptable. Help to clarify this issue comes from the Congregation for the Doctrine of the Faith with *Instruction on respect for the new life and the dignity of its transmission.* It explains that 'the gift of life should be passed on only in marriage through proper acts exclusive to spouses, according to the laws inscribed in their persons and in their union' (Congregation for the Doctrine of the Faith, 1987, Introduction, 5). 'The spread of technology that allows intervention in the processes of transmitting life raises very serious moral problems with regard to due respect for a human being from the very beginning, for the dignity of the person, for their sexuality and for parenthood'(Congregation for the Doctrine of the Faith, 1987, Conclusion).

It is morally wrong to reduce human life to a laboratory issue, reify a person, instrumentalize sexual behaviour, risk death or deliberately take the life of the so-called supernumerary embryos, masturbate with the aim of obtaining sperm, endanger the health of a woman, administer hormonal stimulation causing hyperovulation, take gametes from strangers, undertake 'production' of people, allow the possible negative effects of artificial insemination. In the case of heterologous fertilization, it is worth emphasizing that 'the fidelity of spouses in marital unity entails mutual respect for their right to become father and mother solely through themselves' (Congregation for the Doctrine of the Faith, 1987, II. A.1). In turn, the Church's opposition to homologous fertilization stems from the following: it takes place outside the bodies of the spouses, with the help of third parties who manipulate gametes and embryos. 'This kind of relationship of lordship is in itself contrary to the dignity and equality that should be shared by parents and children'. It is 'in itself wicked and contrary to the dignity of parenthood and marital unity, even if everything was done to avoid the death of the embryo' (Congregation for the Doctrine of the Faith, 1987, II. B. 5.

Presentation of issues related to procreation, by compiling the relevant documents defining how it should be', prompts us to learn about the attitude of people preparing for the sacrament of marriage (potential future parents) to define 'how it is'. By compiling the results of the survey, it will be possible to state whether or not the views of the engaged couples are compatible with moral norms in the field of the transmission of life.

2. Results of the survey of a group of engaged couples

The research was carried out in March, April and May 2022 in two communes near Lublin, one located to the south-east and the other to the north-west of Lublin. The survey took place during pre-marriage courses in parishes. These courses are held there once a year in order to attract more people at the same time. The current courses gathered the inhabitants of nearby villages planning to get married this year. According to the program, they attended lectures and workshops on responsible parenting. It was decided that the survey would be conducted before the beginning of the classes on the regulation of conceptions. This made it possible to register the knowledge and views with which the prospective spouses come to the pre-marriage course, without the influence of the content heard from the instructors. The survey forms were developed in accordance with the aim of the research, which was to diagnose a positive or negative relationship of the attitudes of future spouses and potential parents towards moral principles in the field of procreation.

The respondents were: – assured of anonymity, discretion, as well as the scientific nature of the research, – located in the room so that the work could be independent, – equipped with pens and a list of questions, – formally instructed how and where to answer open and closed questions (by marking the selected answers and entering their own in the dotted spaces), – also asked to carefully and accurately fill in all the fields of the received printout.

The questionnaire, entitled Attitudes Towards Marriage and Family Morality, contained 25 questions, 3 of which required defining of such terms as: abortion, contraception and natural family planning. 10 questions required circling the answer of choice. The other questions, which involved selecting YES, NO or IT DEPENDS, required marking and explaining the chosen answer. Some of the questions concerning procreation will be elaborated on in this text. The other questions related to sexuality will be the subject of the next article. Questions concerning personal data covered: age, which as it turned out was in the range of 22-34; the number of children in the generational family (of one's own and of their fiancé/fiancée) and the planned number of children of your own family–2-3 children were mentioned most often. The last question made it possible to refer to who influenced the respondent's attitudes towards marriage and family, where the father was mentioned the most frequently and the mother immediately after

Out of the questions requiring a definition, the answers concerning abortion turned out to be the most correct. One can see that this is a well-known topic for the engaged, and does not pose any difficulties in explaining. A question about contraception was answered partially with the respondents claiming, for example, that it is pregnancy prevention, but not mentioning the means by which it is done. The biggest problem was explaining: what is natural family planning? Many people did not answer at all, others answered incorrectly. An example of incorrect or incomplete statements are the following statements: 'Natural family planning is living together on days that favour fertility' K6; 'No contraception M28'; 'Related to the use of the calendar' K3, 'safe method when you are not ready to be a parent, unfortunately very unreliable' K10.

People who know any of the methods of natural family planning constitute 36% of the surveyed group, however, most of them admitted only knowing the calculation method known as the calendar method. The discovery of this method by Kuysaku Ogino (1882-1975) and Herman Knaus (1892-1975) was a breakthrough in the 1920s and 1930s (Thiery, 2000). Currently, however, observation methods are more precise than the calculation method, taking into account the individual fertility indicators on an ongoing basis (Dudziak, 2001, 75-83; Taż 2002, 81-101. This group consists of: the thermal, Billings

and symptothermal methods, also known by the names of the people who developed it: in Poland, Teresa Kramarek, in Austria: Josef Rötzer, in the United States John and Sheila Kippley, founders of the Couple to Couple League. The Multiple Index Double-Check Method, which originated in the United Kingdom, takes into account changes in the cervix in addition to the calendar calculation and changes in temperature and mucus (Dudziak, 2001, 91-95). It began with a Pole living in England, Jan Mucharski (also known as Paul Thym), and was developed, described and disseminated By John Kelly and Anna Flynn. In Poland, the first course for natural family planning teachers, in accordance with the principles of the Multiple Index Method, took place in 1988 followed by the next one in 1989. The lecturers included Anna Flynn, who works at the Queen Elizabeth Birmingham Maternity Hospital and Alina Lichtarowicz a doctor of Polish descent based in the United Kingdom.

Among the respondents assessing their knowledge of the NDP methods, 61% chose the answer 'I don't know, but I will learn', 3% said: 'I don't know and I don't care'. A reluctant attitude towards fertility recognition methods or the lack of knowledge and the ability to apply them is not conducive to the attitude of responsible, competent and prepared parenting. Most prospective spouses learnt about natural family planning neither in the family home nor at school. However, it is hopeful that people who have not yet acquired knowledge in the field of NFP have a chance to make up for it during pre marriage courses organized in parishes.

Educational background of the prospective spouses participating in the pre-marriage course and completing the questionnaire is presented in Figure 1. It shows that most of the surveyed graduated from secondary education (more than half of the respondents). 39% of the surveyed group graduated from higher education, and 7% graduated from vocational education. The level of education would not be a barrier to learning observational methods of fertility recognition and birth control with their help. Experience shows that this is not a problem even for the illiterate. In 1989, John and Evelyn Billings, who delivered a lecture at the John Paul II Catholic University of Lublin, admitted that they taught the symptomatic method in 60 countries and it was possible also in tribes of people who could not read and write. It is obvious to people who cultivate the land that nothing grows during the drought and that the soil produces crops during the rainy season. Transferring this into the phases of the cycle and referring to the woman's cervical mucus, which plays an important role regarding in the man's sperm, they understood when there is the fertile period is and when there is not (Figure 1).

In teaching natural family planning, a greater role than educational background seems to be played by the willingness to acquire this knowledge and the opportunity to attend classes with an appropriate instructor. Religious formation may also play a role in motivating the acquisition of this knowledge, its adoption and application. A consequential parameter of religiosity is respect for moral norms, and one of them concerns responsible parenthood that excludes abortion, contraception and in vitro fertilization (Paul VI, 1968; John Paul II, 1995; Congregation for the Doctrine of Faith, 1987). The following Figures 2 and 3 show the attitude of the prospective spouses towards faith and religious practices. In the group

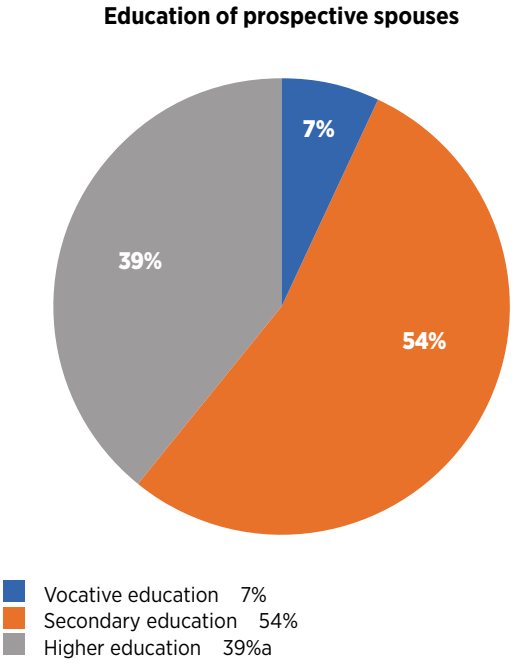

Figure 1. Percentage of the surveyed prospective spouses depending on their education.

of fiancés preparing for the sacrament of marriage in the Catholic Church, 96% declared that they were 'believers' or even 'definitely believers', 4% said that they had no opinion on faith and were not interested in it. Entering into marriage with a non-believer is possible under the condition of declaring no obstacles to the fulfilment of the spouse's religious practices and the Catholic upbringing of children. However, it is a difficult situation that requires special pastoral attention (John Paul II, FC 78). The Catholic side takes on greater and often independently fulfilled duties related to the baptism of children and the implementation of religious practices. In applying the natural regulation of conception, the non-believer will be devoid of religious motivation, but may appreciate other arguments, e.g. ecological, health-related or economic as well as respecting the dignity of the spouse and not creating obstacles to building the marriage bond (Figure 2).

The manifestation of professed faith is the implementation of religious practices. The questionnaire made it possible to mark one of several possible answers regarding the frequency of fulfilling religious practices. It is appropriate for respondents to describe themselves as 'systematically practising' or 'practising more than is mandated by the laws of the Church'. It appeared, however, that the responses of those preparing for marriage were more varied. As we can see in Figure 3, 43% of people practised regularly. The same number of people from the study group admitted that they practiced irregularly Those practising more than what is required by Church's regulations accounted for 3%, however on-practitioners constituted 4% and those who practiced extraordinarily, on special holidays 7%, which gives a total of 11% Those practising, as it is dictated by the regulations of the Church or even more, made up 46% of the surveyed group. The majority constituting 54% of the surveyed group did not fulfil the practices as they should or they did not practice at all. These statements allow us to predict that the declaration of respecting the moral standards that protect marriage and family life would be far from the expected. One should also notice an inconsistency in the responses of people claiming that they were <definitely believers> and at the same time writing that they <practice irregularly>

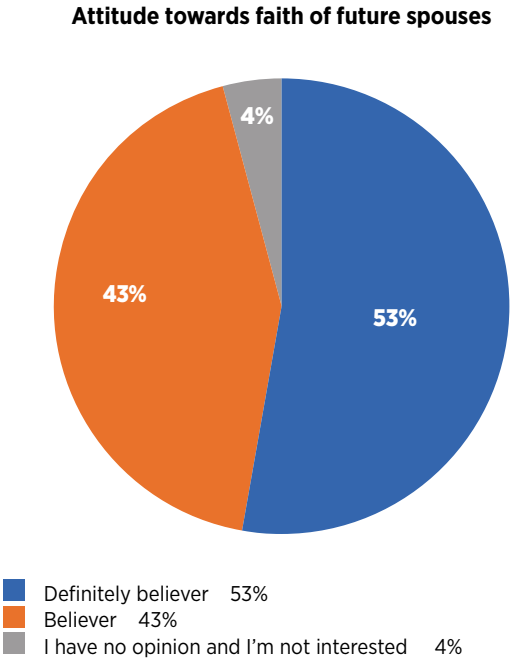

Figure 2. Percentage of the surveyed prospective spouses depending on their self-declared attitude towards faith.

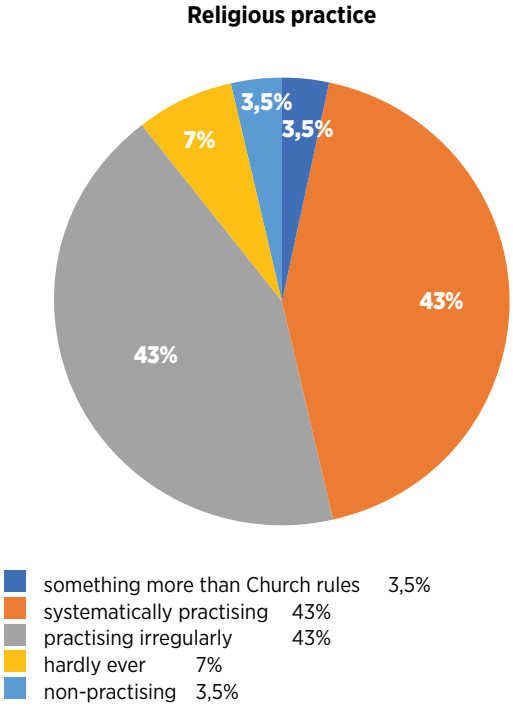

Figure 3. Percentage of the surveyed prospective spouses depending on frequency of their religious practices

(21%) or even <exceptionally, hardly ever> (7%). The sense of dissonance creates a clear discrepancy between a verbal declaration and acts motivated by

faith Words alone without being matched by proper deeds are from maturity that requires the integration of choices (decisions) and actions. The situation of lack of religious maturity may negatively affect future relationship in marriage and family life, especially the upbringing of children who need a clear, unfeigned testimony, the right model to follow (Figure 3).

The moral standards acceptance that the prospective spouses were asked about concerned parenthood excluding contraception, abortion and in vitro fertilization. Do young people preparing for the sacrament of marriage have views in line with the morality of marriage and family? The answer to this question is illustrated in Figure 4.

The data shows that attitudes towards procreation that are inconsistent with moral norms are displayed by: 79% of prospective spouses when it comes to allowing the use of contraception, 68% regarding allowing in vitro fertilization and 43% in terms of allowing the killing of a child by abortion. This condition needs to be corrected by a thorough religious formation taking into account moral education, both for children and adults. You cannot pass on to others what you do not have yourself. The current attitudes of a significant proportion of prospective spouses do not guarantee successful education and moral formation of their future children. This applies to both views and conduct, especially since a large proportion of the respondents, when asked what methods / means they intend to use in their future marriage, they responded in violation of norms applicable to Catholics: 46% write that they would use contraceptives, of which 11% specify that they would be hormonal pills, 7% chose mechanical means, condoms, one of the men said: 'Whatever we will find' Every fourth fiance (25%) wrotes: 'We do not know yet' (eg K 9, M5, K 18,), 'we have not talked about it' (M 20), 'we have not established yet' (K19). The use of natural family planning in a future marriage is declared by 29% of respondents, half of whom write that it will be the calendar method. There was also an intention to combine natural family planning with barrier contraception, such as the use of condoms during the fertile days. Some people also expressed the desire to combine natural family planning with hormonal contraception This idea, besides being morally unacceptable, is illogical and impossible to put into practice. The hormone-induced cycle disorder makes it unrealistic to determine the fertile and infertile days by observation while taking the pills. The deficiencies in the knowledge of the physiology of fertility and the methods of its recognition, as well as the issues of marital and family morality, found in prospective spouses, place high demands on counsellors and priests.

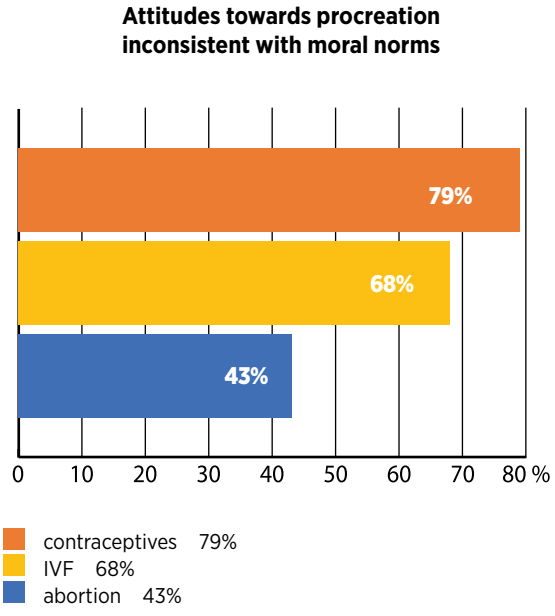

Figure 4. Percentage of the surveyed prospective spouses with attitude towards procreation not in compliance with moral norms (complete or partial approval of morally unacceptable behaviour).

3. Postulates of shaping morality in the procreation sphere

The commitment to the Catholic upbringing of children during the wedding liturgy (Rites of the Sacrament of Marriage, 2007) also applies to moral formation. This should be done through the parents' own testimony, but also through conversations with the child expanding knowledge, sharing books and magazines, developing moral sensitivity choosing good over evil, motivating and creating opportunities for moral behaviour (Łobocki, 2009, 12-13). The state of knowledge of future spouses shows insufficient efforts in this area. It is possible that this topic is considered a 'taboo', which is not discussed

in many households. It is possible that the parents did not have well-established biomedical and moral knowledge in the field of responsible parenting and family planning methods. It is possible that the prospective spouses did not obtain this knowledge at family home to a sufficient degree, or they have either forgotten it or rejected it under the influence of others. From the answer to the question of who influenced the current attitudes of engaged people, the most frequently mentioned person is father (61%) and mother (53%), followed by: grandmother, friends, grandfather, priest, teacher, books, siblings, myself. There is also a response <life> that points to your own life experience.

In order to bring the presented reality <how it is> to <how it should be>, it seems useful to introduce adult catechesis in parishes on the issue of marital and family morality, to open counselling centres not only for engaged couples (as some see it), but also for married couples, conduct thematic courses and training, retreat teachings and, on responsible parenting for spouses in formation movements and communities. Both engaged and married couples need the support of the family pastoral workers. Shaping the attitude of responsible parenthood aims at the situation when 'the spouses obey God's call and faithfully express God's plan for the family' (Goleń, 2013, 112). To counterbalance the widespread promotion of contraception and in vitro fertilization, and the frequent voices that justify the killing of children through abortion, it is right to conduct radio and television broadcasts teaching responsible parenthood. There is also a need for numerous publications, both scientific and popular, on selected issues in natural family planning. In the sphere of procreation-related and moral education of society, spouses have a lot to do, following the attitude of responsible parenthood, known from the Humanae Vitae encyclical. It is good for all Catholic couples to know that 'The vocation to marriage also includes the call to the apostolate. (...) By virtue of the sacrament of marriage, husband and wife are missionaries of love and life' (Adamczyk, 2022, 126).

The fact that more than half of the interviewed prospective spouses admit to <irregular religious practices> that have occurred 'extraordinarily, on special holidays'or not at all, significantly limits the possibility of pastoral influences useful in shaping moral attitudes. However, you cannot give them up. Also pre-marriage courses should be treated very responsibly, conscientiously filling the classes with the necessary content. It is also worth paying attention to the activity of associations teaching methods of fertility recognition as well as education and counselling carried out through their websites. The well versed in biomedical issues teachers' knowledge about natural family planning should be supplemented with content in the field of moral education, and catechists and priests should be invited to participate in fertility recognition training. It is worth using the help of graduates of family sciences, who, as few from among those with higher education, have lectures and exercises in their curriculum which allows learning about fertility recognition methods.

Professional development is also useful for teachers. It should consist of aspects of moral education and biomedical foundations of family planning. This is important for all teachers, irrespective of the subject taught, because each teacher is also an educator and has form time to arrange. The subject of moral education cannot be ignored during this time. Biologists who are familiar with biomedical knowledge should step up their own moral education. On the other hand, catechists, as the only teachers who had the subject of moral theology (general and specific) in their university studies, should supplement their knowledge in the field of fertility physiology and natural family planning. The role of the school is, of course, not to replace parents, but to support the educational process and proper, integral education that takes into account the human body, psyche, spirit and social relations. The educational responsibility of teachers should mobilize them to self-evaluation and place demands not only on students or their parents, but also on themselves. Jarosław Kamiński (2010, 411) rightly states that "the testimony of their own lives is a big challenge for people responsible for moral education of the young generation. The point is that the behavior of parents and educators should be an object of identification for children and an example worth following.

It is worth considering what healthcare facilities can do for responsible procreation, pre-conceptual and prenatal care. Perhaps, instead of offering contraception, abortion and in vitro fertilization, former natural family planning clinics existing next to gynaecological surgeries could be reinstantiated or newly established? Perhaps local governments and non-governmental organizations could support the organization of training and preconception counselling? Perhaps pro life movements could expand their activities?

Responsible parenting is beneficial for the physical and mental health of children, for the bond of spouses and for the spiritual formation of families. Procreation ensures the existence of next generations, determines the future of the nation, societies and the world. For these reasons, it is a social issue, not only an individual one. Therefore, the concern for mature and responsible procreation attitudes should be a call to everyone. Therefore, parenthood as a great and important task cannot be accidental, unprepared, instrumentalized, treated as a divine punishment, an 'accident an intruder that is avoided and fought. Prospective spouses should see in their future parenthood a gift received and offered in love.

Conclusion

We obtain the knowledge on procreation, which is a gift and a task, already in first chapter of the Book of Genesis, after the creation of the world and man. God shares his creative power with the first human couple, inviting them to cooperate: Then God blessed them saying to them: <Be fruitful and multiply and fill the earth and subdue it' the *Holy Bible* 1984 (Gen 1,28a NIV). According to the message in the Books of the Old Testament, parenthood has been treated for centuries as a gift and a sign of God's blessing (e.g. Gen. 24:60; 15, 5; 22:17; 26, 4; 16:10; Ps 128: 3; 127: 3-7;. 5). The child 'was someone who ensured the continuity of the family, gave conviction about a well-fulfilled duty and meaning in life, and ensured the respect of the community (Zarych, 2015). However, procreation does not end in conceiving and giving birth to offspring. After being born physically, there is a need for a mental, spiritual and social begetting that takes place through upbringing. The child, the fruit of conjugal love, together with its parents creates a family, the first and most important place for human development and upbringing. Proper development requires caring love and an example of life that shows the norms and values that need to be learnt, internalized and implemented every day.

The results of surveys conducted among people preparing for marriage indicate that many of them who choose contraceptive measures, approving in vitro fertilization, and even allowing the killing of a child by abortion, do not guarantee a good educational example for future children, and even constitutes a threat to them. This implies a great and difficult task to be performed by family counsellors and priests who conduct pre-marriage courses. The challenge is to help these young people make up for the shortcomings and errors in education in terms of morality, knowledge and reproductive responsibility in a few sessions. This situation highlights the need to undertake numerous activities in different social groups and to prepare the society for cooperation through various trainings. Those should involve: parents, teachers, students, health care workers, journalists, activists of local government organizations, politicians. It is thanks to procreation that the society exists, therefore the task of the whole society should be to prepare for responsible procreation in accordance with moral norms.

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The attitude of women in the perinatal period to food and their own body depending on the satisfaction with the relationship

Stosunek do jedzenia i własnego ciała kobiet w okresie okołoporodowym w zależności od satysfakcji ze związku partnerskiego[1]

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Abstract: The period of pregnancy and puerperium is a unique experience in a woman's life. Although her attention and care are primarily focused on the child, his health and proper development, her self-image still plays an important role for her. One of the determinants of accepting your own body is its weight, which during pregnancy and puerperium – for obvious reasons – is much higher than before. Also other changes that accompany a woman during this period (e.g. discoloration, stretch marks, swelling) affect the assessment of her image. Acceptance of your own physis is largely conditioned by the relationship with your partner, including the sense of support and understanding that the woman experiences from him. The aim of the own research, designed in the model of correlation with the control group, was to verify the relationship between the body image and nutritional behavior of pregnant and postpartum women, depending on their satisfaction with the partner relationship. The variables were measured with the *Kwestionariusz zachowań związanych z jedzeniem* by N. Ogińska-Bulik and L. Putyński, the *Kwestionariusz wizerunku ciała* by A. Głębocka and the *Inwentarz jakości związku* in the Polish adaptation of H. Liberska, D. Suwalska-Barancewicz and P. Izdebski. It has been shown that there is a statistically significant correlation between the body image and nutritional behaviors both in women from the proper group – during pregnancy and puerperium, and in the control group – in women who are not pregnant and in the puerperium period. It has been empirically confirmed that the better the body image, the better the relationship with food and the less abnormal eating behavior. In addition, women who are satisfied with their relationship have a more positive self-image and more constructive eating behavior. The conducted research shows that for women in the perinatal period, as well as those who are not currently pregnant and in the postpartum period, the acceptance of the body image is a factor that protects against unconstructive eating behavior, and the feeling of satisfaction in the relationship is conducive to both a positive assessment of one's own physicality and in the postpartum period and proper relationship with food.
Keywords: body image, eating behavior, partner relationship, pregnancy, puerperium

Streszczenie: Okres ciąży i połogu jest wyjątkowym doświadczeniem w życiu kobiety. Choć jej uwaga i troska skoncentrowane są przede wszystkim na dziecku, jego zdrowiu i prawidłowym rozwoju, to jej własny wizerunek pełni dla niej nadal istotną rolę. Jednym z wyznaczników akceptacji własnego ciała jest jego masa, która w okresie ciąży i połogu – ze względów oczywistych – jest znacznie wyższa niż dotychczas. Także inne zmiany towarzyszące kobiecie w tym okresie (np. przebarwienia, rozstępy, obrzęki) wpływają na wartościowanie swego wizerunku. Akceptacja własnej *physis* w dużej mierze warunkowana jest relacją z partnerem, w tym poczuciem wsparcia i wyrozumiałością, jakiego doświadcza od niego kobieta. Celem badań własnych zaprojektowanych w modelu korelacyjnym z grupą kontrolną było zweryfikowanie związku między obrazem ciała a zachowaniami jedzeniowymi u kobiet w okresie ciąży i w połogu w zależności od ich zadowolenia ze związku partnerskiego. Do pomiaru zmiennych zastosowano *Kwestionariusz Zachowań Związanych z Jedzeniem* autorstwa N. Ogińskiej-Bulik i L. Putyńskiego, *Kwestionariusz Wizerunku Ciała* A. Głębockiej oraz *Inwentarz Jakości Związku* w polskiej adaptacji H. Liberskiej, D. Suwalskiej-Barancewicz i P. Izdebskiego. Wykazano, że istnieje istotny statystycznie związek między obrazem ciała i zachowaniami jedzeniowymi zarówno u kobiet z grupy właściwej – w ciąży i połogu, jak i z grupy kontrolnej – u kobiet niebędących w ciąży i połogu. Potwierdzono empirycznie, że im bardziej korzystny obraz ciała kobiety tym mniej nieprawidłowych zachowań jedzeniowych ujawnia. Ponadto, kobiety zadowolone ze związku partnerskiego mają bardziej pozytywny obraz ciała oraz przejawiają bardziej konstruktywne zachowania jedzeniowe. Z przeprowadzonych badań wynika, że zarówno dla kobiet w okresie okołoporodowym, jak i dla tych, które aktualnie nie są w ciąży i w połogu, akceptacja obrazu własnego ciała jest czynnikiem ochraniającym przed podejmowaniem niekonstruktywnych zachowań jedzeniowych, natomiast poczucie satysfakcji ze związku partnerskiego sprzyja zarówno pozytywnej ewaluacji własnej fizyczności jak i prawidłowej relacji z jedzeniem.
Słowa klucze: ciąża, obraz ciała, połóg, zachowania jedzeniowe, związek partnerski

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Ziolko.pdf

Introduction

The external appearance, especially for a woman nowadays, plays an important role. It is so even if she experiences pregnancy and puerperium. On the one hand, concern for a new life often changes a woman's perspective in perceiving her own image. During this period, it is more important for her – than control and discipline of the body – to maintain her and her child's health and its proper development. On the other hand – aesthetic issues are becoming more and more important for her, the more so that "pregnant women are expected not only to control their bodies for the health and life of the child, but also to control their weight and appearance, and to return to their former condition after pregnancy as soon as possible, so that they would be slim and attractive again (...). Therefore, the body should change its form to the extent necessary to deliver and give birth to a healthy child, and after delivery it should return to its former shape as soon as possible (Jakubowska, 2016, p. 90). This kind of pressure and content appearing in the social, most often virtual, space often becomes a source of frustration for women whose reality looks completely different (cf. Gajtkowska, 2016).

These observations gave rise to the preparation and implementation of a research project on the relationship between the body image and eating behavior of pregnant and postpartum women in the context of subjectively valued satisfaction with the relationship with the partner.

At the beginning of the last century, W. James (1910, after: Kolańska, 2016) characterized two forms of self-experience: the cognizing self and the cognized self. The former is associated with the organization and interpretation of an individual's experience, while the latter applies to, i.a. sensations related to the body and its physical properties. In the 1920s, P. Schilder (1950, after: Kolańska, 2016), the creator of the construct of "body image", emphasized that it contains both a cognitive component–images, fantasies, expectations about the body, and an emotional component that exemplifies feelings towards it. At the same time, according to A. Głębocka (2009) "the image of one's own body"–a term used by the author synonymously for "body image"–regulates human functioning, influencing his or her self-presentation and relations with other people. The mentioned components–cognitive, affective and behavioral – according to T. Cash and T. Pruzinsky (1990) create the attitude of the individual towards their own body.

The process of shaping the image of one's own body is polyetiological and long-lasting, and an important role in its formation is played by early childhood experiences, personality traits, as well as peers and partners (Britek-Matera, 2008; Ziółkowska, Ziółkowska, 2020). Mass culture, in turn, is both a source of aesthetic patterns and a carrier of information on how to control your body so that it is perceived by others as attractive. Cultural messages internalized by an individual ultimately influence the perception of oneself and the world (Izydorczyk, 2009).

Many pregnant women may experience conflicting feelings about their body transformations (Meireles et al., 2015). As it turns out (Okój, 2018), pregnant women are often concerned about whether they will remain attractive to their partners after childbirth, and adverse changes in their own physis related to pregnancy (e.g. significant weight gain, stretch marks, discoloration, cellulite) can be also difficult for them to accept. At the same time, it has been proven that dissatisfaction with body image is related to, i.a. obesity and inappropriate eating behavior (Fuller-Tyszkiewicz et al., 2012; Harasim-Piszczatkowska, Krajewska-Kułak, 2017; Marzęcka, 2015; Silveira et al., 2015), which may have a negative impact on the unborn child and worsen the quality of a woman's life.

Food is primarily used to provide energy necessary to sustain life and the proper functioning of internal organs (Jaworski, Fabisiak, 2017; Ogińska-Bulik, 2016). "The term >>proper nutrition during pregnancy<< should be understood as: satisfying the energy demand (that changes in particular trimesters), the structure of consumption (the right amount and proportions of nutrients) and the change of incorrect eating habits" (Kobiołka, Goraus et al., 2015, p. 188). However, people also reach for food because of loneliness, boredom, stressful tension or threat to self-esteem

(Ziółkowska, Weber, 2022 – in preparation). Offering vs. consuming food can also be a form of expressing feelings, shaping and maintaining relationships or regulating affect (Niewiadomska, Kulik, & Hajduk, 2005; Ziołkowska, 2009). Researchers prove (Bohom, Stice, Spoor, 2009; Evers, De Ridder, & Adriaanse, 2009) that an individual experiencing intense, especially negative emotions, shows a greater tendency to eat large amounts, most often high-calorie food.

Food restrictions can also play important psychosocial functions, resulting from, i. a. the desire to attract attention to oneself, the need to be cared for by other people, the protest against the prevailing rules or the desire to gain control (over the environment and the body) (Niewiadomska, Kulik, Hajduk, 2005). One of the important functions of (not)eating, especially in the female population, is to increase own attractiveness. Having a socially acceptable figure (one of the determinants of which is the "proper" body weight; Brytek-Matera, Czepczor et al., 2021), similar to that promoted by the media, significantly influences human self-acceptance (Przybyła-Basista et al., 2020). Any discrepancies between the aesthetic patterns and one's own physis may lead to anxiety and depression, and consequently disrupt the relationship of the individual with food (Izydorczyk, Rybicka-Klimczyk, 2009; Zarychta et al., 2020).

Meanwhile, pregnancy is a state in which, for obvious reasons, the woman's body undergoes intensive changes in a short time (uterine hyperplasia, breast enlargement, an increase in the amount of amniotic fluid and body fluids, stretch marks, cellulite, etc.), and its weight increases significantly (Połocka-Molinska et al., 2017; Silveira et al., 2015; Skorupińska, Sekuła, 2017). Therefore, it happens that women, without consulting a specialist, undertake restrictive diets or intense physical activity, which may endanger both the health of the mother and her child (Harasim-Piszczatkowska, Krajewska-Kułak, 2017; Pieczykolan, Fils et al., 2017; Pudło, Respondek, 2016).

According to researchers and theorists, one of the most effective ways in which people deal with stressful life events is social support (Gebuza, 2018). Also during pregnancy, relationships with relatives, including a partner, are extremely important for the proper functioning of a woman. It turns out that the subjectively assessed quality of an intimate relationship has an impact on the self-esteem of young mothers, and women in a satisfactory partner relationship cope much better with body changes during pregnancy and puerperium than those deprived of closeness, acceptance and understanding (Sapkota, Kobayashi et al., 2013; Suwalska-Barancewicz, 2018; Wróbel, 2019).

Moreover, it turns out that the subjectively assessed quality of an intimate relationship has an impact on the self-esteem of young mothers – women in a satisfactory partner relationship cope much better with body changes during pregnancy and puerperium than those deprived of closeness, acceptance and understanding (Suwalska-Barancewicz, 2018; Wróbel, 2019). The lack of support from the partner, apart from the lack of acceptance of pregnancy by the woman or the environment, or the difficult financial situation, are factors that cause mood changes and sometimes even depression (Fraś, Gniadek et al., 2012; Ilska, 2018; Ilska, 2020).

1. Aim and method

The aim of the own research, planned in the correlation model with the control group, was to verify the relationship between the body image and eating behavior in pregnant and postpartum women, depending on the subjective satisfaction with the partner relationship. The main explained variable was "eating behavior", and the main explanatory variable–"body image". The "partner relationship satisfaction" was included in the secondary variables.

The authors' own research was based on three questions:

1. Is there a relationship between body image and eating behavior in pregnant and puerperal women?
2. Is satisfaction with the partner relationship related to eating behavior in pregnant and puerperal women?
3. Is satisfaction with the partner relationship related to the body image of pregnant and puerperal women?

Valid self-report research tools with high reliability served the purpose of operationalization of the variables. To assess the "eating behavior" variable, the authors applied the Food Related Behavior Questionnaire (KZZJ) by N. Ogińska-Bulik and L. Putyński (2004), which consists of 30 items. The tool has a factorial structure, and consists of three subscales (each with 10 items): "emotional eating" (tendency to overeat under the influence of affect), "habitual eating" (tendency to reach for food without control) and "eating restrictions" (tendency to avoid / limit food intake). The respondents refer to individual statements by selecting "yes" or "no". Each diagnostic answer scores 1 point. The higher the score, the more abnormal the eating behavior is. The comparison of the sums of the subscale results additionally shows what kind of abnormalities in the relationship with food are involved. The internal compliance of the questionnaire, measured with the Cronbach's alpha coefficient, amounts to 0.89, therefore it is satisfactory.

The Body Image Questionnaire (KWCO) by A. Głębocka (2009) was used to assess one's own body. It was designed for people who reveal a deterioration in psychosocial functioning while struggling with problems with the weight and shape of the body. The tool consists of 40 statements included in four subscales: "cognition-emotions" (opinion on one's own appearance), "behavior" (manifestations of a healthy lifestyle), "environmental criticism" (subjective assessment of the acceptance of the subject by the environment) and "pretty-ugly stereotype" (internalizing contemporary canons of beauty and negative stereotypes about obese people). The respondents answer questions on a five-point scale, where 5 means "definitely yes", 4 – "rather yes", 3 – "hard to say", 2 – "rather not", 1 – "definitely not". The higher the test result is, the more negative his body image is. The Cronbach's alpha reliability index for this tool is 0.87, so it is satisfactory.

In turn, the Relationship Quality Inventory is the Polish version of The Quality of Relationship Inventory questionnaire, adapted by H. Liberska, P. Izdebski and D. Suwalska-Barancewicz (2015). The tool allows to assess the quality of partners' relations in a relationship. The Polish version of the tool consists of 23 questions. The questionnaire contains three subscales: "perceived support", "depth of relationship" and "conflict". The respondents mark the answers on a four-point scale, where 1 means that the phenomenon does not occur, and 4 that it occurs at a high intensity. The reliability of the tool, expressed with the Cronbach's alpha index, is satisfactory, amounting to 0.88.

Moreover, demographics record helped to collect data that allowed for the exact description of the studied sample (e.g. age, partnership relationship).

Due to the Covid-19 pandemic, the study was conducted online from March to June 2021. The link to the research along with the instructions and a declaration of informed consent to participate in the study were sent to participants who responded positively to the invitation posted on the Facebook platform and self-help groups for young mothers. At the same time, the respondents were informed about the full protection of their personal data and about the possibility of withdrawing from the study at any time without giving a reason.

The criteria for inclusion in the proper group were: gender (female) and pregnancy (3rd trimester) or puerperium. The control group included women who were currently not pregnant or in puerperium, and if they were already mothers, there had to be at least two-year period since the last childbirth.

Ultimately, the study involved 60 women who met the inclusion criteria for either of the groups – proper or control. Their age ranged from 20 to 40 years, and the mean was 29.45 (with a standard deviation of 4.65). 30 women (50%) were in the third trimester of pregnancy or in the puerperium period, and 30 women (50%) were not currently pregnant or in puerperium, and their last childbirth was not earlier than two years before. All of the respondents were in a partnership.

The hypotheses were verified through statistical analyses performed using the IBM SPSS Statistics 25 package. The classic threshold $\alpha = 0.05$ was considered the significance level.

2. Results

The first step in the analysis of the collected research material was the calculation of descriptive statistics and checking the normality of the distribution of variables (Table 1).

Only the distribution of results in the two subscales of the variable "body image" – "behavior" and "pretty-ugly stereotype" – turned out to be close to normal. In other cases, it deviates from the Gauss curve, which is indicated by a statistically significant result of the Kolmogorov-Smirnov test. However, the values of the skewness of the distributions of these variables fall within the range of +/- 2, which allows the use of parametric tests in further analysis of the collected material (George and Mallery, 2019).

In order to answer the first question – is there a relationship between body image and eating behavior of the surveyed women – a series of correlation analyses with the Pearson r coefficient was performed for the entire sample (Table 2) and for the compared subgroups (Table 3 and 4).

In the entire sample, almost all tested correlations turned out to be statistically significant. The level of "habitual eating" correlates positively, with moderate strength, with the "cognition-emotions", "environmental criticism" and "pretty-ugly stereotype" scales. "Emotional eating" has a positive relationship (strong or moderate) with all four subscales of the variable "body image". On the other hand, the "eating restrictions" scale positively correlates with the "cognition-emotions", "behavior" and "pretty-ugly stereotype" scales. The strength of the former is high, while the others are moderate.

Table 1. Basic descriptive statistics of the studied quantitative variables – body image, eating behavior and satisfaction with the relationship

Variable	Subscales	M	Me	SD	Sk.	Kurt.	Min.	Maks.	W	P
Body image	Cognition-emotions	42,07	39	16,01	0,35	-1,17	19	76	0,93	0,002
	Behavior	15,35	16	4,98	-0,15	-0,75	5	25	0,97	0,238
	Criticism of the environment	11,24	10	5,63	1,62	2,12	6	28	0,80	<0,001
	Pretty-ugly stereotype	44,24	44	9,55	-0,25	-0,59	22	65	0,98	0,410
Satisfaction with the relationship	Perceived support	3,50	3,58	0,48	-1,19	1	2,14	4	0,87	<0,001
	Interpersonal conflicts	1,78	1,60	0,55	1,12	1,08	1,10	3,60	0,90	<0,001
	Relationship depth	3,45	3,50	0,40	-1,36	2,64	2	4	0,89	<0,001
Eating behavior	Habit eating	3,76	3	2,68	0,73	-0,08	0	10	0,92	0,001
	Emotional eating	4,20	4	2,24	0,30	-0,72	0	9	0,95	0,028
	Food restrictions	3,27	3	2,19	0,16	-0,99	0	8	0,94	0,008

Table 2. Body image and eating behavior (N = 60)

		Habit eating	Emotional eating	Food restrictions
Cognition-emotions	r Pearson significance	0,478 <0,001***	0,710 <0,001***	0,585 <0,001***
Behavior	r Pearson significance	0,134 0,330	0,326 0,015*	0,349 0,009**
Criticism the environment	r Pearson significance	0,301 0,026*	0,439 <0,001***	0,233 0,086
Pretty-ugly stereotype	r Pearson significance	0,353 0,008**	0,487 <0,001***	0,372 0,005**

Note: p <0,05*, < 0,01**, < 0,001 ***

Table 3. Body image and eating behavior in pregnant and puerperal women (N = 30)

	Habit eating	Emotional eating	Food restrictions
r Pearson	0,385	0,767	0,587
Cognition -emotions			
significance	0,057	<0,001***	0,002**
r Pearson	-0,234	0,075	0,162
Behavior			
significance	0,261	0,721	0,440
r Pearson	0,030	0,310	0,071
Criticism the environment			
significance	0,886	0,132	0,735
r Pearson	0,569	0,574	0,345
Pretty-ugly stereotype			
significance	0,003**	0,003**	0,092

Note: p <0,05*, < 0,01**, < 0,001 ***

Table 4. Body image and eating behavior in women who are not pregnant and in puerperium (N = 30)

	Habit eating	Emotional eating	Food restrictions
r Pearson	0,607	0,664	0,597
Cognition -emotions			
significance	<0,001***	<0,001***	<0,001***
r Pearson	0,516	0,586	0,545
Behavior			
significance	0,003**	<0,001***	0,002**
r Pearson	0,497	0,532	0,346
Criticism the environment			
significance	0,005**	0,002**	0,061
r Pearson	0,262	0,461	0,451
Pretty-ugly stereotype			
significance	0,161	0,010**	0,012*

Note: p <0,05*, < 0,01**, < 0,001 ***

As mentioned, an analogous analysis was performed for the proper group – pregnant and puerperal women, and for the control group – women who are not currently pregnant or in puerperium.

Four statistically significant relationships were found in the proper group. The "cognition-emotions" scale positively correlates with "emotional eating" and "eating restrictions", and the "pretty-ugly stereotype" with "habitual eating" and "emotional eating". The strength of the first of the observed relationships was very high, while the strength of the other three was high. On the other hand, in the control group, almost all relationships turned out to be statistically significant. These correlations are positive, strong or moderate.

The next step was to check whether there were correlations between satisfaction with the relationship and eating behavior. As in the previous case, the analyses were carried out first for the entire study sample (Table 5), and then for the compared groups (Table 6 and 7).

Table 5. Satisfaction with the relationship and eating behavior of the surveyed women (N = 60)

	Habit eating	Emotional eating	Food restrictions
r Pearson	-0,267	-0,412	-0,252
Perceived support			
significance	0,049*	0,002**	0,064
r Pearson	0,300	0,388	0,138
Interpersonal conflicts			
significance	0,026*	0,003**	0,316
r Pearson	-0,050	-0,154	-0,120
Relationship depth			
significance	0,714	0,262	0,384

Note: p <0,05*, < 0,01**, < 0,001 ***

One of the dimensions of the variable "partner relationship satisfaction", namely "perceived support", correlated negatively with two subscales of the variable "eating behavior", i.e. with "habitual eating" and "emotional eating". This means that the higher the assessment of support in a partner relationship, the lower the level of behavior related to eating habitually or under the influence of emotions revealed by the respondents. The strength of the former was low, while the latter was moderately strong. On the other hand, the level of "interpersonal conflicts" (subscale of the variable "partner relationship satisfaction) correlated positively, moderately with "habitual eating" and "emotional eating" (i.e. with the subscales of the

Table 6. Relationship satisfaction and eating behavior in pregnant and puerperal women (N=30)

	Habit eating	Emotional eating	Food restrictions
r Pearson	-0,264	-0,345	-0,344
Perceived support			
significance	0,202	0,091	0,092
r Pearson	0,405	0,529	0,183
Interpersonal conflicts			
significance	0,045*	0,007**	0,383
r Pearson	-0,184	-0,123	-0,169
Relationship depth			
significance	0,379	0,559	0,420

Note: p <0,05*, < 0,01**, < 0,001 ***

Table 7. Relationship satisfaction and eating behavior in women who are not pregnant and in puerperium (N=30)

	Habit eating	Emotional eating	Food restrictions
r Pearson	-0,240	-0,465	-0,148
Perceived support			
significance	0,201	0,010**	0,436
r Pearson	0,311	0,294	0,152
Interpersonal conflicts			
significance	0,095	0,115	0,422
r Pearson	0,051	-0,166	-0,083
Relationship depth			
significance	0,791	0,379	0,661

Note: p <0,05*, < 0,01**, < 0,001 ***

variable "eating behavior") – the higher the level of interpersonal conflicts in the relationship, the more frequently women reached for food.

Two statistically significant relationships were found in the proper group – in pregnant and puerperal women. The level of "interpersonal conflicts" correlated positively, strongly with "habitual eating" and moderately with "emotional eating". In other words: the greater the level of conflict in a partner relationship, the greater a woman's tendency to eat food habitually or under the influence of negative affect.

In the control group – in women who were not pregnant or in puerperium–one statistically significant relationship was found. The level of "perceived support" correlated negatively, with moderate strength, with "emotional eating". This means that the lower the level of support felt by a woman from her partner, the greater was her tendency to reach for food under the influence of emotions.

In the next step, it was checked whether there were relationships between the body image and the level of satisfaction with the partner relationship in the surveyed women. For this purpose, a series of correlation analyses with Pearson's r coefficient was performed both for the entire sample (Table 8) and separately for the compared subgroups–proper and control (Tables 9 and 10).

There were five statistically significant correlations in the entire sample. The body image subscale – "cognition-emotions" negatively correlated with

Table 8. Body image and satisfaction with the relationship of the surveyed women (N = 60)

	Perceived support	Inter-personal conflicts	Rela-tionship depth
r Pearson	-0,340	0,427	-0,262
Cognition-emotions			
significance	0,011*	0,001**	0,053
r Pearson	-0,210	0,154	-0,195
Behavior			
significance	0,125	0,261	0,153
r Pearson	-0,572	0,478	-0,315
Criticism the environment			
significance	<0,001***	<0,001***	0,019*
r Pearson	-0,088	0,180	-0,126
Pretty-ugly stereotype			
significance	0,521	0,188	0,359

Note: p <0,05*, < 0,01**, < 0,001 ***

"perceived support" and positively with "interpersonal conflicts" (subscales measuring satisfaction with a partner relationship), while "environmental criticism" was negatively associated with "perceived support" and "depth of relationship" and positively with the level of "interpersonal conflicts". The correlation between "perceived support" and "environmental criticism" was strong, the other four were moderately strong.

Table 9. Body image and relationship satisfaction in pregnant and puerperal women (N=30)

	Perceived support	Inter-personal conflicts	Relation-ship depth
r Pearson	-0,248	0,487	-0,225
Cognition-emotions			
significance	0,232	0,014*	0,280
r Pearson	-0,141	0,216	-0,045
Behavior			
significance	0,501	0,300	0,831
r Pearson	-0,443	0,612	-0,122
Criticism the environment			
significance	0,027*	0,001**	0,561
r Pearson	-0,124	0,261	-0,069
Pretty-ugly stereotype			
significance	0,556	0,207	0,744

Note: p <0,05*, < 0,01**, < 0,001 ***

Table 10. Body image and relationship satisfaction in non-pregnant and postpartum women (N=30)

	Perceived support	Inter-personal conflicts	Rela-tionship depth
r Pearson	-0,453	0,365	-0,314
Cognition-emotions			
significance	0,012*	0,048*	0,091
r Pearson	-0,275	0,117	-0,308
Behavior			
significance	0,142	0,539	0,098
r Pearson	-0,677	0,434	-0,412
Criticism the environment			
significance	<0,001***	0,016*	0,024*
r Pearson	-0,097	0,016	-0,189
Pretty-ugly stereotype			
significance	0,610	0,935	0,317

Note: p <0,05*, < 0,01**, < 0,001 ***

Three statistically significant relationships were found in the subgroup of pregnant and postpartum women. The "cognition-emotions" scale of the body image positively correlated with "interpersonal conflicts" (the higher the score on the scale of "interpersonal conflicts", the higher the score on the "cognition-emotions" scale). On the other hand, the level of "environmental criticism" negatively correlated with "perceived support" and positively with "interpersonal conflicts" (the lower the perceived support, the higher the level of perceived criticism and the greater interpersonal conflicts). These relationships turned out to be strong or moderate.

In the control group – in women who were not pregnant or in puerperium – five statistically significant relationships were found. The "cognition-emotions" scale negatively correlated with "perceived support" and positively with "interpersonal conflicts", while "environmental criticism" was negatively related to "perceived support" and "relationship depth", and positively with "interpersonal conflicts". The relationship between "perceived support" and "environmental criticism" was strong, while the others were moderately strong.

3. Conclusions

The analysis of the results of own research allows for a positive answer to all research questions. It should be emphasized, however, that the applied tools had a factorial structure, and although many correlations between the individual dimensions of the variables were confirmed, some of them turned out to be statistically insignificant. Importantly, the correlations between the main variables are statistically significant not only in the proper group, but also in the full sample and in the control group.

In conclusion:

1. The relationship between body image and eating behavior was confirmed. The more favorable the body image, the lower the severity of abnormal eating behavior. In the group of pregnant and puerperal women, "cognition-emotions" – the subscale of the "body image" variable – correlated positively with two subscales of the "eating behavior" variable, i.e. with "emotional eating" and "eating restrictions". Additionally, the "pretty-ugly stereotype" subscale positively correlated with habitual and emotional eating. In the control group, the "behavior" and

"cognition-emotions" subscales of the body image positively correlated with all three subscales included in the *Food Behavior Questionnaire*. There was also a positive correlation between the "pretty-ugly stereotype" subscale with "emotional eating" and "eating restrictions".

2. The correlation between partner relationship satisfaction and body image was confirmed. Own research has shown that women who are satisfied with a partner relationship assess their bodies more positively. In the group of pregnant and puerperal women, the "cognition-emotions" scale correlated positively with "interpersonal conflicts", while "environmental criticism" correlated negatively with "perceived support" and positively with "interpersonal conflicts". In women from the control group, the "cognition-emotions" scale negatively correlated with "perceived support" and positively with "interpersonal conflicts". The scale of "environmental criticism" was negatively related to "perceived support" and "depth of relationship", and positively related to the level of "interpersonal conflicts".
3. The relationship between satisfaction with the partner relationship and eating behavior was confirmed. The greater the woman's subjective satisfaction with the relationship with her partner, the lower the severity of inappropriate eating behavior. In the proper group, "interpersonal conflicts" positively correlated with "emotional eating" and "habitual eating", and in the control group – "perceived support" negatively correlated with "emotional eating".

4. Discussion

The period of pregnancy and puerperium is usually a beautiful, but also a difficult time for a woman. Its psychophysical condition is influenced by many factors, both biological and psychosocial, cultural and economic. Mom's body undergoes intensive changes, and its mass – especially in the last trimester – increases. Meanwhile, the pressure of beauty can increase women's anxiety about their own image and arouse unpleasant affective states related to it.

One of the strategies for dealing with tension is (not)eating. Pregnant women apply it all the more because there is a greater social consent to the "culinary whims" of women in this state. Unfortunately, eating habitually, under the influence of emotions, or eating restrictions are not a constructive strategy of coping with difficult situations – they do not solve the essence of the problem, but have negative effects on the woman and her child.

The partner, his understanding, acceptance and maturity, play an invaluable role during pregnancy – a period which is full of intense experiences. These features help a woman to accept her own body and alleviate the affective tensions resulting, i. a. from the concern about the health and proper development of the child, the course of childbirth, but also out of concern for problems not directly related to pregnancy (e.g. the economic situation of the family, development and upbringing of other children).

Own research has documented the relationship between the body image and eating behavior of the surveyed women. It was expected that the more negatively the women value their image, the more often they turned towards improper eating behavior–overeating vs. avoiding food.

Similar research results were published by A. Brytek-Matera and A. Rybicka-Klimczyk (2008). They also proved that younger women were more likely to apply dietary restrictions in response to dissatisfaction with their appearance, while older women – to overeat. The authors, explaining the mechanism of these two forms of women's behavior, claim that the younger ones want to achieve autonomy by controlling their own bodies, while the older ones relieve tension through compensatory behavior.

In the author's own research, the high level of the "pretty-ugly stereotype" scale positively correlated with the level of emotional and habitual eating, which means that the more the respondent internalizes contemporary beauty standards, the greater the tendency to eat emotionally and habitually. These results contradict some reports by other authors. It has been proved, for example (Kuleta et al., 2006; Ziółkowska, Ocalewski, 2021) that the stronger the cultural message regarding the ideals of beauty in the form of pressures from the media or

the expectations of relatives, the greater the tendency to engage in behaviors aimed at weight reduction by taking dietary restrictions.

The authors' own research also revealed that a high level of perceived "environmental criticism" and a worse attitude to a healthy lifestyle favors the manifestation of abnormal eating behavior by the respondents, both in the form of overeating and food restrictions. This conclusion is confirmed in the works of other researchers (Stice, Whitenton, 2002, after: Kuleta, 2008), who indicate that the lack of acceptance by the loved ones, especially the partner, may cause excessive criticism towards one's own body, which in turn may result in incorrect eating behavior.

Moreover, the existence of a significant relationship between the woman's satisfaction with the partner relationship and her eating behavior was confirmed, predicting that women who do not find satisfaction in the relationship are more likely to cope with this type of frustration through improper eating behavior. This conclusion is consistent with the reports of other researchers. It turns out that excessive food intake is a response to negative emotions that accompany, for example, interpersonal conflicts (Szczygieł, Kadzikowska-Wrzosek, 2014). Often, such behavior can be observed in people who experience the so-called "emotional hunger" (Czepczor, Brytek-Matera, 2017). In 2016, a study was conducted (Kozłowska et al., 2017) aimed at analyzing the importance of negative emotions for the diet of young people. It has been shown that snacking is one of the strategies of coping with a stressful situation, which is particularly eagerly chosen by women (51%). Men show a much lower tendency to eat under stress (only 25% of the respondents). Additionally, women eat food also when they experience depression (56% of respondents). The same conclusions were obtained by S. Kryska, A. Rej-Kietla (2013), who showed that almost 38% of respondents admitted to eating their emotions and sneaking in stressful or conflict situations.

It was also checked whether the satisfaction with the partner relationship is related to the body image. It was expected that the subjectively perceived low satisfaction with the relationship would be accompanied by an unfavorable body image. This prediction turned out to be correct; the higher the level of "conflicts" (partner relationship satisfaction scale), the higher the score on the "cognition-emotions" scale (one of the dimensions of the "body image" variable). Moreover, the low score of the "perceived support" from the partner was related to the high sense of "body criticism" from the environment. It has also been noticed that a negative assessment of their own body occurs in respondents who assess the depth of the relationship with their partner as negative. These results are consistent with the reports of other authors emphasizing the importance of social relationships, especially intimate relationships for the assessment of the physical self (Paap, Gardner, 2011). Importantly, a valuable partner relationship can positively affect the body image, but being in a stable relationship does not protect the individual from experiencing dissatisfaction with the body. Only successful intimate relationships in a subjective assessment protect women from social pressure regarding the ideal of beauty, and the sense of closeness and bond strengthens the positive aspects of the body image (Laus et al., 2018; Notari et al., 2017).

The cult of beauty and a slim figure means that women (also in the perinatal period) may feel discomfort due to their own appearance, and as a result of negative affect – reach for food or apply dietary restrictions. However, remaining in a safe, satisfactory relationship with a partner, experiencing his acceptance and support, may become an important determinant of forming / maintaining a positive assessment of one's own image.

For many mothers, the evolution of their bodies during pregnancy is a remarkable experience that they fully approve of. However, it is worth providing support to those for whom the psychophysiological processes they face and their visible consequences are difficult (Wojdyła, Żurawicka et al., 2019). In such a situation, it would be beneficial to educate women and their partners to prepare for the natural changes accompanying the period of pregnancy and puerperium, to equip mothers with constructive strategies for coping with emotions and stress, and to prepare for the fact that returning to the pre-pregnancy shape requires time and reasonable, pro-health actions. It is also important to support young parents in solving problems in their mutual relations, because women who are not satisfied with their relationship show not only a greater tendency to show unconstructive behavior towards their own body, but also to eat, which is dangerous especially during pregnancy and puerperium for the health of both mum and her baby.

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Satisfaction with life in postmenopausal women

Satysfakcja z życia kobiet w wieku pomenopauzalnym[1]

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Abstract: *Introduction:* Having satisfaction with life constitutes an indisputable human desire. The postmenopausal period is usually related to some complaints that can result in a decrease in psychophysical performance in women, thus affecting their satisfaction with life. *The aim of the study:* The objective of the study was to assess satisfaction with life in postmenopausal women. *Material and methods:* The study was performed in six randomly chosen outpatient gynaecological clinics and primary health care settings in Lublin and encompassed 510 women. A diagnostic survey was applied. The research instrument utilized included a specially prepared questionnaire consisting of the authors' own part (sociodemographic data) and the standardized Satisfaction with Life Scale (SWLS). *Results:* Satisfaction with life values obtained by the respondents who used the SWLS ranged from 5 to 35 points with the mean value of 20.58±5.36. Satisfaction with Life was significantly related to the respondents' education (p=0.003), material conditions(p<0.001) and living conditions (p<0.001). Satisfaction with life was also differentiated by the women's health self-assessment (p<0.001) and sexual activity(p=0.001). *Conclusions:* Postmenopausal women are characterized by medium satisfaction with life. There is a relationship between their satisfaction with life and the level of education, subjective evaluation of their material and living conditions, subjective health assessment and sexual activity.
Keywords: menopause, postmenopause, satisfaction with life.

Abstrakt: *Wprowadzenie:* Doznawanie satysfakcji życiowej jest pozadyskusyjnym ludzkim pragnieniem. Okres pomenopauzalny zazwyczaj pociąga za sobą pewne dolegliwości, mogące przyczyniać się do osłabienia kondycji psychofizycznej kobiety i tym samym zadowolenia z życia. *Cel pracy:* Celem pracy było zbadanie jaką satysfakcją z życia cechują się kobiety w wieku pomenopauzalnym. *Materiał i metody:* Badania przeprowadzono w sześciu losowo wybranych poradniach ginekologicznych oraz w przychodniach podstawowej opieki zdrowotnej na terenie miasta Lublin. Objęto nimi 510 kobiet. Jako metodę badań zastosowano sondaż diagnostyczny. Narzędziem badawczym był specjalnie dla celów tej pracy przygotowany kwestionariusz, składający się z części własnej konstrukcji (dane socjodemograficzne) oraz standaryzowany kwestionariusz Skala Satysfakcji z Życia. *Wyniki:* Wartości satysfakcji z życia, jakie uzyskały badane, wypełniając kwestionariusz SWLS (Satisfaction With Life Scale), wahały się od 5 do 35 punktów, przy czym średnia wynosiła 20.58±5.36. Satysfakcja z życia była istotnie związana z wykształceniem (p=0.003), warunkami materialnymi (p<0.001) i mieszkaniowymi (p<0.001) badanych. Satysfakcję z życia różnicowała również samoocena zdrowia kobiet (p<0.001) oraz ich aktywność seksualna (p=0.001). *Wnioski:* Kobiety w wieku pomenopauzalnym charakteryzują się przeciętną satysfakcją z życia. Występuje związek między zadowoleniem z życia a poziomem wykształcenia, subiektywną oceną sytuacji materialnej i mieszkaniowej, subiektywną oceną stanu zdrowia i aktywnością seksualną.
Słowa kluczowe: menopauza, postmenopauza, satysfakcja z życia

Introduction

Research literature suggests different forms of conceptualization of life satisfaction. For some authors it constitutes a synonym for quality of life, wellbeing and happiness. Thus, the terms are often used interchangeably (Kanadys et al. 2014).

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Paluck.pdf

Satisfaction with life is a broad term and difficult to define clearly because of its subjective character. Finally, it was acknowledged to be a cognitive component of wellbeing and reflection of evaluation of individuals' own existence in the context of their well-known cultural and axiological schemes (Jenabiet al, 2015; Luhmannet al, 2014). Some authors are of the opinion that wellbeing is literally the presence of positive feelings and lack of negative ones (Hofmann et al., 2014; Matud et al., 2014). They are sometimes distinguished in two basic forms, namely hedonistic andeudaimonic ones. The former represents a collection of positive affective experiences and the latter results from the determination of achieving an aim that transcend sconventional complacency (Bartels et al. 2015).

Having satisfaction with life is an indisputable human desire. However, different life circumstances, volitional actions and a variety of biological factors can determine a potential range of wellbeing experienced (Mazur, 2015). Postmenopause constitutes a certain type of period of existential crisis (Heidari, 2017). Despite its undoubtedly physiological character, it usually triggers some complaints that can cause a weaker psychophysical condition in women. All of them clearly lead to changes in perception of satisfaction with life. Thus, the level of satisfaction with life can depend on health condition and its evaluation, lifestyle, perception of menopause and psychosocial situation of women (Terauchi, 2017).

Decreased satisfaction with life can result from biological changes that induce climacteric symptoms, metabolic and neoplastic diseases (Wieder-Huszla et al., 2017). At the time, the presence of chronic diseases is associated with coexistence of long-lasting psychological problems (having anxiety, depression and grief). Wellbeing is also connected with an ability of performing activities of daily living that are then usually restricted to some extent (Glinac et al., 2017, Banaczeket al., 2016). The greatest burden is attributed to psychic, neurological and genitourinary disorders which affect women's daily performance (Lukkala et al., 2016). Additionally, the latter can impair sexual activity satisfaction that encompasses physical pleasure, individual attractiveness and partner relationships(Ornat et al., 2013). Happy and satisfying sexual relationships are of great importance in psychophysical health (Thomas et al., 2015).

In most cultural circles. the termination of reproductive stage equals the onset of the unavoidable ageing process. At the time, a lot of women experience the sense of loss usually associated with maternity and youth. However, some of them go through positive emotions, namely, the sense of greater freedom, lack of fear of getting pregnant or relief of premenstrual syndrome symptoms. Therefore, the perception of satisfaction with life after menopause can be of an ambivalent character (Yoshanyet al., 2017; Frange et al., 2018).

1. The aim of the study

The objective of the study was to assess the level of satisfaction with life in postmenopausal women and what satisfaction depends on.

2. Material and methods

The research was conducted in six randomly chosen gynaecological outpatient clinics and primary health care settings in Lublin. It encompassed 510 women. The inclusion criteria were as follows the period of 2-10 years following the last menstruation, written informed consent for participation in the study, good health condition prior to the study. Women after surgical menopause and early menopause were excluded from the study.

The diagnostic survey was applied as the research method. The instrument utilized was a specially-prepared-for-this-purpose questionnaire consisting of the authors' own part (sociodemographic data) and the standardized Satisfaction with Life Scale (SWLS).

The SWLS by Diener et al. and adopted by Juczyński comprises five items. The respondents assessed what degree each item referred to their recent life in a 7-point Likert scale (1- strongly disagree; 2 - disagree; 3 - slightly disagree; 5 - neither agree nor disagree; 5 slightly agree; 6 - agree; 7 - strongly agree). The assessments were added and converted into sten

scores. According to the sten score scale, they were divided into low scores (1-4 stens), medium stens (5-6 stens) and high scores (7-10 stens). The measurement obtained was also the total indicator of satisfaction with life (Juczyński, 2012).

Every female was requested individually to take part in the study. Their eagerness to participate in the research was confirmed by their informed written consent on a specially prepared form which provided the aim and course of the research. The anonymity and freedom of decision on the study participation were highlighted. In the gynaecological outpatient clinics, the study was performed in a separate room where intimacy, peace and calmness were guaranteed for the respondents. The time for questionnaire completion was adjusted to the respondents' individual needs. At every stage of the study, each woman had an opportunity to ask questions to be given in-depth replies.

The study was conducted according to the protocol approved by the Bioethics Committee of the Medical University of Lublin (nr KE–0254/292/2015) and in accordance with the principles of the Helsinki Foundation for Human Rights.

The research material collected was statistically analysed by means of IBM SPSS Statistics software. The quantitative variables were described using the mean, standard deviation, median as well as minimum and maximum values. In the case of quantitative variables, percentage and number were provide for the reply categories. In the case of nominal variables, a Chi-Square test of independence was applied. To determine equality of the groups, Chi-Square goodness-of-fit test was utilized. The analysis results obtained were found to be statistically significant for p value <0.05 and they were provided up to approximate millesimal figures, e.g. 0.014.

3. Results

3.1. Characteristics of the study group

The study group was differentiated by several sociodemographic factors, above all their age ranging from 44 to 65 years old. More than a half of the respondents (304; 59.6%) lived in urban areas while 206 (40.4%) lived in rural areas. The greatest number of the respondents had secondary education (215; 42.2%) while 170 (33.3%) had higher education; 81 (15.9%) basic vocational education and 44 (8.6%) primary education. Their material situation was assessed in the following way: 271 (53.1%) of the respondents evaluated it as moderate, 159 (31.3%) as good; 48 (9.4%) poor; 27 (5.3%) very good, and 5 (1.0%) as very poor. However, the evaluation of living conditions was different: 265 (52.0%) of the respondents admitted to having good conditions; 143 (28.0%) very good, 97 (19.0%) moderate and 5 (1.0%) poor. The vast majority of the females researched (380;74.5%) were married. The remaining women were widowed (63; 12.4%), single (35; 6.9%) and divorced (32; 6.3%). At the time of the study, the professionally active women constituted 306 (60.0%). Other 204 (40.0%) declared lack of permanent employment.

3.2. Satisfaction with life

Values of satisfaction with life obtained by the respondents who completed the SWLS ranged from 5 to 35 points with the mean of 20.58±5.36. After converting the raw scores into stens, in 147 women (28.8%) low satisfaction with life was found (1-4 stens), in201 (39.2%) medium (5-6 stens), while in 162 (31.8%) high (7-10 stens). The SWLS results are demonstrated in Table 1.

The relationship between satisfaction with life and the respondents' age was close to significance (p=0.057). Satisfaction with life was significantly related to the females' education (p=0.003). It was also differentiated by material conditions (p<0.001) and living conditions (p<0.001). It was not distinguished by the women's place of residence(p>0.05), professional activity (p>0.05) and marital status (p>0.05). Satisfaction with life was significantly related to the women's health self-assessment (p<0.001). The dependence between the respondents' satisfaction with life and their sociodemographic data, and health self-assessment is presented in Tables 2, 3 and 4.

Table 1. The Satisfaction with Life Scale

Items	M	SD	Min	Max	Percentile		
					25	50	75
In most ways my life is close to my ideal	3.56	1.35	1.00	7.00	3.00	4.00	5.00
The conditions of my life are excellent	3.75	1.36	1.00	7.00	3.00	4.00	5.00
I am satisfied with my life	4.71	1.18	1.00	7.00	4.00	5.00	5.00
So far I have got the important things I want in life	4.55	1.36	1.00	7.00	4.00	5.00	5.00
If I could live my life over, I would change almost nothing	4.01	1.70	1.00	7.00	3.00	4.00	5.00
SWLS– global result	20.58	5.36	5.00	35.00	17.00	21.00	24.00
SWLS-stens	5.53	1.93	0.00	10.00	4.00	6.00	7.00

M – mean, SD–standard deviation, Min – minimum, Max – maximum

Table 2. Satisfaction with life and the respondents' age

Variables		Satisfaction with life		
		Low n= 147; 28.8%	Medium n=201; 39.2%	High n=162; 31.8%
Age	M	56.89	57.59	56.59
	SD	4.22	4.92	4.93
	Me	56.00	58.00	56.50
Significance		$\chi 2$=5.722; p=0.057		

M – mean, SD–standard deviation, Min – minimum, Max – maximum

Some attempts of researching dependence between the women's satisfaction with life and their physical activity, preventive examinations or check-ups and sexual activity were made. Satisfaction with life was distinguished by sexual activity(p=0.001). Other properties researched were insignificant (p>0.05). Dependences between the respondents' satisfaction with life and some selected health behaviours are shown in Table 5.

4. Discussion

The maintenance of high satisfaction with life can be difficult in the postmenopausal period. Some authors indicate its considerable deterioration after periods come to an end (Frange, 2018). However, others suggest that wellbeing can remain independent of the life period women are in but can depend on specific factors related to age (Banaczek, 2016). The analysis of satisfaction with life in the study group showed medium values (M=20.58±5.36) and high in 31.8% of the women. Slightly lower values were presented by Kanadys et al.(M=17.40±7.38) and Juczyński (M=18.42±5.28) (Kanadys et al., 2014; Juczyński, 2012). It is worth highlighting that values concerning perimenopausal women provided by other authors turned out to be the lowest among all the groups included in the research.

The statistical analysis of the material collected showed a relationship close to significance between satisfaction with life and their age (p=0.57) and significant relationship (p<0.05) with the level of education, subjective assessment of material and living conditions, subjective health self-assessment and sexual activity. The aforementioned relationships were more favourable for younger women with better education, having better social and living conditions, and assessing their health condition in a better way as well as being sexually active.

Many authors noticed that satisfaction with life deteriorated along with the progression of the ageing process (Jenabiet al., 2015; Wieder-Huszla et al., 2014). Other researchers (Elahi et al.,2018) stated that satisfaction with life increases along with age and is associated with greater experience in solving life problems and coping with challenges of daily living.

Greater satisfaction with life among individuals with better education and having good social and living conditions was found by some researchers; however, their respondents constituted perimeno-

Table 3. Satisfaction with life and sociodemographic data of the respondents

Variables		Satisfaction with life					
		Low n=147; 28.8%		Medium n=201; 39.2%		High n=162; 31.8%	
		n	%	n	%	n	%
Place of residence	Urban areas n=304; 59.6%	80	54.4	120	59.7	104	64.2
	Rural areas n=206; 40.4%	67	45.6	81	40.3	58	35.8
	Significance	$\chi 2$ =3.060; p=0.217					
Education	Primary n=44; 8.6%	8	5.4	24	11.9	12	7.4
	Vocational n=81; 15.9%	19	12.9	35	17.4	27	16.7
	Secondary n=215; 42.2%	80	54.4	80	39.8	55	34.0
	Higher n=170; 33.3%	40	27.2	62	30.8	68	42.0
	Significance	$\chi 2$ =19.487; p=0.003					
Professional activity	Yes n=306; 60.0%	93	63.3	111	55.2	102	63.0
	No n=204; 40.0%	54	36.7	90	44.8	60	37.0
	Significance	$\chi 2$ =3.156; p=0.206					
Marital Status	Married n=380;74.5%	110	74.8	142	70.6	128	79.0
	Widowed n=63; 12.4%	16	10.9	26	12.9	21	13.0
	Single n=35; 6.9%	13	8.8	16	8.0	6	3.7
	Divorced n=32; 6.3%	8	5.4	17	8.5	7	4.3
	Significance	$\chi 2$ =7.429; p=0.283					
Material conditions	Very good n=27; 5,3%	3	2.0	3	1.5	21	13.0
	Good n=159; 31,2%	24	16.3	65	32.3	70	43.2
	Moderate n=271; 53,1%	93	63.3	116	57.7	62	38.3
	Poor n=48; 9,4%	27	18.4	17	8.5	9	5.6
	Significance	$\chi 2$ =68.165; p<0.001					
Living conditions	Very good n=143; 28,0%	23	15.6	50	24.9	70	43.2
	Good n=265; 52,0%	77	52.4	105	52.2	83	51.2
	Moderate n=97; 19,0%	46	31.3	42	20.9	9	5.6
	Poor n= 5;1	1	.7	4	2.0	0	0.0
	Significance	$\chi 2$ =53.358; p<0.001					

Table 4. Satisfaction with life and there spondents' subjective assessment of health

Variables		Satisfaction with Life					
		Low n=147; 28.8%		Medium n=201; 39.2%		High n=162; 31.8%	
		n	%	n	%	n	%
Health condition	Very good n=19; 3.7%	1	.7	3	1.5	15	9.3
	Good n=298;58.4%	62	42.2	131	65.2	105	64.8
	Moderate n=172; 33.7%	71	48.3	60	29.9	41	25.3
	Poor n=21; 4.1%	13	8.8	7	3.5	1	.6
Significance		$\chi 2$ =55.552; p<0.001					

Table 5. Satisfaction with life and selected health behaviours

Variables		Satisfaction with Life					
		Low n=147; 28.8%		Medium n=201; 39.2%		High n=162; 31.8%	
		n	%	n	%	n	%
Physical activity	Yes n=118; 23.1%	29	19.7	44	21.9	45	27.8
	No n=392 76.9%	118	80.3	157	78.1	117	72.2
Significance		$\chi 2$ =3.098; p=0.212					
Gynaecological check-ups	Regular n=291; 57.1%	81	55.1	113	56.2	97	59.9
	Irregular n=159; 31.2 %	45	30.6	71	35.3	43	26.5
	Never n=60; 11.7%	21	14.3	17	8.5	22	13.6
Significance		$\chi 2$ =5.705; p=0.222					
Breast self-examination	Regular n= 369 ; 72.4%	104	70.7	151	75.1	114	70.4
	Irregular n= 299; 58.6%	43	29.3	50	24.9	48	29.6
Significance		$\chi 2$ =1.279; p=0.527					
Having mammogram screening performed	Regular n= 369; 72.4%	106	72.1	147	73.1	116	71.6
	Irregular n= 141; 27.6%	41	27.9	54	26.9	46	28.4
Significance		$\chi 2$ =0.111; p=0.946					
Sexual activity	Yes n=269; 52.7%	57	38.8	88	43.8	96	59.3
	No n=241; 47.3%	90	61.2	113	56.2	66	40.7
Significance		$\chi 2$ =14.580; p=0.001					

pausal women and not exclusively postmenopausal ones (Kanadyset al., 2014). Ornat et al, noticed a decrease in satisfaction with life in women with low material status (Ornatet al., 2013).

Morbidity is connected with evaluation of satisfaction with life so psychosomatic disorders can result in worse scores in the scope. Interestingly, experiencing symptoms in some diseases seem to be a more important factor associated with satisfaction with life than a type of a disease itself (Lukkala, 2016). This remains unknown which diseases and symptoms may affect worse perception of the respondents' lives; explanation of the issue requires further research.

One of essential elements of women's quality of life is their sexual activity (Stec, 2014). Having the desired level of quality of sexual life is of fundamental significance for sexual and reproductive health and is related to improvement of general quality of life. Most women aged 40-60 years old are sexually active. However, at this time some negative changes occur in sexual functions and some concurrent symptoms are very common (Thomas, 2019).

Women who positively evaluate their sexual life after menopause usually are characterized by greater self-confidence and higher self-acceptance (Thomas et al. 2018). However, satisfying sexual life affects considerably partners' relationships especially in married couples (Parand et al 2014). Thus, this sphere of life can be supposed to determine women's general satisfaction with life. Similarly, the authors' own research revealed that sexually active women show higher satisfaction with life.

The results presented encourage further investigations. The authors' own study has some limitations. Due to the age of the respondents, it is difficult to include women who are free from any health problems. To obtain more in-depth and objective results, an attempt of researching an influence of the occurrence of a chronic disease on the level of satisfaction with life should be made. Furthermore, broadening the study group would be of great importance in order to obtain a representative group for the population. Research literature still lacks studies devoted solely to postmenopausal women. The strength of the study is the fact that menopause has been treated as a separate period of women's lives with its characteristics. The comparison of the relationships and dependences detected along with research results of other authors turned out to be difficult since more frequently most research focus on perimenopause women.

Conclusions

1. Postmenopausal women are characterised by medium satisfaction with life.
2. There is a relationship between satisfaction with life and the level of education, subjective evaluation of material and living conditions, subjective assessment of health and sexual activity in postmenopausal women. The aforementioned relationships were more favourable for the younger women having better education, better social and living conditions, giving better health assessment and being sexually active.

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Role and tasks of the midwife as a member of the hospice perinatal care team

Rola i zadania położnej jako członka zespołu hospicyjnej opieki perinatalnej[1]

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„Every life, even handicapped according to the world, deserves to live (...)
in the eyes of a hurt baby we can find much love if we only brave enough
to love them (...)"

prof. Jerme Lejeune – International Family Congress, Warsaw 1994

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Abstract: An unsuccessful prenatal diagnosis is a traumatic experience for parents expecting the birth of a child. Hospice Perinatal Care is aimed at families who are experiencing an unsuccessful prenatal diagnosis. It is a form of help and support by providing individualised care to the woman and her loved ones, tailored to their needs and expectations, allows to live parental experiences with dignity. The perinatal hospice care system is not regulated by law. There is a visible lack of unified standards of conduct. Each institution providing hospice perinatal assistance develops its own model of care, as a result of which the patient and her family do not have the opportunity to experience continuity of care. It is crucial to consider the problem of low level of medical staff consciousness on the aims, possibility of perinatal hospices and principles of prenatal hospice care. One member of the hospice perinatal care team is the midwife. The aim of this article is to present the role of the midwife and the tasks of individual specialists in the therapeutic management of a pregnant woman with a prenatally diagnosed lethal defect in the fetus. The role and tasks of the midwife as a member of the team taking care of a pregnant patient with a diagnosed fetal lethal defect is primarily to accompany the woman during this difficult period, provide emotional support and prepare parents for the birth of a sick child and focus activities on the real needs of parents and adapt to their expectations. Including a midwife to perinatal care team in hospice allows to completes the process of taking care of parents of a child with a lethal defect. At present, there are no standards and guidelines concerning the organisation of obstetric care for patients in the situation of prenatal diagnosis of a malformation. For this reason, it is important to carry out activities to prepare staff to provide professional assistance to families experiencing an unsuccessful prenatal diagnosis.
Keywords: lethal defect, midwife, prenatal diagnosis, prenatal hospice

Abstrakt: Niepomyślna diagnoza prenatalna jest traumatycznym doświadczeniem dla rodziców oczekujących narodzin dziecka. Hospicyjna Opieka Perinatalna skierowana jest do rodzin, które doświadczają niepomyślnej diagnozy prenatalnej. Stanowi formę pomocy i wsparcia poprzez objęcie kobiety i jej najbliższych indywidualną opieką, dostosowaną do potrzeb i oczekiwań, pozwalającą na godne przeżywanie rodzicielskich doświadczeń. System perinatalnej opieki hospicyjnej nie jest uregulowany prawnie z tego powodu widoczny jest brak ujednoliconych standardów postępowania. Instytucje świadczące hospicyjną pomoc perinatalną opracowują własny model opieki, w wyniku czego pacjentka i jej rodzina nie mają możliwości doświadczenia ciągłości opieki. Konieczne jest zatem zwrócenie uwagi na problem niskiego poziomu świadomości personelu medycznego na temat celów i możliwości hospicjów perinatalnych oraz zasad prenatalnej opieki hospicyjnej. Jednym z członków hospicyjnego zespołu opieki perinatalnej jest położna. Celem artykułu jest przedstawienie roli

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Porysz.pdf

położnej oraz zadań poszczególnych specjalistów w postępowaniu terapeutycznym w opiece nad ciężarną, u której prenatalnie stwierdzono wadę letalną u płodu. Rola i zadania położnej jako członka zespołu sprawującego opiekę nad ciężarną pacjentką z rozpoznaną wadą letalną u płodu polega przede wszystkim na towarzyszeniu kobiecie w tym trudnym okresie, udzieleniu wsparcia emocjonalnego i przygotowaniu rodziców do narodzin chorego dziecka oraz koncentrowaniu działań na realnych potrzebach rodziców i dostosowywaniu do ich oczekiwań. Włączenie położnej do zespołu hospicyjnej opieki perinatalnej pozwala na dopełnienie procesu pielęgnowania wobec rodziców dziecka z rozpoznaną wadą letalną. Obecnie brakuje standardów i wytycznych dotyczących organizacji opieki położniczej wobec pacjentek w sytuacji wykrycia wady rozwojowej w okresie prenatalnym. Z tego powodu istotne jest prowadzenie działań przygotowujących personel do udzielania profesjonalnej pomocy rodzinom doświadczającym niepomyślnej diagnozy prenatalnej.
Słowa kluczowe: diagnoza prenatalna, hospicjum prenatalne, położna, wada letalna

Introduction

For future parents pregnancy is the time of hope, dreams and expectations to welcome a new life. Visualization of the future is often accompanied by concerns about the health and life of the unborn child, but despite anxiety, in parents' hearts there are feelings unlike any previously known. Joy dominates, and a strong, uniting bond is established between them. Unsuccessful prenatal diagnosis ruins the current order, making the diagnosis of a congenital disease in a child one of the most tragic life experiences. How to help parents who feel completely helpless, which is caused by the diagnosis being definitive and irreversible? How does the preparation for the birth of a child with a congenital disease or defect look like? How can parents' suffering be reduced? Hospice perinatal care is one of the forms of help that allows to live parental experiences with dignity, praises life as a value and brings joy to every moment of its duration.

1. Prenatal diagnostics

Advances in prenatal diagnosis make it possible to identify developmental disorders of the fetus at an early stage of pregnancy. Detection of defects during prenatal examinations (including TTTS twin pregnancy steal syndrome, obstructive uropathies, adenocystic lung degeneration, non-immune fetal edema, hydrocephalus, fetal hemolytic disease, spinal hernia, teratomas, diaphragmatic hernia, oligohydramnios, or polyhydramnios) (Health Policy Programme, Journal of Laws, 2020 No 1398, as amended) allows for the implementation of intrauterine therapies supporting treatment after childbirth. However, there are still diseases in which the implementation of therapeutic measures is impossible, as no effective therapy has yet been developed. These disorders are described as lethal defects. "For the so-called a lethal defect (lat. Latali) in a fetus and a newborn, serious developmental abnormalities with uncertain or poor prognosis are considered. A lethal defect may be: 1) miscarriage of a dead fetus, 2) premature stillbirth, 3) death of the child immediately after birth or in early infancy, regardless of the treatment used (Krzeszowiak, Śmigiel, 2016, p. 58). Among such diseases there are, among others trisomy of the 18 and 13 pair chromosomes, chromosomal aberrations (e.g. monosomes of autosomal chromosomes), lethal monogenic diseases (bone dysplasia, some forms of Smith and Lemili syndrome), defects of the central nervous system (skullcap, cerebral hernias), critical heart defects with lung hypoplasia, some forms of conjoined twins (Szmyd, Śmigiel, Królak-Olejnik, 2014, p. 389). There are places created for children with a diagnosis of birth defects and their families. The aim of these places is providing specialized care. These institutions are known as perinatal hospices.

According to Małgorzata Grabska, paediatrician working in Fr. E. Dutkiewicz SAC in Gdańsk, "perinatal hospice is not a place, is a way of thinking (...) It is being next to the family in this path through the pregnancy, birth and death. Death with dignity. Such death, wich is not "for nothing". Such, which is leaving us with experience of welcoming and saying goodbye to a child, which is extremely tough but also full of love" (Małkowska, 2013, p. 12).

2. Hospices around the world

The idea of establishing perinatal hospices is related to the hospice movement supporting terminally ill adults. The first activities aimed at helping those in need struggling with a chronic disease appeared in ancient times.

The approach to people in need of special care has improved under the influence of the Gospel message that people should be treated subjectively, appreciating the dignity of their person, conscience and the value of life (Szot, 2009, p. 221). Christianity "brought a new justification for the need to care for the sick, a mercy that does not allow the sick to be left without help" (Szumowski, 1961, p. 100). In the ancient times care of those in need was considered as serving God (res sacra miser). The first institutions to help those in need were church institutions–religious orders, fraternities. After the Edict of Milan, in AD 313, charity centers were opened to help the sick. The person influencing the development of the hospice movement was the bishop of Caesarea Cappadocia, St. Basil. A man in the suburbs of the metropolis brought to life a new city whose task was to care for travelers and the sick, especially lepers. Monasteries founded by a clergyman had places for pilgrims, the sick and the abandoned. In 529, St. Benedict opened a Benedictine convent in Monte Cassino. One of the ideas in the rule of this assembly was to care for the sick. In 6th-7th century hermits provided social care in the deacons-hospices they ran. Shelters and hospitals were established at church institutions. They were called hospitals, hospitals, and infirmary. There, the spiritual and physical needs of the sick were taken care of. The Crusades, especially their significant increase in the years 1095-1270, contributed to the numerous emergence of new facilities of this type. Congregations influencing the development of care for the sick were the Basilians (Eastern Byzantine Church) and Benedictines (Western Church). The regular canons of the Holy Spirit were taking care of the unwanted children. The decree of the Council of Trent, issued in the years 1545-1563, by imposing on bishops the obligation to care for hospitals, significantly contributed to increasing the level of health services for the sick and dying. During this period, previously unknown types of institutions were established–for the incurably and mentally ill and convalescents. During this period, laymen also began to support the development of institutions caring for those in need. The Roman emperor Justinian (527-567) was a donor to many hospices and health centers. From the 10th century in Italy, France and Germany during the so-called In municipal communes, care for the sick and the poor was getting better and better (Szot, 2009, p. 221). In 1591 in Warsaw Fr. Piotr Skarga founded st. Lazarus Hospital, which idea was to support cancer patients. Medicine development in 19th century also affected standards improvememnt of care of patients with fatal diseases. In 1842 Jeanne Gardier opened a place only for dying people in Lyon – hospice and Calvary. Over time, similar facilities for people in the terminal state were opened in France. In Dublin, the Daughters of Charity opened Lady's Hospice in 1897 and in 1905 in London the St. Joseph. In the following years, under the care of the Church of England, the following were successively opened: Friedesheim Home of Rest (1885 r.), Hostel of God (1891 r.) i St. Luke Home for the Dying Poor (1893 r.) (Szot, 2009, p. 221).

The initiator of modern hospice care was an English scientist–a doctor, nurse, volunteer from the St. Lazarus Church in London–Cicley Saunders. The woman took care of people suffering from cancer. The experiences of the woman and the needs of her patients made her want to create a place where people would receive the necessary help and could wait for death in decent conditions. In 1967 Dr. Saunders was the initiator of the opening of the stationary Hospice of St. Christopher in London (Szot, 2009, p. 221). The facility motto were the words of its founder: „You matter, because you are who you are. You matter until the last moment of your life. We will do everything we can, not only helping you to die calmly but also to live until you die" (Doyle et al., 1998). This place has become a model unit providing hospice care and supporting terminally ill people and their relatives. Two years later, the scope of provided assistance was extended to include home hospice teams. In 1975, at St. Luke in Sheffield, the day care center for terminally ill people was the first to combine home and community care. This solution contributed to full-scale care and prevention of the isolation of the patient and support of the relatives in caring for the dying person. In 1975, a Palliative Care Unit was established at the Royal Victoria Hospital in Montreal. At that time, one of the main goals of the World Health Organization was to relieve pain and symptoms of terminal cancer (Szot, 2009, p. 221).

3. Hospice movement in Poland

Special needs of chronically ill were also noticed in Poland. Since 1964, Hanna Chrzanowska, the initiator of the Krakow home nursing centre, has taken care of people diagnosed with incurable diseases and in a terminal state. Dr Stanisław Kownacki, a specialist working in the infectious diseases ward of the hospital in Nowa Huta, was considered a precursor of the hospice movement in Poland because it significantly influenced its development. He believed that medical facilities should take care of chronically ill patients until death. Kownacki didn't support opening stationary hospices though. People with advanced neoplastic disease stayed in the hospital in Nowa Huta. There were special places in the facility–social beds, which were intended for units requiring care, called hospice. Kownacki expressed his approval for the frequent visits of patients by their families, friends and volunteers. In 1978 dr Cicely Saunders took part in Polish sitting of Medical Society and Oncological Institute in Cracow. During these events, she gave speeches in which she raised the issue of caring for terminally ill patients. In 1984 in Gdańsk, on the initiative of Fr. Eugeniusz Dutkiewicz and prof. Joanna Myszkowska-Penson, a place was opened to care for terminally ill people in their homes. In the following years in Poland more hospice teams have been founded. They had a stationary and home character. The first way of care took place in a specially adapted place–a hospice. On the other hand, according to the second model, care for the patient should take place in their home. An alternative to both projects is the day hospice, the purpose of which is to provide the patient with specialist care during their daily stay in a special facility. At the Department of Oncology of the Medical Academy in Poznań in 1988, on the initiative of prof. Jacek Łuczak, the first Palliative Care Unit in Poland was opened, which in 1990 was transformed into a Palliative Care Clinic. The establishment of the National Palliative and Hospice Care Council in 1993 by the Minister of Health and Social Welfare was a turning point in organizing care for terminally ill people. On September 1, 1994, the Pain Treatment Clinic for Children was established at the Institute of Mother and Child in Warsaw, which contributed to the establishment of the first Warsaw Hospice for Children (Szot, 2009, p. 221). At present, the United States is the country with the most extensive possibilities of perinatal help for children diagnosed with lethal defects and their parents. There are the most facilities of this type in the USA. Available data shows that nowadays every state has got at least one facility with hospice care. Perinatal hospices are most often a part of hospice for adults and children. There are also groups for parents with the similar experiences – for example Embracing Grace in Richmond, Virginia. Most facilities of this type is funded by private persons (Kmieciak, Szafrańska-Czajka, 2016; Informator dla Rodziców, Hospicjum perinatalne Fundacji Gajusz). In Central-East Europe there are not enough perinatal hospices. The available data show that there are two facilities of this type in Germany–in Bruck and in Berlin (Kmieciak, Szafrańska-Czajka, 2016). In the capital of this country there is Betereuung Und Begleitung von Neugeborenen Mit Unheilbaren Erkrankungen at the Neonatology Clinique of Charite University Hospital. The task of this facility is to care for unborn children and newborns diagnosed with incurable diseases. There is a stationary hospice in Prague and stationary and mobile hospice in Ostrava in the Czech Republic. Help and support in the country is also provided over the phone and the Internet by midwife Lenka Pazdera, who currently lives in Great Britain. She is the woman in charge of proper operation of Perinatální hospic- Perinatální hospicova a paliativní péči. The costs of care provided by the perinatal hospice in the Czech Republic are not covered by government funds. The services provided by the facility are free of charge. Caring for babies before birth is part of a wider program. In Bratislava, Slovakia, there is an organization that cares for people who have survived the loss of a loved one. There is also a home hospice Plamienok, which task is to take care of children of different age. This institution is funded by private persons. The main goal of this facility is not the help for parents and their unborn children, however it also supports women who ask for help. At the moment there is not enough information on perinatal hospices activity in Eastern Europe (Kmieciak, Szafrańska-Czajka, 2016).

4. The specificity of the palliative care model on the example of the Warsaw Hospice for Children

Currently, there are fourteen institutions in Poland for the care of parents whose children have been diagnosed with lethal defects: Gajusz Foundation in Łódź, Fr. E. Dudkiewicz hospice in Gdańsk, w Łodzi, Warsaw Hospice for Children Foundation, Silesia Perinatal Hospice in Katowice, "Pomóż mi" Foundation ("Help me") for Children with cancer diseases and Children Hospice in Białystok, Lesser Poland Children Hospice in Cracow, Cracow Fr. Józef Tischner Hospice for Children in Cracow, Greater Poland Perinatal Hospice "RAZEM" Hospice for Children in Poznań, Little Prince Hospice for Children in Lublin, Home Hospice Foundation for Children in Opole, Outer Subcarpathia Hoscpice for Children in Rzeszów, Silesia Children Hospice Foundation in Tychy, Alma Spei Children Hospice in Cracow, Hospice for Children of Lower Silesia in Wrocław (Kmieciak, Szafrańska-Czajka, 2016). People who have contributed in a special way to the development of perinatal hospices in Poland are prof. Joanna Szymkiewicz-Dangel (specialist in paediatrics and cardiology) and Tomasz Dangel PhD (specialist in anaesthesiology and resuscitation, palliative medicine). In 1995, at the Children's Memorial Health Institute, Tomasz Dangel MD, created the idea of home palliative care for children and founded the Warsaw Hospice for Children. The first patient of the hospice was looked after at the turn of 1998-1999. In 2006, an ultrasound clinic was opened at Agatowa Street in Warsaw, thanks to which specialists can provide comprehensive care combining prenatal diagnostics and care in a home hospice for children. It is a unique model of caring for children with lethal defects. In addition, in 2016, a support group was established at the hospice for couples whose child did not have a chance to stay at home. According to the law in force, perinatal palliative care is directed to the families of a child who has been diagnosed with an incurable disease, regardless of the manner and date of delivery. Therefore the help of hospices is available for couples in the case of miscarriage, stillbirth or death after childbirth, birth of a living child with a lethal defect. (Szymkiewicz-Dangel, 2016; Dangel, Szymkiewicz-Dangel, 2016a; Dangel, 2015; Journal of Laws 2017 No. 236). The care provided by perinatal hospices is continuous. It provides pre-contraceptive, antenatal, intra-natal, postpartum and interconceptual care as well as care for the obstetrician and newborn. According to the Standards of the Polish Pediatric Society, perinatal palliative care consists in providing comprehensive support to parents of children in the intrauterine life phase and newborns with lethal defects (...) as well as care of newborns with such defects focused on providing comfort and protection against persistent therapy. It includes symptomatic treatment for the child and psychological, social and spiritual support as well as support for parents in grief. Child care can be carried out in the neonatology ward or at home by parents and the hospice, if the child survives the delivery and is discharged from the hospital" (Bednarska et al., 2019). Among the patients who found out about their child's disease before 24 weeks, 79% of women who obtained information at the Agatowa Clinic decided to continue their pregnancy (conference materials from 2015–5th scientific symposium in the cycle "Prevention of reproductive health disorders" entitled " Early reproductive failures–etiology, prevention and management in an interdisciplinary approach). Dangel thinks that "perinatal hospice is not a facility (for example hospice or clinique), but perinatal medicine model based on respect for life and dignity of terminally ill child (fetus and newborn). It provides comprehensive care for a pregnant woman after prenatal diagnosis of a lethal fetal defect, which has been verified in a reference center. Before childbirth, it includes comprehensive medical, psychological and spiritual care for a pregnant woman, as well as support in mourning, regardless of the period of the child's loss. Postpartum care includes palliative neonatal care, home palliative care and long-term care. It is an alternative to eugenic abortion and persistent therapy" (Dangel, 2015; Dangel, Szymkiewicz-Dangel, 2016b).

The members of the interdisciplinary team taking care of the couple and their child are: doctors (including neonatologist, gynecologist, ultrasound doctor, geneticist), midwives, psychologist, clergy-

man, social worker, language translator, volunteers, physiotherapist, doula and funeral service provider (Madetko, Kowalczyk, 2018; Informator dla lekarzy Fundacji Gajusz). It is very important to provide the woman and the child's father a comprehensive care that will allow them to feel safe. In this critical period for the pregnant woman, but also during the further course of pregnancy, labour and the puerperium, the person who should provide the greatest support for the pregnant woman is the midwife. This role results from her constant presence at this time with the pregnant woman, and later with the woman giving birth and the midwife, creating a bond with her and providing emotional and informational support. It is the midwife who, as a result of the unfavourable diagnosis received by the parents from the doctor, has the task of strengthening the emotional bonds which have developed between mother and child, supporting and preparing the mother to care for the child with disabilities. The midwife can also act as a confidant for the mother when she needs it. The most important thing is for the pregnant woman to feel that there is someone who will always help her, answer her questions related to understanding the nature of the disability and support her in moments of crisis. (Sak, Łozińska-Czerniak, 2020).

The overriding goal of the perinatal hospice is to provide very detailed information on the child's disease, treatment options, possible medical procedures and their consequences for the child and mother. If parents need to meet other people with similar experiences, hospice can enable them such a meeting. Institutions providing the couple with reliable information and support enable rational decisions regarding further proceedings. The possibility of consulting a psychologist, talking to couples with similar experiences and the clergy gives the parents a chance to get used to the fate of their child–intrauterine or postpartum death, disability. Hospice helps them with dealing with emotions which occur with disturbing prenatal diagnosis–thoughts, stress, anxiety (Krzeszowiak, Śmigiel, 2016, p. 57; Szmyd, 2014, p. 389). If, after delivery, the condition of the newborn allows to discharge them from the medical facility, the hospice helps the family to provide comprehensive care and appropriate conditions for the child's stay at home. In such situations, the facility helps to organize the necessary equipment for this, and arranges home visits of doctors and midwives. The help of specialists who will support the woman and her relatives in this difficult period is very important. Visits should take place regularly with a frequency adjusted to the needs of parents and the condition of the newborn. During the visit medical staff should check if the couple is dealing well with the situation they are in and help them to solve any difficulties (Krzeszowiak, Śmigiel, 2016, p. 57; Szmyd, 2014, p. 389). If the child dies, the hospice supports couples in their mourning. Consultations with a psychologist and enabling contact with people from support groups may be helpful in this period (Kozik, 2014, p. 28).The activities of perinatal hospices have not been financed from public funds so far. These institutions obtained funds for their activities from private persons. According to the Regulation of the Minister of Health of January 31, 2017, No 236 amending the regulation on guaranteed services in the field of palliative and hospice care, it is possible to cover the costs of services provided by the National Health Fund (NFZ). In accordance with the Regulation "the services financed under the general health insurance include, support for the parents of the child, including those in the prenatal phase, the care focuses on providing comfort and protection against persistent therapy for newborns–with severe and irreversible disability or life-threatening incurable disease that arose in the prenatal phase during the child's development or during childbirth". According to the Regulation, services guaranteed to pregnant women may be provided by centers providing perinatal palliative care–in a prenatal diagnosis center, prenatal cardiology center, genetics unit, palliative medicine clinic, home hospice for children or in an inpatient hospice. The guaranteed services include medical and psychological advice and consultations in hospices and palliative medicine clinics. These services will be financed by the public payer in the units that will contract the services from the National Health Fund. Services guaranteed under the conditions of palliative care are provided until the 28th day after the birth (Journal of Laws 2017 No. 236).

5. Midwives role in hospice perinatal care

An unsuccessful obstetric diagnosis is a traumatic experience for parents who are expecting a baby. Such a situation requires the implementation of specialist care for couples awaiting the birth of an terminally ill child (Kornas-Biela, 2008). One of the members of the hospice perinatal care team is a midwife. Midwife supervises the family awaiting the birth of a child with a lethal defect. In such case midwife faces many very important tasks that will help future parents prepare and survive the period of pregnancy, childbirth, puerperium and mourning. (Krzeszowiak, Śmigiel, 2016, p. 57). The midwife is the only member of the medical staff who is present with the patient and the family throughout this period. The fact that there is no time limit, as in the case of the doctor or the psychologist, allows the midwife to undertake supportive or complementary actions to those begun by them. She takes part in all therapeutic procedures, either by herself or by assisting in them. During these procedures she gets to know the reaction of the pregnant woman which enables her to take appropriate actions (Jalowska et al., 2019).

The midwife should take care of the patient according to the biopsychosocial model. Care should take into account the biological, psychological and social area. From the very beginning of cooperation between medical staff and parents, there should be a thread of understanding that will facilitate further work. The basis of such a relationship is active listening, empathy, a willingness to understand and help. Acceptance by the midwife and the couple will have a positive impact on the undertaken actions. Patients may react in different ways to an unsuccessful prenatal diagnosis. This event may be accompanied by extreme behaviors and emotions (fear, helplessness, anger, guilt). The midwife must show great care and patience. It is the midwife who, at various stages of the diagnostic procedure, will often explain information provided by other members of the therapeutic team that is incomprehensible to the pregnant woman. This allows for a gradual familiarisation with the new situation.

The midwife must show great care and patience. She should try to get involved in all activities related to the course of pregnancy, childbirth, both the future mother and the father of the sick child. Thanks to this, they will have the opportunity to establish a bond with the child, which may turn out to be very important in mourning in the event of the death of the newborn. Medical personnel should be tolerant of the couple and the decisions they make. In no way should you exert pressure, impose your decisions on your parents. The midwife's task is to provide comprehensive answers to questions bothering parents, to determine the further course of action, to calm down, support and comfort them. The couple may need to talk about the baby, their feelings, or the opposite – they will avoid these topics, wanting to reduce their suffering. The midwife should follow the parents' needs in this regard. Due to this, it will be possible to build a therapeutic atmosphere, thanks to which a woman and a man will feel safe (Motyka, 2011). The midwife in this situation should make use of the skills developed in the course of her education and professional work, such as patience, empathy, understanding, commitment, which constitute her unique role in the team as well as being of great value to the supported parents. Parents awaiting the birth of a child with a lethal defect should be provided with specialist care already in the perinatal period. It is worth getting to know the midwife who will care for them before the birth. Thanks to this, both parties can know each other, accept and discuss all important issues. The midwife who is caring for the couple should give them full information about the course of pregnancy, delivery and the puerperium. This will enable preparation for upcoming events in some way. It is also important to establish a birth plan. An important element of preparation for termination of pregnancy is educating a woman in the field of labor pain relief, proper breathing techniques, and postpartum lactation management. Before the due date of delivery, parents should be able to find out about the hospital where their care will be provided. Medical staff should follow the patient's wishes, according to the existing possibilities. It is also worth discussing with the couple the possibility of carrying out religious ceremonies according to their faith. In addition, you can offer parents to prepare souvenirs related to their child – for example photos, footprint, birth certificate (Krzeszowiak, Śmigiel, 2016, p. 57;

Szmyd, 2017). During the patient's stay in the hospital, it is very important to choose the appropriate room for the woman. The best solution is to provide an individual room, away from the delivery path and in the maternity ward. This will keep the couple intimate and calm. Choosing the right place will limit their negative emotions that may arise in contact with other families waiting for the birth of a healthy child. Moreover, the above-described solution will enable the presence of the child's father or other relatives of the woman with whom she would like to be at the moment, in comfortable conditions that do not increase stress for the patient. Inappropriate selection of the room may adversely affect the mental state of a woman and her recovery both physically and mentally (Krzeszowiak, Śmigiel, 2016, p. 57; Szmyd, 2017; Niekorzystne zakończenie ciąży. Rekomendacje postępowania z pacjentkami dla personelu medycznego oddziałów położniczo-ginekologicznych województwa mazowieckiego, 2019). During labor, parents should decide for themselves whether they want the fetal heart function to be monitored regularly. The decision on how to terminate the pregnancy is made by doctors taking into account the current obstetric condition, with particular emphasis on the health situation of the mother. After birth, the baby should undergo standard neonatal examination. The midwife's task is to ensure thermal comfort and food for the newborn. It is unjustified to use persistent therapy in a patient diagnosed with a lethal defect. Parents should have unlimited contact with the child, also in the event of its transfer to the Neonatal Intensive Care Unit. If they wish for other family members to be present in the room, hospital staff should not prevent them from making such visits. The midwife, may offer the woman and the man to bathe and dress the newborn baby together, if their condition allows it. Medical personnel should cover the child in such a way as not to emphasize anatomical abnormalities. Hospital staff should ensure the presence of a clergyman in the room, if parents express such a need. If a newborn is born dead or dies while in hospital, parents should be able to say goodbye to them and give them a hug. This is important to the mourning process (Krzeszowiak, Śmigiel, 2016, p. 57; Szmyd, 2017). If the condition of the newborn allows his discharge from the hospital, the midwife should, in accordance with applicable law, make at least 4 patronage visits at the patient's home. The purpose of the above-mentioned procedure is the observation and assessment of the child's condition. It is also important to evaluate the relationship between parents and the child. The medical worker should provide the couple with information on the care and nutrition of the child, lactation, and pro-health behavior. The perinatal hospice also supports parents in caring for a child with a lethal defect staying at home.

6. Situation of the parents of a child with a lethal defect

Unsuccessful prenatal diagnosis destroys the current world of parents who are expecting a child to be born.They do not take into account the possibility of complications during pregnancy. Nobody is able to prepare for such a message. Such situations force couples to make very difficult decisions that will affect their future and the fate of the unborn child. There are no standards of conduct in the case of a diagnosed lethal defect, therefore parents and members of the medical staff face difficult ethical dilemmas.

Parents should also determine what procedures will be performed on the child in the event of a live birth. Surgery to extend and improve the life of the newborn, resuscitation, perinatal or intensive care care, and hospital / home treatment should be considered.

The aim of deciding on the medical actions mentioned above is to ensure child's well-being and reduce their suffering. The choices made by the woman and the child's father should be independent, the best in their opinion. The only exception is the decision to use life extension methods, which is at the discretion of the doctor. No one in the medical staff is allowed to put pressure on the couple. Before making a decision, the woman and the child's father should have the opportunity to consult other specialists in the field of obstetrics and genetics, a psychologist, priest, and parents with similar experiences. Independent opinions may be helpful (Szmyd, Śmigiel, Królak-Olejnik, 2014, p. 389; Dangel, 2012; Dangel, Szymkiewicz-Dangel, 2005).

A very important task is to provide the couple with information about their child's condition–the course of the disease, treatment methods, possible complications and genetic issues. In addition to the substantive value of the explanations provided, the very way of talking to the parents is extremely significant. A person responding to parents' questions should be full of empathy and understanding. It is worth to remember, that the factor that may influence the decisions made is the way of passing the poorly prognostic diagnosis to the parents. The couple should obtain this information from a specialist with current medical knowledge who is confident of the diagnosis. The best solution is to talk to both parents at the same time. The woman and the man should be able to ask questions. It is the doctor's responsibility to explain all options for further action. The conversation should take place in a quiet, secluded place that gives a sense of comfort and security. When making a diagnosis, it is advisable for the specialist to use vocabulary that is understandable to the couple. After the diagnosis is made, the woman and her husband should be able to consult a psychologist, priest or parents with similar experiences. (Szmyd, Śmigiel, Królak-Olejnik, 2014, p. 389; Dangel, Szymkiewicz-Dangel, 2005). If a decision is made to withdraw from persistent therapy after childbirth, the couple may benefit from the care of a perinatal hospice. This institution cares for the parents and the child from the diagnosis of the lethal defect to the end of mourning. Persons using the care of the above-mentioned unit are provided with specialist medical, psychological and spiritual care. It is very important to take care of such families. They cannot be alone or without specialist care. Helping you survive such a difficult life event is to enlist the help of support groups that connect people with similar experiences (Szmyd, Śmigiel, Królak-Olejnik, 2014, p. 389; Dangel, Szymkiewicz-Dangel, 2005). In case of unsuccessful diagnosis woman should be provided with particular care. Future mother could feel responsible for her child's state and their disease. The emotional instability accompanying the period of pregnancy will probably further intensify the negative emotions in the patient.

7. Summary

Hospice Perinatal Care is aimed at families who experience unsuccessful prenatal diagnosis. It is a form of help and support by providing a woman and her relatives with individual care, tailored to the needs and expectations. The perinatal hospice care system is not regulated by law. There is a visible lack of unified standards of conduct. Each institution in Poland providing hospice perinatal assistance develops its own model of care, as a result of which the patient and her family do not have the opportunity to experience continuity of care. It is crucial to consider the problem of low level of medical staff consciousness on the aims, possibility of perinatal hospices and principles of prenatal hospice care. In the medical community, there is a lack of preparation of staff to provide professional help to families experiencing unsuccessful prenatal diagnosis. Due to the fact that an unsuccessful prenatal diagnosis is a trauma not only for families but also for the healthcare personnel, it is important to provide psychological and emotional support to the members of the therapeutic team, as well as education in coping with difficult situations. Daily contact with illness, suffering and death makes medical personnel particularly vulnerable to the occurrence of burnout syndrome.

Conclusions

1. In current reality role and tasks of midwife as a member of a team that takes care of a pregnant patient with diagnosis of a lethal defect of a fetus, is first and foremost about accompanying woman in this hard period, emotional support and preparing parents for birth of a sick child.
2. It is important to concentrate actions on real needs of parents of children with lethal defect and adjust individual care to their expectations.
3. Including a midwife to perinatal care team in hospice allows to completes the process of taking care of parents of a child with a lethal defect.

Translation: mgr Justyna Zydek

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Attitudes of spouses towards abortion and the quality of their mutual relations

Postawy małżonków wobec aborcji a jakość ich wzajemnych relacji[1]

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Abstract: In recent years, social and political discussions on the legal aspects of abortion in Poland and the relaxation of restrictions in this regard have been intensifying. However, there are few debates about the social, psychological and medical effects on women and men who decide to terminate a pregnancy, both individually and in relation to their relationship. The paper examines the relationship between women's and men's attitudes towards abortion and the quality of their marital relations. On their basis, it is not possible to state unequivocally what the consequences of an abortion for the life of the spouses could be. However, it can be stated to what extent the cognitive and emotional-motivational aspect of their attitudes towards abortion is related to the quality of their relationship, love, marital communication and the sense of marital selection. The diagnostic survey method was applied to conduct the research. In order to collect data that allow one to assess the quality of the respondents' marriage, four standardized research tools were used: Józef Szopiński's Scale of Marriage Bonds, the Questionnaire for Measurement of Love in the concept of Robert Sternberg, adapted by Bogdan Wojciszke, the Questionnaire for Marriage Communication by Maria Kaźmierczak and Mieczysław Plopa, as well as the Matrimonial Selection Questionnaire by Jan Rostowski and Mieczysław Plopa. One of the statements from the scale of attitudes towards parenthood by Marta Komorowska-Pudło was used to assess the respondents' attitudes towards abortion. Based on the data obtained from the research, it can be concluded that the attitudes of spouses towards abortion have a statistically significant, though not high, relationship with the quality of their mutual relations. The higher the level of acceptance they expressed towards the possibility of termination of pregnancy in the event of unplanned conception of a child, the lower was the level of their satisfaction in terms of their mutual bond, love, communication and sense of mutual choice. At the same time, along with the increase in the level of satisfaction of spouses with their mutual relationship, the level of their negative attitude to choosing abortion as an option to regulate the number of children in the family increased. Based on the comparison of the research results with the data presented in the literature on the quality of marriages of people experiencing abortion, it can be concluded that the attitudes of spouses towards abortion in terms of the cognitive and emotional-motivational components are similarly related to the quality of their relationships, as in the case of the attitudes of spouses towards abortion in terms of the behavioral component. Openness to abortion (pro-choice attitude) is associated with less satisfying relationships between men and women in a relationship, and non-acceptance (pro-life attitude) with a higher level of the quality of their relationships. The research also attempted to identify selected individual factors conditioning attitudes towards abortion. Religiousness differentiates the attitudes of respondents of both genders towards abortion, while the education, duration of the marriage and parental status only the attitudes of the respondents.
Keywords: marriage, abortion, love, marital relations, attitudes

Abstrakt: W ostatnich latach nasilają się dyskusje społeczne i polityczne na temat prawnych aspektów aborcji w Polsce i złagodzenia obostrzeń w tym zakresie. Niewiele jest jednak debat na temat społecznych, psychologicznych i medycznych skutków dla kobiet i mężczyzn podejmujących decyzję o przerwaniu ciąży tak w aspekcie indywidualnym, jak i w odniesieniu do ich wzajemnej relacji. W artykule podjęto badania nad związkiem postaw kobiet i mężczyzn wobec aborcji z jakością ich relacji małżeńskich. Nie można na ich podstawie jednoznacznie stwierdzić, jakie mogłyby być skutki aborcji dla wspólnego życia małżonków. Można jednak stwierdzić, w jakim stopniu poznawczy i emocjonalno-motywacyjny aspekt ich postaw wobec aborcji wiąże się z jakością ich więzi, miłości, komunikacji małżeńskiej oraz poczucia doboru małżeńskiego. Do przeprowadzenia badań wykorzystano metodę sondażu diagnostycznego. W celu zebrania danych pozwalających ocenić jakość małżeństwa respondentów posłużono się czterema standaryzowanymi narzędziami badawczymi: Skalą Więzi Małżeńskiej Józefa Szopińskiego, Kwestionariuszem Pomiaru Miłości w koncepcji Roberta Sternberga, w adaptacji Bogdana Wojciszke, Kwestionariuszem Komunikacji Małżeńskiej Marii Kaźmierczak i Mieczysława Plopy oraz Kwestionariuszem Doboru Małżeńskiego Jana Rostowskiego i Mieczysława Plopy. Do oceny postaw respondentów wobec aborcji wykorzystano jedno z twierdzeń ze skali postaw wobec rodzicielstwa Marty Komorowskiej-Pudło. Na podstawie danych uzyskanych z badań można stwierdzić, że postawy małżonków wobec aborcji mają istotny statystycznie, choć niewysoki, związek z jakością ich wzajemnych relacji. Im wyższy poziom akceptacji wyrażali oni wobec możliwości przerwania ciąży w sytuacji nieplanowanego poczęcia dziecka, tym niższy był poziom ich satysfakcji w zakresie ich wzajemnej więzi, miłości, komunikacji i poczucia wzajemnego doboru. Jednocześnie, wraz ze wzrostem poziomu satysfakcji małżonków z ich wzajemnej relacji zwiększał się poziom ich negatywnego nastawienia do wyboru aborcji jako możliwości regulowania liczby dzieci w rodzinie. Na podstawie porównania uzyskanych wyników badań z danymi przedstawianymi w literaturze na temat jakości małżeństw osób doświadczających aborcji można wysnuć wniosek, że postawy małżonków wobec aborcji w zakresie komponentu poznawczego i emocjonalno-motywa-

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Rawick.pdf

cyjnego w podobny sposób wiążą się z jakością ich relacji, jak w przypadku postaw małżonków wobec aborcji w aspekcie komponentu behawioralnego. Otwartość na aborcję (postawa pro-choice) wiąże się z mniej satysfakcjonującymi relacjami kobiet i mężczyzn w związku, a nieakceptacja jej (postawa pro-life) z wyższym poziomem jakości ich relacji.
Słowa kluczowe: małżeństwo, aborcja, miłość, relacje małżeńskie, postawy

Introduction

In the light of systematically repeated discussions on the legal aspects of the permissibility of abortion, the analysis of psychosocial effects that an artificial termination of pregnancy could have on people directly related to it, i.e. both spouses, is usually omitted. In this paper the relationship between spouses' attitudes towards abortion and the quality of their mutual relations is discussed. Although, on the basis of the research presented here, it is not possible to conclude unequivocally what the relational experiences of spouses after an abortion could look like, it is worth paying attention to the quality of the relationship, love, communication and sense of marital selection, depending on what attitudes towards abortion they declared during the research in relation to their own position in the face of unplanned pregnancy. It turns out that the very declaration of attitudes in this respect (openness or lack of openness to abortion in the case of unplanned pregnancy) significantly differentiates the quality of the marital relations between the respondents.

1. Attitudes towards abortion in the aspect of marital relations in the light of literature

Almost thirty years after the introduction of the Act on Family Planning, Protection of the Human Fetus and Conditions for Termination of Pregnancy on January 7, 1993, the discourse on abortion and its various conditions is still important. Systematically, as social debates on the principles of permitting abortion in Poland are returning. Each year, tens of millions of abortions are recorded worldwide (Bearak et al., 2020). Despite the legal prohibition of abortion on demand in Poland, it can be assumed that some women decide to do so, inter alia, in the form of the so-called abortion emigration to neighboring countries or through pharmacological solutions. This is indicated by media reports revealing these facts among celebrities, as well as undocumented statements of people providing medical and therapeutic help.

Two main currents have been clashing in discussions on abortion for years: opponents and supporters. The supporters of abortion are looking for arguments for its legalization, also for cross-border purposes, e.g. indicating the risk of death or serious injury of illegal abortions, but without discussing the long-term and wide-ranging consequences for the quality of mental life or relations with the spouses of women who perform abortions (Lowe, 2018). In these two trends, there is talk of pro-life attitudes that indicates that human life should be protected from conception to natural death, and pro-choice attitudes, recognizing the right of women to choose abortion, due to the belief that it is her business. private, and the fetus is a part of it, not an independent human being (Singer, 2007; Picker, 2007, after: Król, 2014). Meanwhile, an analysis of the Poles' attitudes towards abortion has shown that over the past 25 years, attitudes have changed from pro-choice to pro-life. The fact that abortion should be permitted by law, when a woman simply does not want to have a child, was convinced by CBOS (Public Opinion Research Center) in 1999 that 27% of respondents said *yes* whereas 58% said *no*; in 2005: *yes*: 28%, *no*: 60%; in 2010: *yes*: 18%, *no*: 73%; in 2012: *yes*: 14%, *no*: 75%; in 2016: *yes*: 14%, *no*: 78%; in 2020, *yes*: 18%, *no*: 73% (Feliksiak, Roguska, 2020).

It is difficult to accurately assess the attitudes of women and men towards abortion. However, one can risk a hypothesis that there is some similarity between attitudes towards abortion in the cognitive, emotional-motivational and behavioral aspects. This means that the cognitive and emotional-motiva-

tional declarativeness of accepting or not accepting an abortion could be reflected with a high probability in the performance or, respectively, failure to perform it, if the women or both spouses were in a situation of unexpected and/or unwanted pregnancy. Research conducted among English and Welsh women shows that those who were negative about abortion more often struggled with making abortion decisions. Women with positive attitudes towards abortion were less likely to have moral dilemmas related to abortion (Hoggart, 2017).

In countries where abortion is legally permissible, many researchers are convinced that attitudes towards abortion and decisions related to abortion by women are largely influenced by the availability of institutions where pregnancy can be legally terminated. The research carried out in 1992-2011 shows that the level of anti-abortion activities and attitudes were negatively related to the number of institutions performing abortion. Also, the abortion rate in a given US state was positively related to the number of institutions performing abortions (Medoff, 2021). Where abortion is legal, women's decisions about it are largely influenced by difficult financial situation, or even poverty. Poor women have more abortions than rich women (Oberman, 2018). In a study carried out in Norway, it turned out that the strongest determinant of women's decisions about abortion was the prospect of single parenthood. At the same time, those women who displayed liberal attitudes towards abortion more often decided to terminate the pregnancy (Skjeldestad, 1994). In 2009, Swedish researchers analyzed the profiles of male partners of women who decided to have an abortion. Among the 590 men under the survey, every third had a previous experience of an abortion performed by a partner. These men were older, had a lower level of education and less emotional support than the men for whom this was the first experience of a partner deciding to have an abortion (Makenzius et al., 2012). Newton (2015; cf. Fagan, Talkington, 2014, after: Ryś, 2014) points out that the acceptance of abortion may be associated with the prevalence and acceptance of contraception, contributing to a radical change in the social perception of sexual intercourse, human life, human, science, and morality in general.

There are few studies in the literature that discuss the quality of spouses' relationships depending on their attitudes towards abortion. The quality of marriages of people experiencing abortions was also rarely discussed. However, the limited data available on the determinants and consequences of this experience for women and men indicate that the acceptance or non-acceptance of abortion is related to the quality of the relationship between them. The research of women in Shanghai shows that women whose husbands were careless about contraception were more likely to accept attitudes towards abortion. At the same time, such an attitude of the husband to family planning more often exposed women to decisions about abortion. The attitudes towards reproduction in the husbands of the women were to a large extent dependent on the education of these men (Ling, Hayashi & Wang, 1998). Many Chinese young women under the survey consider their parents' views on marriage and reproduction crucial. They often put their parents' preferences over those of their intimate partners. They justify this by the fact that intergenerational ties are more durable and reliable than the ties between intimate partners (Lai, Choi, 2021). The vast majority of women decide to have an abortion together with their husbands (Ariffin et al., 2017). However, women are often forced to have abortions by their partners, parents, and even employers or doctors (Reardon, 2018).

When researching attitudes towards abortion, researchers focus, inter alia, on whether women who decide to have an abortion and their partners experience the stigma associated with the decision to abort. It turns out that women with a low level of reproductive autonomy feel more stigmatized and must take into account the position of their partners when making decisions (Mehta et al., 2019). At the same time, it also turns out that despite the growing popularity of abortion in the world, the decision to terminate a pregnancy often causes moral outrage towards women and their partners (Pacilli et al., 2018). Major and Gramzow (1999) observed that women who felt abortion stigmatized more often felt the need to keep it secret from family and friends. Hiding this fact was also associated with suppressing thoughts and emotions about abortion, which, how-

ever, led to the fact that thoughts and anxiety about abortion were even more intrusive for them. It was all connected with an increase in mental stress over time. Revealing the fact of abortion reduced distress among women experiencing intrusive thoughts about abortion. The conclusions drawn by the researchers from the above analyzes may lead to suppositions that the distress experienced by these women could have a negative impact on relationships with their spouses. Many women struggling with abortion decisions are victims of violence in their own intimate relationships with their partners. Researchers have observed that violence by intimate partners (physical, emotional and sexual) negatively affects the reproductive health of women (Silverman, Raj, 2014, after: Ely & Murshid, 2021). This violence is associated with unplanned pregnancies by 3-13% of women (Campbell, 2002, after: ibidem). Women experiencing partner violence are at increased risk of unintended pregnancy, contraceptive problems and a history of miscarriage (Colarossi and Dean, 2014; Pallitto et al., 2013, after: ibidem).

In relationships with a partner–the perpetrator of violence, it is difficult to negotiate family planning since they tend to sabotage family planning efforts and the desire to fertilize their partner without caring for her desire to get pregnant (Moore, Frohwirth, & Miller, 2010, after: ibidem). As a result, these are precisely these women who are among those who use abortions more often (Ely & Murshid, 2021). It happens that these partners intentionally engage in unprotected sexual violence in order to impregnate their partner and then consider the pregnancy unwanted and lead to her termination. Such experiences may take place many times (Moore et al., 2010, after: ibidem). On the other hand, experiencing violence in the life history of patients (also in their childhood) was associated with a greater risk of experiencing abortion in the future (Coyle et al., 2015; McCloskey, 2016, after: ibidem). Sexual abuse may more often be associated with abortion, both in the context of deciding about the abortion itself and the strength of the effects of mental health (Reardon, 2018). At the same time, women with an abortion experience are more exposed to sexual violence and violent partnerships (Russo and Denious, 2001, after: Ely, Murshid, 2021).

Many researchers discuss the health and psychological effects of abortion on women. Their analysis allows drawing the conclusion that most of these effects, directly or indirectly, may reduce the quality of marital relations. Currently, with regard to the effects of abortion, researchers have no doubts about their occurrence. The discussions revolve around how often these effects appear, how intense they are, and to what extent they constitute a physical or mental health problem (Wilmoth, 1992, after: Reardon, 2018). Julius Fogel (after Reardon, 2018), a psychiatrist and gynecologist, pioneer of abortion law who performed tens of thousands of abortions, stated that abortion always requires a psychological price. According to him, every woman is traumatized by termination of pregnancy. It touches the level of her humanity, part of her own life. He believes that when a woman terminates her pregnancy, she is destroying herself. It cannot be harmless, and the trauma may collapse into unconsciousness and never reveal itself in a woman's lifetime.

Researchers who describe the consequences of abortion often analyze them from two perspectives–whether they are supporters or opponents of it. Despite many differences, both groups agree that women experiencing abortion more often than those who do not experience it have mental health problems (Reardon, 2018), although there are also some who deny the occurrence of such disorders (Steinberg et al., 2018). A study conducted among women aged 13-49, residents of California, the USA, showed that the treatment rate at a mental health clinic was 17% higher in the group who had an abortion (N = 14,297) compared to the group of women, who gave birth to children (N = 40 122). Within 90 days after pregnancy, the abortion group had 63% more mental health problems than the labor group (Coleman et al., 2002).

Many women experience long-term emotional, spiritual, psychological, and interpersonal difficulties after an abortion, including complicated grief, depression, post-traumatic stress disorder (PTSD), and relationship disorders (Whitney, 2017). The mourning process may last from several days to several years, and PTSD often shows up even after several years (Reardon, 2018). In one of the studies conduct-

ed among American women, PTSD was found in 32.5%, and ASD (acute stress disorder) in 52.5% of women after an abortion, compared to those who had never experienced it (Vukelic, 2010). The effects of abortion have been documented to include later premature births and breast cancer, more common in women who terminated their first pregnancy (Carroll, 2012). In an interview, abortion was associated with a significantly increased risk of postpartum depression after the first live birth (Meltzer-Brody, Maegbaek, Medland, 2017, after: Reardon, 2018), alienation, withdrawal from human warmth, inhibition of the maternal instinct (Fogel, after: ibidem). Among the effects, researchers also often mention guilt, sadness, grief, a sense of loss, anxiety, the use of psychoactive substances, sleep disorders (Reardon, 2018), decreased self-esteem, self-destructive behavior, existential fears and a decrease in the quality of life (Coleman et al., 2017) . Fogel (after: Reardon, 2018) indicates that something happens at deeper levels of a woman's consciousness when she terminates a pregnancy. Adverse personal and interpersonal effects for the spouses turned out to be greater and manifested themselves, inter alia, in in PTSD and in relationship problems when there was a disagreement between the partners in the abortion decision (Coyle, Coleman, & Rue, 2010).

The effects of an abortion do not always have to be immediate, but they can be triggered by subsequent births or natural losses, and even by subsequent non-pregnancy events (Ryan, Mengeling, & Booth, 2014, as cited in Reardon, 2018). Research shows that the percentage of women experiencing negative reactions increases with time, along with a significant decrease in decision satisfaction and the feeling of relief (Major, Cozzarelli, & Cooper, 2000; Miller, Pasta, & Dean, 1998, after: ibidem). The psychological and physical symptoms described in the literature as PAS and PAD post-abortion syndrome prevent many women from fulfilling their marital role and building a successful relationship with their husbands. They hinder these tasks, among others such problems as self-image disorders, loss of life purpose, conflicts in relations with her husband, fear of sexual intercourse, hypersensitivity, outbursts of anger, anxiety and depression, difficulties in feeling love, abuse of psychoactive substances, suicidal thoughts (see Ryś, 2014)). When the partner knows about abortion and participated in making the decision about abortion, he may also experience many of the above. consequences of termination of pregnancy (see Kornas-Biela, 2000). Then it is difficult to talk about the possibility of building a successful marital relationship free from such difficult states. German researchers indicate that soon after the abortion, satisfaction with the relationship decreases slightly, and in the following years there is no significant difference in satisfaction with the relationship compared to the pre-abortion period (Hajek, 2021). On the other hand, a number of data from studies described by Maria Ryś (2014) indicate that 25-70% of women after an abortion assess the change of relationship with their child's father to the disadvantage or even to its disorder and breakdown or even breakup. Similarly, the child's father may, over time, experience a loss of positive feelings towards his spouse (including trust, respect, sense of security), especially when she has aborted without his knowledge and consent (see Kornas-Biela, 2000). Among the consequences of abortion for marital relations among the women surveyed by Kaczmar (2014), about half of them can be mentioned, e.g. feeling of loneliness, emotional indifference, dying out of love life, the desire for frequent isolation, fear of sexual intercourse and the next pregnancy, and in about one third of them aversion to sexual life, sexual indifference and sexual dysfunction.

Difficulties in heterosexual relations between women experiencing abortions, compared to women who gave birth to a child, are proved by the research of Sullins (2003, after: Franz, Coleman, 2009), which shows that women with an abortion experience are twice as likely to be unmarried, and when they are married the risk of divorce in their relationships is 37% higher (including multiple divorces). These women had twice as many sexual partners, started sex earlier and married later.

Taking into account the negative consequences of abortion for the marital relationship, it is worthwhile in further research to look at the quality of these relationships when declaring attitudes towards abortion before the spouses think about such decisions.

2. Methodological fundamentals of research

The research was conducted in 2018-2020 among 480 people (240 men and 240 women) in the West Pomeranian Voivodeship. The research goal was to determine the respondents' attitudes towards abortion and their relationship with the quality of ties and relationships that they had with their spouses, as well as to identify selected determinants of these attitudes manifested by the respondents. The measurement of attitudes towards abortion was carried out using the scale of attitudes towards parenthood, developed by Marta Komorowska-Pudło (2013). One of the statements on this scale: "In order to avoid an unplanned pregnancy, you should even use an abortion" was used to achieve the research goal set here. The respondents described their own attitude towards abortion by indicating one of the five responses to the above-mentioned statements–from completely agree to completely disagree. The measurement of the quality of mutual relations between the spouses was carried out using Józef Szopiński's (1980) Scale of Marriage Bonds (SMB) (that enables the assessment of compassion, understanding and cooperation of spouses), intimacy and commitment in love), the Marriage Communication Questionnaire MCQ) by Maria Kaźmierczak and Mieczysław Plopa (2008) (that allows the analysis of the level of support, commitment and depreciation in marital relations) and the Marriage Selection Questionnaire (MSQ) by Jan Rostowski and Mieczysław Plopa (2006) (that measures the sense of intimacy, similarity, self-realization and disappointment of the spouses). The measurement of selected individual determinants of respondents' attitudes towards abortion was carried out using the questionnaire and the data sheets contained therein, as well as the Centrality of Religiosity Scale by Stefan Huber (after: Zarzycka, 2007). Using variables such as the respondents' education, place of residence, duration of the marriage, their parental status and the level of centrality of religiosity in their lives, the relationship with the respondents' pro-life and pro-choice attitudes was determined in the analyzed aspect of the research. The selection of the sample was non-random, purposeful and included married couples of young adults (aged 25-40).

The statistical analysis that enables the determination of the relationship between the variables was carried out with the use of the Spearman correlation coefficient ρ and Mann-Whitney U.

3. An analysis of the research results

The data obtained in the research show that the more definitely non-accepting the respondents' attitude towards abortion, the higher was the quality of their marriage in terms of all measured aspects (table 1).

Spouses who did not accept abortion were characterized by a higher level of bonding, i.e. compassion, understanding and cooperation. Respondents accepting abortion as a way of regulating fertility in the event of an unplanned pregnancy, less often than respondents who did not accept abortion, sensed mutual moods, shared closeness, empathy and trust, and missed each other less frequently when they were separated. They cared less about joint anniversaries, about sharing experiences that gave pleasure and joy. There was less tenderness and caring between them, as well as caring for a good relationship in the sphere of sexuality.

The lower level of understanding of the respondents accepting abortion, as compared to those who did not accept it, was related to the fact that the former were less likely to engage in joint discussions on mutual activities and investments, and less frequently to talk to each other about various life matters. They showed less joy in their accomplishments and less interest in the causes of their spouse's various emotional states, such as the causes of grief. More often they had secrets that they did not reveal to themselves. Less often they said to each other that they felt good with each other, less often they declared that they understood each other better and better, and they did not feel that in the future they would understand each other better. They appreciated each other's professional matters less and were less interested in the needs of contacts with the spouses' generational families.

Table 1. Relationship between the attitudes of spouses towards abortion and the quality of their marital relations

Marriage quality		Attitudes towards abortion			
		Men		Women	
		The Spearman's Rho	Significance level	The Spearman's Rho	Significance level
Marital bond	Compassion	0.18	0.004	0.27	0.000
	Understanding	0.12	0.050	0.19	0.002
	Cooperation	0.15	0.020	0.21	0.001
	Full bond	0.15	0.019	0.23	0.000
Love	Passion	0.12	0.053	0.15	0.018
	Intimacy	0.12	0.049	0.18	0.004
	Commitment	0.17	0.005	0.24	0.000
	Full love	0.15	0.016	0.20	0.002
Communication directed to the spouse	Support	0.12	0.067	0.18	0.004
	Involvement	0.09	0.169	0.09	0.174
	Depreciation	-0.15	0.015	-0.20	0.002
	Full communication	0.15	0.015	0.20	0.001
Sense of marital selection	Intimacy	0.14	0.029	0.17	0.006
	Similarity	0.17	0.005	0.23	0.000
	Self-realization	0.24	0.000	0.28	0.000
	Disappointment	-0.23	0.000	-0.22	0.000
	Total selection	0.24	0.000	0.27	0.000

In the case of respondents of both genders, the lower quality of cooperation in the marriages of people accepting abortion, compared to those who did not, was associated with less frequent mutual care and less time spent together. There were fewer compromises between them in resolving conflicts, and less often they recognized the sense of marital fidelity. Respondents accepting abortion were less willing to look for solutions during the marital crisis and were less willing to sacrifice to do everything to save the stability of the marriage if the conflicts turned out to be very strong. These respondents also less frequently declared that if they were to remarry, they would choose their spouse for the second time. Moreover, men accepting abortion less frequently indicated having mutual friends, while women from this group less often planned and carried out joint tasks together with their spouses, less frequently declared the use of methods of birth control agreed with their husbands, more often stated that they did not recognize similar values in life with their spouses and appreciated their husbands less often.

The level of love among respondents accepting abortion turned out to be lower than among those who did not accept abortion. The passion of respondents of both genders accepting abortion was less often expressed through sexual arousal at the sight of their spouses. Moreover, the men from this group less frequently desired sexual experiences with their wives and less often indicated that they were attracted to them. The women felt less desire as a result of memories of shared moments with their husbands, or as a result of closeness to them. Those accepting abortions revealed a lower level of intimacy with their spouses. It was manifested in the fact that accepting abortion less often than not accepting it indicated a sense of understanding with their spouse and peace in his presence, support and help in need, as well as warmth and cordiality in the relationship. Those who accepted abortion to a lesser extent than those who did not, gave up on fulfilling their own desires if it were to endanger the relationship. Less frequently, they declared that

they took into account the common good in their actions towards each other and put it before their own good, and that they constantly made efforts for the relationship, also in difficult situations.

Communication with spouses was much better among those who did not accept abortion as compared to those who did. In the case of the men, the relationship between support for wives and attitudes towards abortion turned out to be statistically significant at the level of the tendency. The men accepting abortion less often than those who did not accept it supported their spouses mentally, emotionally and spiritually, backed them up in their actions and views, and helped them when they needed it. In the case of women, the relationship between support and their attitudes towards abortion turned out to be statistically significant. Those accepting abortion to a lesser extent than those who did not accept it were less interested in the successes of their spouses, showed them their care and help, gave them mental, emotional and spiritual support, were interested in their needs, praised their husbands for their work, provided advice when they needed it and helped them in solving various problems or making decisions. The relationship between the generally understood involvement of the respondents in building relationships with their spouses and their attitudes towards abortion turned out to be statistically insignificant, however, in a detailed analysis, several statistically significant correlations were found. It turned out that spouses of both genders accepting abortion less often than those who did not accept it hugged their spouses and kissed them. In addition, the men from this group less often sought compromises with their wives during various conflicts and discussions, and women less often confessed their feelings towards their husbands. More statistically significant relationships were found in a detailed analysis of the level of depreciation of the spouses with their attitudes towards abortion. Respondents of both genders accepting abortion more often than those who do not accept it, imposed their opinion on their spouses, said something inconsiderate or unpleasant to them, behaved arrogantly and rude towards them, humiliated them or behaved vulgarly towards them. Moreover, women accepting abortion more often than those who did not accept it demanded submission from their spouse or insulted him.

The measurement of the relationship between the sense of marital selection and the respondents' attitudes towards abortion turned out to be statistically significant for all detailed variables. The analysis of the dimension of intimacy allowed drawing conclusions that those who accept abortion less often than those who do not accept it indicated that their contact with their spouses deepened over time, and that the level of their mutual compliance in plans, aspirations, and expectations was higher than in those who did not accept it. Moreover, women accepting abortion less frequently than those who did not accept it declared that with the duration of their marriage, their sensitivity to mutual needs with their husbands increased and the sense of psychological kinship with them, and that the sense of happiness in their marriages increased. Based on the measurement of the relationship between the spouses' sense of similarity and their attitudes towards abortion, it was found that those accepting abortion to a lesser extent than those who did not accept it derived satisfaction from joint activities and the implementation of joint plans with their spouses. Those accepting abortion less frequently than those who did not accept it displayed the same or similar views with their spouses on the upbringing of their children and indicated a convergence of world views, which also expressed their agreement in the choice of the hierarchy of goals and values of life. Women accepting abortion less often than those who don't accept it also indicated that they agreed with their husbands in terms of joint decision-making, as well as in terms of spending free time with them. In the area of the sense of self-fulfillment in marital and parental roles, those who accepted abortion less frequently than those who did not accept it indicated the awareness of the requirements of married life and were less positive about parenthood. More often they declared that they found a full human life in marriage, that they noticed changes in themselves for the better over the years of the relationship, and that marriage was the best way of life, love and work. They also said

Table 2. Individual determinants of spouses' attitudes towards abortion

Individual determinants of respondents' attitudes towards abortion		Attitudes of spouses towards abortion					
		Men			Women		
		Pro-life	Undefined	Pro-choice	Pro-life	Undefined	Pro-choice
		%					
Education	Higher	70.2	18.7	11.1	78.4	13.2	8.4
	Secondary	69.7	19	11.3	80.6	13.5	5.9
	Vocational	75.8	15.1	9.1	87.5	12.5	0
Correlation indicator		*rho* = -0.06 p = 0.371			*rho* = 0.11; p = 0.076		
Place of residence	City over 200,000 residents	71.7	17.7	10.6	73.3	14.6	12.1
	City from 50,000 to 200,000 residents	69.2	11.6	19.2	86.2	10.4	3.4
	City up to 50,000 residents	63.5	25.9	10.6	76	18.7	5.3
	Country	67.9	17.8	14.3	84.4	9.3	6.3
Correlation indicator		*rho* = -0.03; p = 0.638			*rho* = 0.07; p = 0.256		
Duration of relationship	Up to 2 years	63.2	29.4	7.4	88.1	10.4	1.5
	2-3 years	70	15.7	14.3	77.9	16.2	5.9
	4-5 years	63.3	24.5	12.2	66	22	12
	6-9 years	79.3	10.4	10.3	74.2	9.7	16.1
	Above 10 years	69.4	13.9	16.7	74.3	14.3	11.4
Correlation indicator		*rho* = 0,02; p = 0,752			*rho* = -0,19; p = 0,002		
Parental status	Have children	69.8	19.9	10.3	71.6	16.3	12.1
	No children	66.9	19.9	13.2	81.6	13.3	5.1
Correlation indicator		U Mann-Whitney = 7228.50; p = 0.231			U Mann-Whitney = 6950.50; p = 0.078		

Table 3. Religiousness of spouses and their attitudes towards abortion

Attitudes towards abortion	The level of centrality of the religiosity of the respondents (average results)	
	Men	Women
Pro-life	44.10	48.65
Undefined	34.00	41.07
Pro-choice	31.48	44.70
Correlation indicator	*rho* = 0.32; p = 0.000	*rho* = 0.19; p = 0.006

less frequently that children born into the world made their marriage more attractive and deepened and strengthened their love, and that the birth of a child strengthened their sense of security and mutual support. Those accepting abortion more often declared disappointment with their relationship with their spouse, more often indicated that they regretted the lost independence and freedom from the pre-marriage period and that they felt better at work than at home. They more often declared that their spouse had failed their expectations, that they felt lonely in a relationship and that they would rather be in company than alone with their spouse. They were more frequent among those accepting abortion than among those who did not accept the statements that in difficult situations and problems they would prefer to leave their spouse and be free, especially if the problems were related to marriage. They also thought about breaking up with their spouse more often. Moreover, the men accepting abortion more often expressed a desire to return to their parents' home and stay in it, and also more often indicated that after conflicts they are accompanied by a long-lasting discrepancy. The women

accepting abortion more often also pointed out that marriage became an obstacle for them in achieving their goals, e.g. professional aspirations.

In the further part of the research, it was determined to what extent pro-life and pro-choice attitudes were differentiated by variables such as the education of the respondents, their place of residence, the duration of the marriage, their parental status and the level of centrality of religiosity in their lives (tables 2 and 3).

Pro-life attitudes were more often revealed by respondents with a lower level of education. In the case of women, the relationship between education and their attitudes towards abortion was statistically significant at the trend level, while in the population of their husbands no such relationship was found (table 2). The place of residence turned out to be a variable that did not differentiate their attitudes towards abortion in the case of the men under the survey. In the group of women, based on the percentage scale, a higher percentage of pro-choice attitudes among female residents of large cities can be found. However, these data are not statistically significant. The attitudes of the women towards abortion varied depending on how long they lived in their marriages. The shorter the duration of the relationship, the more often they rejected the possibility of having an abortion in the event of an unplanned pregnancy.(statistically significant data). In the case of the men, no such differences were found, although on a percentage scale, as in the case of women, the lowest number of pro-choice people in this situation was among those whose marriages lasted up to two years. Women who did not have children yet displayed pro-life attitudes more often than women who already had children. These were to a greater extent (although in the research it concerned every eighth of them), they were open to accepting abortion in the case of unplanned pregnancy (data statistically significant at the trend level). In the case of men, no such differences were found.

Religiousness turned out to be a variable that differentiated to a statistically significant degree the attitudes of spouses towards abortion. The higher the level of centrality of religiosity in the lives of respondents of both genders, manifested in the interest in religious issues, beliefs, experience of prayer and participation in services, the more often there were people with pro-life attitudes (table 3). Along with the decline in the level of religiosity of the respondents, the group of respondents focused on the possibility of choosing an abortion in the event of an unplanned pregnancy increased.

Conclusions from the research

All the data obtained from the research indicate that the attitudes of spouses towards abortion are statistically significantly related to the quality of their mutual relations. The more accepting they refer to the possibility of terminating a pregnancy in the event of an unplanned conception of a child, the less satisfying their mutual bond, the quality of love, communication and the sense of mutual selection turned out to be. At the same time, the high level of the quality of the marriage relationship positively correlated with the negative attitude to the choice of abortion as an option to regulate the number of children in the family. Pro-life attitudes were more common in spouses engaged in religious life, and in the case of women also in those who had a lower level of education, were in a relationship with a shorter duration, and did not have children yet.

Taking into account the previously indicated data from the research on the difficult relationships of spouses experiencing abortion and comparing them with the presented results from our own research, it can be assumed that there is a high probability that in the situation of legalization of the universal right to abortion, spouses who declare openness to termination of pregnancy at the cognitive and the emotional and motivational component of their own attitudes, would be willing to implement them in the behavioral aspect. This means that a pro-choice attitude carries the risk of actually having an abortion, and not accepting it will be associated with a high probability of having a child also in a situation where its conception was not planned by the spouses. Therefore, it seems justified to organize support for spouses

in building high-quality relationships in order to increase the percentage of people with pro-life attitudes. At the same time, taking into account the determinants of the quality of marriage that appear in women and men in the developmental period, from the beginning of their lives, it would be worth strengthening activities aimed at shaping psychosocial maturity to build marital relationships in adulthood in the broadly understood family, school and media systems.

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Selected psychological factors related to pregnancy planning in women diagnosed with paranoid schizophrenia. Preliminary study

Wybrane czynniki psychologiczne związane z planowaniem ciąży u kobiet ze stwierdzoną schizofrenią paranoidalną. Badania wstępne

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Abstract: The aim of the presented research was to determine whether the selected psychological variables are related to the desire to have a child in childless women diagnosed with schizophrenia, to check the differences in terms of these variables between women diagnosed with schizophrenia, who declare the will to have a child, and those who do not plan to have one, as well as the comparison of the results obtained in the group of women with no history of psychopathology. 30 women diagnosed with schizophrenia and 30 healthy women participated in the study. The Self-esteem Scale by Rosenberg was used, as well as the Strength of character VIA-120 by Peterson and Seligman. The results indicate differences in the level of self-esteem and selected strengths of character, both between women who want to have a child and those who do not declare such a willingness, and between the group of women diagnosed and the comparison group.
Keywords: paranoid schizophrenia, pregnancy, childbirth, maternity

Abstrakt: Celem przedstawionych badań było określenie, czy wybrane zmienne psychologiczne mają związek z pragnieniem posiadania dziecka u bezdzietnych kobiet ze stwierdzoną schizofrenią, sprawdzenie różnic w zakresie tych zmiennych pomiędzy kobietami z diagnozą schizofrenii, które deklarują chęć posiadania dziecka, a tymi, które posiadać go nie planują, a także porównanie wynikami uzyskanymi w grupie kobiet bez stwierdzonej psychopatologii w wywiadzie. W badaniu wzięło udział 30 kobiet z rozpoznaniem schizofrenii oraz 30 kobiet zdrowych. Wykorzystane zostały Skala Samooceny Rosenberga, a także test Sił Charakteru VIA-120 Petersona i Seligmana. Wyniki wskazują na występowanie różnic w zakresie poziomu samooceny oraz wybranych sił charakteru, zarówno między kobietami, które chcą posiadać dziecko, a tymi, które takiej chęci nie deklarują, a także między grupą kobiet z diagnozą, a grupą kontrolną.
Słowa kluczowe: schizofrenia paranoidalna, ciąża, poródm macierzyństwo

1. Instroduction

Several decades ago, it was still believed that the fertility rate of women with schizophrenia was below the average, i.e. 30% -80% of the fertility rate of the general population (Stewart, 1984). However, more recent studies do not find a significant difference between the number of pregnancies in women with schizophrenia and the number of pregnancies in the general population (Matevosyan, 2011; Solari, Dickson, & Miller, 2009). Some researchers even report that the percentage of pregnant women in this group of patients has increased significantly in recent years (Matevosyan, 2011; Simoila et al., 2019; Taylor et al., 2020). Even if the percentage of pregnant women suffering from schizophrenia is comparable to the percentage of mentally healthy pregnant women, the distinction may appear in

a different aspect. Previous studies show that women with schizophrenia reported behaviors related to rape or sexual violence as well as violence during pregnancy much more often. Miller (2009) reports that as many as 33% of the women surveyed were exposed to such violence, while Seeman (2013) stated that 14% of 808 women experienced physical violence during pregnancy. They were also supposed to engage in risky sexual behavior more often, were less satisfied with their sex life, and had definitely more sexual partners with whom they did not build solid relationships (Rola et al., 2019; Solari, Dickson, & Miller, 2009).

Already nearly four decades ago, Abernethy (1974) noticed in her research that the rate of sexually active women with schizophrenia was much higher than she had expected. More than two-thirds of the surveyed women declared they were active in this area, which can be confirmed by the research discussed above, but this is not the most important aspect. Abernethy (1974) reports that fifty percent of the women surveyed used some form of birth control, but only eighteen percent used actual contraceptives at their last intercourse, so the likelihood of pregnancy (including unplanned pregnancies) in this group is quite high. At the same time, it should be noticed that the clinical picture of the disease in women is different from that in men, among others women have much better developed social skills and function better in society, and thus more often have a chance to start a family and lasting relationships than men (Li et al., 2016; Prat et al., 2018).

1.1. Pregnancy and childbirth as triggers of schizophrenia

The perinatal period is known as the period of special risk as it may exacerbate symptoms in women with schizophrenia. As indicated by Jones et al. (2014; p. 1789) "*childbirth is a powerful trigger of mania and psychosis, and episodes at this time cause substantial morbidity and mortality, with suicide a leading cause of maternal death*". In the study conducted by Solari et al. (2009), as many as 55% of women diagnosed with a diagnosis experienced a severe psychotic episode in the first year after childbirth, and most of them in the first three months. In turn, in study by Khapre, Stewart, and Taylor (2021), the occurrence of positive, disorganization, and manic symptoms 2 years before pregnancy were associated with increased risk of relapse during pregnancy and postpartum. Similar dependencies were indicated by the results of a systematic review and meta-analysis by Wesseloo et al. (2015).Women with diagnosed schizophrenia also more often manifested symptoms of clinical postpartum depression (Solari, Dickson, & Miller, 2009).

Previous studies show that patients diagnosed with paranoid schizophrenia have more complications during childbirth than healthy women (Vigod et al., 2014), although the chronicity of the disease, long-term treatment and impaired social skills are more important here, which may result in the abandonment of appropriate treatment. perinatal complications, including those affecting the mental sphere (Stewart, 1984). The results of studies by Simola et al. (2020) indicate that women with schizophrenia have higher prevalence of psychosocial and somatic risk factors related to pregnancy, as well as pregnancy-related complications and disorders than non-affected women. Similarly, in studies of women with more than three months of hospitalization, as well as with active psychotic symptoms in the last six months before pregnancy, a greater risk of exacerbation of the disease immediately after delivery was found. They may experience auditory hallucinations that are harmful to the baby, believe that the newborn has a disease or are defective, as well as the illusion that the birth did not take place at all (Solari, Dickson, and Miller, 2009). It has also been noticed that after childbirth, especially in women with affective disorders, the mental state deteriorates most often, while the intensity and aggravation of symptoms is less frequent in women diagnosed with schizophrenia (McNeil et al., 2009; Taylor et al., 2015). However, when it occurs with a shorter time interval from childbirth than in affective patients, and the exacerbation state lasts much longer, the symptoms may get worse.

1.2. Risks for the mother related to schizophrenia

A potential threat for a pregnant woman with a diagnosis may be the cessation of taking antipsychotic drugs for the sake of an unborn child, while according to Łoza et al. (2016), a pharmacological break lasting only a few days carries an almost twofold increase in the risk of exacerbation of symptoms, relapse, and re-treatment in hospital. (Tomczak, 2016). According to Doyle, Carballedo and O'Keane (2015), for a woman with serious mental illness, at high risk of relapse, discontinuation of treatment may be unwise as for relapse may relatively be more harmful to the mother and child than continuing drug treatment. DeCesaris (2013) found that women with schizophrenia received less intensive prenatal care.

Fabre et al. (2021) postulated to define women suffering from schizophrenia as women with a much higher rate of prenatal complications. These women have been shown to exhibit significant symptoms of toxaemia, vaginal bleeding and proteinuria during pregnancy. It is interesting, however, that these results were significant only in the case of socio-demographic differences between the diagnosed women and the control group women. When women of similar social status were tested, these differences were negligible (Stewart, 1984). The earlier studies by Rieder et al. (1975) who investigated the reasons for the twice as many deaths of newborns and fetuses born to women with schizophrenia. The cause of some of the deaths was unknown, and some newborns or fetuses had significant neurological defects. The cause is considered to be the unfavorable environment of the uterus or the association with the toxicity of a drug taken by women during pregnancy (Teodorescu et al., 2017). Nilsson (2002) also argued for an increased frequency and severity of prenatal complications in women with schizophrenia. mortality among newborns in this group of women It was noticed that women diagnosed with pregnancy more often reported material problems, panic related to childbirth, fears related to childbirth and raising a child, and also more often postulated their unpreparedness for the role of a parent (Solari et al., 2009).

Another research proving the particular group of pregnant women with diagnosed paranoid schizophrenia is the Canadian study by Vigod et al (2014). The authors noted that diagnosed women were more likely to become pregnant in adolescence and were also exposed to a number of complications related to pregnancy, childbirth and the puerperium. Compared to women with no clinical history of psychiatric disorders, they had a higher rate of gestational hypertension (2.8% vs 2.0%), pre-eclampsia or eclampsia (2.2% vs 1.1%) and venous thromboembolism (1.6% vs 0.6%). Approximately 5.5% of women with schizophrenia also had gestational diabetes, while in the control group the rate was 4.7% (Vigod et al, 2014). Also Teigset, Mohn and Rund (2020) indicate the association between perinatal obstetric complications and executive dysfunction in early-onset schizophrenia.

1.3. Risks for the child related to maternal schizophrenia

One of the most dangerous symptoms that may occur during pregnancy in women with schizophrenia is psychotic denial of pregnancy (Solari et al., 2009). It is associated with a high risk, as for a woman may completely refuse prenatal care, which should be particularly careful in the case of pregnancy in a woman diagnosed with paranoid schizophrenia. Some of the women who fall under the delusion that they are not pregnant may not recognize the birth, and violent and independent delivery can lead to the death of the child. Apart from the classic complications that can occur with each birth, a woman may think that the delivery is a movement of the bowels and the baby may be born on the toilet, for example (passive delivery). A woman may also be shocked by the delivery and the arrival of the baby that she bury it or leave it in the garbage can (active birth) (Stewart, 1984). It is believed that such methods of denial of pregnancy may be defense mechanisms against the possible and expected loss of a child. This is also evidenced by the fact that psychotic denial of pregnancy is more common in women who have previously lost custody of their children (Solari et al., 2009).

A pregnant woman with schizophrenia may also be convinced about the special nature of the child. Shee may suspect his conception of God or Satan, which in both cases may be dangerous for the fetus and cause attempts at an abortion on his own (Stewart, 1984). Therefore, an important aspect of caring for a woman who showed any psychotic symptoms is the control of her contact with the child, which at the same time can give the woman a sense of security and the opportunity to learn how to care for a child. Olsen et al. (2012) showed that recent psychiatric episodes may influence women's decisions to have an induced abortion.

A study conducted in the USA in 2002-2003 by Havens et al. (2009), which included women aged 14 to 44 (1,800 pregnant women and 37,527 non-pregnant women), showed that one in four took psychoactive substances during pregnancy. This percentage was particularly large in the group of women with possible psychopathology (Seeman, 2013) and this may be one of the reasons for the loss of health and life of children. Research conducted in the USA also shows that the group of women with various types of psychopathology, including schizophrenia, is a high-risk group in the context of using various psychoactive substances (Klimkiewicz, Jasińska, 2018; Seeman, 2013).

1.4. The determinants of the decision making process about pregnancy

In recent decades, almost all areas of our life have changed, including the perception of a child as a value and the decision-making process itself, which is to lead to a possible pregnancy (Lesińska-Sawicka, 2007). Therefore, the question arises as to what is the cause of this and is it possible to consider these changes unambiguously as a positive or negative phenomenon? According to Mynarska (2011), the decline in the fertility rate in the developed countries of Western Europe began in the 1960s, respectively later (i.e. in the 1990s) the same phenomenon occurred in the post-socialist countries (Młynarska, 2011).

What aspects of the decision about the baby have changed? The first and perhaps most important difference is that the arrival of a child is not a "mandatory" complement to a relationship between two people. You can have it, but it is not an absolute value and the main goal (Lesińska-Sawicka, 2007). Another element is the reorientation of the reasons influencing the decision to have a child. There are completely new conditions that must be met, at least at an optimal level, to make the decision about a child easier or to consider having it at all. (Lesińska-Sawicka, 2007). These include: getting an education (Thalberg, 2013), independence and a stable situation on the labor market (Soderberg, 2015), or having a partner who, in the opinion of women, would be a suitable candidate for a father (Soderberg, 2015). Other reasons include the economic situation and the lack of a proper pro-family policy (Mills et al., 2011).

There were also three significant social differences: the decision about parentage is made at an increasingly later age (Kossakowska & Soderberg, 2021), and thus the number of children in the family decreases significantly, and couples remaining in relationships more and more often decide on the so-called childlessness by choice (Mynarska, 2015, Mynarska & Rytel, 2020; Tochioni et al., 2022).

The above-described social changes and factors influencing the decision to motherhood have an impact on the attitudes towards motherhood among women suffering from schizophrenia. Additionally, Seeman (2013) points out that the clinical team that the patient enters may be of key importance for a woman's decision. Sometimes it happens that the desire to have a child and convincing a partner, as well as the whole family, about the rightness of this decision is in opposition to the position of a doctor who may find it inadvisable for the sake of the patient herself or the consequences of pregnancy that may threaten the child (Seeman, 2013). Gadamer (2004) noted that each patient related stakeholder contributes important arguments and broadens the horizons of discussion on pregnancy planning. He also stated that such a discussion, repeating key information, exchanging arguments and trying to look at the conflict from different sides is very valuable for the patient and allows her to maintain autonomy and conviction about agency. The whole process also helps the patient to understand the complexity of the consequences and facilitates the reorganization of assumptions and a gradual understanding of the validity of the doctor's opinion and its causes (Seeman, 2013).

Few studies deal with the problem of procreation in women suffering from schizophrenia. This applies to aspects related to pregnancy and puerperium to a lesser extent, but the issues of procreation attitudes in this group of women seem to be completely ignored.

The aim of the research presented in this paper was to determine whether there are specific psychological determinants of the decision to pregnancy in women diagnosed with schizophrenia. And if they exist, what is their influence on the decision-making process and how does this process differ in diagnosed women compared to healthy women? And also whether there are specific personality conditions for wanting to have a child, or whether the disease and certain limitations associated with it exist, are not an obstacle.

The research was exploratory in nature, no directional hypotheses were formulated, however, the following research questions were formulated:

1. Is there any differentiation in terms of strength of character and self-esteem among healthy women and women diagnosed with paranoid schizophrenia, declaring their desire to have a child?
2. Do the diagnosed women who declare their will to become a mother differ in terms of their strength of character and self-esteem from the diagnosed women who decide not to have a child?
3. Does having a partner by women diagnosed with schizophrenia differentiate in this group in terms of declarations of the will to have a child?

2. Method

2.1. Procedure

The research was cross-sectional and was carried out in the Internet space. The data collection lasted from March to August 2019. The selection criteria for the study group were the diagnosis of paranoid schizophrenia, age from 18 to 45[1], gender–women and not having children. The selection criteria for the comparative group were the lack of psychopathology, gender – women, and the same age range as in the group of women diagnosed with and not having a child.

The study involved women who replied to the Internet advertisement about the study. The recruitment of women to the comparative group took place either on portals devoted to pregnancy and motherhood, or acquired through social contacts. Women diagnosed with paranoid schizophrenia were recruited for the study from groups and online forums on mental disorders.

The research procedure was performed in accordance with the Helsinki Declaration of Human Rights (WMA, 2013). The study was approved by the university advisory board. As the study was of an informative cross-sectional purely descriptive nature, no formal ethical approval was required under the country's legislation. Participants were informed of the purpose, risks, and benefits of the survey. They were told they could withdraw from the study at any time and for any reason without a penalty. All participants provided electronic informed consent prior to participate in the study. Electronic informed consent was prepared in accordance with the Ethics Guidelines for Internet mediated Research (British Psychological Society 2017).

2.2. Study tools

In addition to the questionnaire collecting data on the age of the respondents, the age of receiving the diagnosis (for women in the study group), marital status and the declaration of the desire to have a child, the following tools based on the self-report method were used in the study: Rosenberg's Self-Assessment Scale–SES (Rosenberg, 1965), The Character Strength Test–VIA-IS (Peterson & Seligman, 2004).

2.2.1. The Self-Esteem Scale

For measuring self-esteem level, the Self-Esteem Scale (SES) by M. Rosenberg in Polish adaptation by I. Dzwonkowska, K. Lachowicz-Tabaczek and

1 The reproductive age of women in Poland is 15-49 years of age. The given age range (18-45 years) was intended to invite only adult women to participate in the study. The adoption of the upper limit as 45 was based on the data from the GUS demographic report (2019), which shows that the percentage of women who gave birth to their first child after the age of 45 is only 0.1%.

M. Łaguna (Dzwonkowska et al., 2008) was used. SES consists of 10 diagnostic statements and examines the general level of self-esteem (understood as a constant attitude towards self–positive or negative). The respondent marks her answer on a four-point scale, determining the degree of compliance of the statement with self-confidence. The reliability of the scale is high, Cronbach's alpha ranges from 0.81 to 0.83 for different age groups. The numerous data collected during the adaptation of the Polish version of the SES, as well as the correlations with questionnaires examining similar psychological constructs testify to the high accuracy of the SES (Dzwonkowska et al., 2008).

2.2.2. The Values in Action Inventory of Strengths (VIA-IS)

For measuring character strengths, the Polish version of the VIA-IS (Peterson & Seligman, 2004; Polish language version: Najderska & Cieciuch, 2013) was used. The instrument consists of 240 items rated on a five-point Likert scale (from 1 = "strongly disagree" to 5 = "strongly agree"), representing the defined 24 character strengths assigning to six core virtues: creativity, curiosity, judgment, love of learning, and perspective (assigned to the virtue of wisdom and knowledge); bravery, perseverance, honesty, and zest (assigned to the virtue of courage); love, kindness, and social intelligence (assigned to the virtue of humanity); teamwork, fairness, and leadership (assigned to the virtue of justice); forgiveness, humility, prudence, and self-regulation (assigned to the virtue of temperance); and appreciation of beauty and excellence gratitude, hope, humor, and spirituality (assigned to the virtue of transcendence). Research on the Polish adaptation of this test has shown that the reliability of the features ranges from satisfactory (0.60) to quite high (0.70), so it can be concluded that the reliability of the Polish adaptation of the Character Strength Test is satisfactory. The accuracy of the tool was assessed using English studies (Lindley et al., 2007) and almost all statistically significant differences were reflected in the Polish adaptation of the test (Najderska, Cieciuch, 2013).

2.3. Statistical analysis

All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 25.0 for Windows. In the case of the variables for which the Shapiro-Wilk test results showed no normal distribution for the analyzed variables, the Mann-Whithey U test was used in further analysis to determine differences between the groups. In the case of normally distributed variables, the Student's t-test was used to compare the results in two independent groups. and the chi-square test to determine the significance of differences in abundance distributions. The level of statistical significance for the study was set at $p < 0.05$.

3. Results

3.1. Characteristics of the study group

The mean age of all respondents is 26.3 years (SD = 5.1). Half of them (n = 30) are women diagnosed with paranoid schizophrenia between the ages of 15 and 34 ("diagnosis" group), the other half (n = 30) are healthy women ("healthy" group). The mean age of women in diagnosis group was 28 years (SD = 5.4), and in the healthy group was 24 years (SD = 3.8). A majority of women in the diagnosis group, do not have a partner (70%), and also 70% of them want to have a child or have seriously considered having a child. In the healthy group, 83.3% of the respondents declared the will to have a child, and 70% of them have a partner. Detailed characteristics of the respondents are presented in Table 1.

3.2. Differences in terms of character strength among healthy women and women diagnosed with schizophrenia, declaring a desire to have a child

Due to the lack of normal distribution of the analyzed variables, in order to determine whether healthy women who declare the desire to have a child differ from women with schizophrenia who want to become a mother in terms of their strength of character, the

Table 1. Study groups characteristic

	Diagnosis group *n*=30		Healthy group n=30		Total *N* = 60	
	M	*SD*	*M*	*SD*	*M*	*SD*
Age	28.4	5.4	24.3	3.8	26.3	5.1
Age of diagnosis	24.1	5.5	*NA*	*NA*	*NA*	*NA*
	n	%	n	%	n	%
Marital status						
Married/ informal relationship	9	30	21	70	30	50
Single	21	70	9	30	30	50
A desire to have a child						
yes	21	70	25	83,3	46	76,7
no	9	30	5	16,7	14	23,3

NA – not applicable

non-parametric version of the Student's t-test for independent groups was used–the Mann-Whitney test.. The results are presented in Table 2.

The results indicate only one significant difference between the group of women with schizophrenia and the group of healthy women. The Mann-Whitney test result: Z = -2.027, p = 0.043 (p <0.05) indicates that *Social Intelligence* as strength of character measured by the VIA-IS questionnaire is higher in the group of women diagnosed with paranoid schizophrenia compared to the group of women healthy (M = 27.86 *vs* M = 19.84).

3.3. Difference in self-esteem among healthy women and women diagnosed with paranoid schizophrenia, declaring a desire to have a child

As the distribution of self-esteem in women from both the diagnosis and the healthy group was normal (Shapiro-Wilk test results: $p_{\text{diagnosis group}} = 0.200$ and $p_{\text{healthy group}} = 0.800$), both groups are equal, and the result of Levene's test was 0.106), the Student's t-test was used for independent samples. The results ($t_{(58)} = 9.526$; $p < 0.001$) indicate that the level of self-esteem is different in both groups–higher in women with a diagnosis (M = 45.5; SD = 9.5) compared to healthy women (M = 26.0; SD = 6.0).

3.4. Differences in strength of character among women diagnosed who declare and those who do not wish to have a child

The Mann-Whitney test was used to determine whether there are differences in character strength between women who want and do not want to have a child in the group with the diagnosis. Significant differences were only noticed only for the *Prudence* dimension. Results are presented in Table 3[2].

The Mann-Whitney test result: Z = -2.428, p = 0.015 indicates that *Prudence*, as strength of character measured by the VIA-IS questionnaire was higher in diagnosis group declaring the will to have a child compared to women not declaring it (M = 18.05 vs M = 9.56).

3.5. Differences in self-esteem among women diagnosed with a desire to have a child and those who do not

Despite the normal distribution of the examined variable (results of the Shapiro-Wilk test: $p_{\text{diagnosis group}} = 0.200$), the assumption about the equality of the examined subgroups was not met (women who wanted to have a child n = 21; women who did not want to have a child n = 9). Therefore, the non-parametric Mann-Whitney test was used to determine whether there are differences in self-esteem between women who want and do not want to have a child in the diagnosis group. The results are presented in Table 4.

Although the level of self-esteem, assessed with the SES questionnaire, is higher among women who want to have a child, the Mann-Whitney test result: Z = -1.359, p = 0.174 indicates that these differences are not statistically significant.

2 Due to the large number of dimensions in the Character Strength Test and the extensive table that would take them into account, it was decided to present in the article only the results in which a statistically significant difference was obtained. The remaining results are available from the authors at the request of the Readers.

Table 2. Comparison of the results in terms of character strength among healthy women and women with the diagnosis of schizophrenia, declaring the desire to have a child

	Diagnosis group n=21[1]		Healthy group n=25[2]		Mann-Whitney test	*Z*	*p*
Strenght of character	Average rank	Total ranks	Average rank	Total ranks			
Self-regulation	24.5	515.0	22.6	566.0	241.0	-0.476	0.634
Excellence gratitude	24.5	515.0	22.6	566.0	241.0	-0.475	0.635
Zest	25.3	531.0	22.0	550.0	225.0	-0.828	0.407
Spirituality	22.8	479.5	24.1	601.5	248.5	-0.310	0.756
Humor	21.6	454.5	25.1	626.5	223.5	-0.863	0.388
Social intelligence	27.9	585.0	19.8	496.0	171.0	-2.027	0.043*
Love	22.0	531.0	24.7	575.5	214.5	-0.765	0.533
Teamwork	20.9	439.5	25.7	641.5	208.5	-1.193	0.233
Perseverance	23.3	488.5	43.7	592.5	257.5	-0.111	0.912
Judgment	24.1	506.0	23.0	575.0	250.0	-0.276	0.782
Forgiveness	20.2	423.5	26.3	657.5	214.5	-1.525	0.122
Humility	25.8	541.5	21.6	539.5	192.5	-1.061	0.289
Bravery	22.2	466.0	24.6	615.0	235.0	-0.608	0.543
Fairness	23.6	494.5	23.5	656.5	261.5	-0.220	0.982
Perspective	24.6	515.5	22.6	565.5	250.0	-0.486	0.627
Hope	22.2	467.0	24.6	614.0	236.0	-0.586	0.558
Bravery	20.4	446.5	25.5	537.0	222.0	-0.111	0.120
Honesty	24.4	512.0	22.8	569.0	224.0	-0.409	0.683
Leadership	21.5	452.0	25.2	629.0	221.0	-0.918	0.359
Curiosity	23.2	488.0	23.7	593.0	257.0	-0.122	0.903
Love of learning	23.3	489.0	23.7	592.0	250.0	-0.099	0.921
Appreciation of beauty	21.6	454.0	25.1	627.0	223.0	-0.875	0.381
Prudence	26.8	562.5	20.7	518.5	193.5	-1.525	0.127

1 the number of women declaring the will to have a child in the group with the diagnosis;
2 the number of women declaring their will to have a child in the healthy group;
Z – Mann Whitney test result
*indicates p<0.05

Table 3. Comparison of the Prudence results among women with the diagnosis who declare and do not wish to have a child

	Willing to have a child n=21		Not willing to have a child n=9		*Z*	*p*
	Average rank	Total ranks	Average rank	Total ranks		
Strenght of character					-2.428	0.015
Prudence	18.05	379.00	9.56	86.00		

Z – Mann Whitney test result

Table 4. Comparison of the self-esteem results among women with the diagnosis who declare and do not wish to have a child

	Willing to have a child n=21		Not willing to have a child n=9		*Z*	*p*
	Average rank	Total ranks	Average rank	Total ranks		
Self-esteem	16.93	355.50	12.17	109.50	-1.359	0.174

Z – Mann Whitney test result

3.6. Marital status of women diagnosed with a diagnosis and differentiation in terms of declarations of the will to have a child

The chi-square test was used to determine whether the frequency of declarations of willingness to having a child is more frequent among women with a diagnosis who have a husband / partner than among women with a diagnosis who are single. The obtained result $(1, N = 30) = 0.370$; $p = 0.543$ indicates no differences in the frequency of declaring the desire to have a child due to the marital status of the respondents.

4. Discussion

The aim of the presented study was to check whether self-esteem and selected strengths of character differentiate between healthy women and women diagnosed with schizophrenia in terms of the declared willingness to have a child. The obtained results show that both healthy and diagnosis group of women think about their offspring and declare their will to have one, which suggests that the fact of suffering from serious mental illness such as schizophrenia is not a factor that excludes a satisfactory motherhood. This corresponds to the conclusions of Abernethy (1974), who signaled that, contrary to popular opinion, a surprisingly large percentage of women suffering from paranoid schizophrenia is sexually active, and thus the possibility of pregnancy also appears (Stewart, 1984).

It cannot be concealed, however, that the research of Abernethy (1974) is quite outdated research, especially if we take into account the dynamics of the scientific discipline of psychiatry and psychology. However, the thesis is confirmed by newer research. Miller (2009) stated that there are no significant differences between the fertility rate of healthy women and those diagnosed with paranoid schizophrenia, so presumably women diagnosed with schizophrenia decide to have a child almost as often as healthy women (Solari, Dickson, & Miller, 2009). Thus, are there any features or their compilations that make women diagnosed with them want to have a child? Are these features completely the same as in healthy women, or are there any differences between the two groups?

The results obtained in the VIA-IS questionnaire for the assessment of character strengths show that among women who declare their will to have a child, and those who do not in the group with the diagnosis, a statistically significant difference can only be seen in the strength of prudence. Prudence is defined here as being cautious in making choices or refraining from excessive risk (Najderska & Cieciuch, 2018). It can be assumed that in the group of mentally ill women, those who want to have a child consulted a doctor or read about heredity, contraindications and possible complications during pregnancy, childbirth and puerperium, so they know about possible limitations and hence a higher level of prudence.

The second significant difference between the study groups concerns strength known as social intelligence. Similarly, its levels are higher in women with paranoid schizophrenia than in healthy women. People with high social intelligence are characterized by awareness of one's own and other people's motives and feelings as well as knowing what to do to adapt to different social situations (Najderska & Cieciuch, 2018). The obtained result seems interesting if we take into account the fact that poorer social functioning is inherent in the specificity of functioning and axial symptoms of

schizophrenia. There is growing evidence that the ability to make accurate inferences about mental states in others known as social intelligence is impaired in schizophrenic patients (c.f. Najderska & Cieciuch, 2018). Despite the lack of directional hypotheses, we rather assumed that social intelligence would be the domain of healthy women. The explanation should probably be sought in the characteristics of the control group studied, which in turn results from the method of recruitment. The diagnosed women belonged to social groups, so we can assume that they were more active in seeking information about their disease and social support. Probably, therefore, they either had a higher "baseline" level of social intelligence, or they had the opportunity to develop this trait through belonging and active participation in group activities. The adoption of such an interpretation suggests at the same time one of the possible directions of preventive interventions in relation to women suffering from schizophrenia, especially in the context of reproductive plans. It seems that the ability to function as a member of a group in which diagnostic diagnosis does not constitute a stigmatizing etiquette may support the development of their interpersonal competences and shape other individual characteristics, such as social intelligence.

Another difference between the groups shown in the presented studies concerns self-esteem, and the nature of this difference is similar to the variables described above–the level of self-esteem is higher in women diagnosed with schizophrenia. These results differ from those obtained in the Dordzik (2019) study, in which mothers suffering from schizophrenia showed lower self-esteem than healthy mothers. Granberg et al. (2001) claims that the self-image and self-esteem of patients suffering from schizophrenia are similar to the average results of healthy people, which, however, does not have to favor adaptive behaviors in interpersonal relationships, because this self-esteem is most often associated with the symptoms of the disease (i.e. defense mechanisms). The fact of the stability of such a self-image is quite a matter of a person, research by Harder (2006) showed that only 1/3 of respondents suffering from schizophrenia do not change their image of themselves under the influence of their mental state (Chuchra, 2008).

Another interesting result concerns the relationship between having a partner and the willingness to have a child among women from the group with a history of psychopathology. Interestingly, the desire to have a child is more often declared by women who are not in a stable relationship and again, it may be caused by the diversity of groups (partner/no partner), but it may also lead to the conclusion that in the group of women, where the average age is almost 27, the desire to have a child does not translate into real plans and is rather a fantasy.

The search for factors influencing the decision to have a child among women with schizophrenia seems to have a significant application significance, for example, serving to create effective programs supporting them both in the decision made and in adapting to motherhood despite the disease. Research shows that many mothers with schizophrenia consider motherhood an important and rewarding aspect of their lives. At the same time, it is estimated that approximately fifty percent of diagnosed mothers are temporarily or permanently deprived of childcare (Seeman, 2013). The awareness of such a risk favors women with schizophrenia to experience anxiety–especially in the perinatal period–before delivering the child. According to Solari et al. (2009), the actual loss of a child can be a disaster for their mental and physical health.

Although, as some studies show (Naslund et al., 1985), mothers diagnosed with schizophrenia provide their children with parental care comparable to healthy mothers, there are differences in the mother's response to the signals sent by the child, often already at the stage of understanding them (Davidsen et al., 2015; Singhai et al., 2022). On the other hand, Kasperek-Zomowska et al. (2008) notes that mothers with schizophrenia are less likely to hug their children and less likely to play with them. The results of subsequent studies also indicate that the history of severe psychopathology is associated with more suboptimal and pathological caring representations, less joy of future parents, and excessive overwhelming responsibilities related to parental care (Røhder et al., 2019). The research by Dordzik (2019) shows that mothers suffering from schizophrenia exhibit parental attitudes based on demand

and protection, while these two dimensions together reflect the control over the child, which may limit its freedom. As Dordzik (2019) points out, excessive demands and protection–presented at the same time–can strongly, symbiotically bind the child with the mother, which, according to transgenerational concepts, may be one of the risk factors for the child becoming ill in the future or for developing other psychological problems.

Studies trying to establish predictors of antenatal representations of caring mothers who had been diagnosed with severe mental illness, including schizophrenia, showed that childhood experiences, and above all relationships with the mother, have a large impact on models of care for one's own child (Røhder et al., 2019). Insufficient or considered inadequate practical support from the mother's own mother was negatively associated with the pleasure of caring for the child and positively with helplessness in contacts with the child. Interestingly, dissatisfaction with both practical and emotional support from partners was associated with increased care for the offspring and difficulty in separation. This shows how invaluable influence the development of a healthy mother-child relationship is from social support and the family of origin of women with a history of psychopathology. It is also valuable information for specialists who, realizing the impact of the patient's suboptimal social relations, may propose compensatory support (Røhder et al., 2019).

The current study is a preliminary study–it was conducted with the participation of a small group of women, and the problem addressed in it requires further exploration. However, given the fact that women perinatal period is a time special risk that may be a trigger and/or exacerbate symptoms in women with schizophrenia, its results shed new light on the issue of offspring planning by women diagnosed with schizophrenia. These results may be useful for taking preventive and intervention measures addressed to women of reproductive age planning to give birth to a child.

Study limitations

Despite the high importance of identifying specific psychological variables influencing on the decision about pregnancy in women diagnosed with schizophrenia, our study has some limitations that should be mentioned. First, the cross-sectional nature of the study precludes drawing causal conclusions. Thus, prospective longitudinal studies seem to be necessery to explore the association between some interpersonal factors such as strengts of character and self-esteem and the decision of having a child among schizophrenic women. Second, as participants were volunteers and the study sample was relatively small, especially when divided into women who declared willingness or not having a child, and they not represent the total population. Third, the limitations of the online survey as a data collection method should also be mentioned, particularly sample bias. Finally, women with diagnosis in our study was not assessed by clinical diagnostic interview, and we rely only on participants' declaration that they suffering from schizophrenia. In further research, in addition to self-report scales, qualitative assessment methods should also be used, including, for example, a structured clinical interview such as SCID-I.

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Matrimony and parenthood in the life of Queen Victoria

Matrymonium i rodzicielstwo w życiu królowej Wiktorii[1]

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Abstract: Starting a family and caring for your offspring is a task of a paramount importance in the life of every person. This belief is unchangeable since the ages past and was popular also in 19th century, when love was not the most important virtue in marriage and childrens' mortality rate was maintaining a very substantial number. The person who knew it the best was „the Grandmother of Europe" – Queen Victoria who, together with her husband, prince Albert, fostered nine children, and her descendants to this day reign over some of the thrones of Europe. In this article the mindset of Queen Victoria, in regards to parenthood, will be shown on the basis of journals and her correspondences. Motherhood was a „darker side" of marriage. In that century It was a duty of every woman to fulfill it. High number of pregnancies and problems with properly fostering a family, left a physical and mental mark on Victoria, which is why her view on upbringing may surprise and shock. Relationship of Victoria and Albert was not as harmonious as people thought, because of couple's differences in character. Rashness and short temper of Victoria fought Albert's calmness and mindfulness – that was the picture of their married life for over 20 years. Numerous rows and arguments were a constant element of their life. On the one hand feeling of being intellectually inferior, on the other, low social status, those were the main reasons for disagreements between spouses. During their marriage Albert tried to change Victoria's character. To some extend he succeeded, but the price was his health. The picture of the royal family perceived by their people was different to reality, but warmth and joy of family life, without disagreements and maintaining all moral codes, were supposed to be a trademark of family in Victorian era.
Keywords: Queen Victoria, Prince Albert, motherhood, parenthood

Abstrakt: Założenie rodziny i wychowanie potomstwa to bardzo ważne zadanie, przed którym stoi każdy człowiek. Taki pogląd jest niezmienny od wieków i był popularny także w XIX stuleciu, kiedy miłość nie zawsze stanowiła najważniejszą wartość w małżeństwie, a śmiertelność wśród dzieci utrzymywała się na bardzo wysokim poziomie. Najlepiej wiedziała o tym „babka Europy" – królowa Wiktoria, która razem ze swoim mężem księciem Albertem doczekała się aż dziewięciorga dzieci, a jej potomkowie do dnia dzisiejszego zasiadają na tronach w Europie. W poniższym artykule na podstawie pamiętników monarchini oraz zachowanej korespondencji zostanie przedstawiony stosunek królowej Wiktorii do kwestii rodzicielstwa. Macierzyństwo dla królowej było „ciemniejszą stroną" małżeństwa. Był to obowiązek, który każda kobieta żyjąca w tych czasach musiała spełnić. Liczne ciąże i problemy wychowawcze odcisnęły na niej emocjonalne oraz fizyczne piętno, dlatego jej pogląd dotyczący wychowania dzieci może dzisiaj zaskakiwać, czy wręcz szokować. Małżeństwo Wiktorii i Alberta nie było wcale tak zgodne, jak wszyscy uważali, ze względu na różnice charakterów. Wybuchowość i porywczość Wiktorii kontra spokój i opanowanie Alberta – tak wyglądało ich pożycie małżeńskie przez ponad dwadzieścia lat. Liczne sprzeczki i kłótnie były elementem ich codziennego życia. Z jednej strony poczucie niższości intelektualnej, z drugiej poczucie niższości społecznej, to były główne przyczyny kłótni małżonków. Albert przez cały czas starał się dokonać przemiany charakteru Wiktorii. W pewnym stopniu odniósł sukces, jednak wielkim kosztem, ponieważ sam przez to bardzo podupadł na zdrowiu. Obraz rodziny królewskiej, który mieli znać poddani był zupełnie inny niż ten rzeczywisty, ciepło i radość życia rodzinnego, bez kłótni i sprzeczek oraz zachowanie wszelkich zasad moralnych, tak miała wyglądać rodzina w czasach epoki wiktoriańskiej.
Słowa kluczowe: królowa Wiktoria, książę Albert, macierzyństwo, rodzicielstwo

Introduction

A person entering matrimony is obliged to creating a family and parenthood is the biggest privilege and gift that humanity received. An adult is able to give birth and foster offspring (Kosmala, Krzysteczko 1996). The process of upbringing is extremely important because it shapes young person and makes them look for model roles in their parents.

Throughout the ages the upbringing model changed. Not only every century but also every age had their own recipe for fostering their offspring. In 19th century child mortality rate was very high. Every mother which birthed a child, could not be sure if it would survive its first days. Anxiety related with childbirth and next, with upbringing plagued

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Warown.pdf

every woman from 19th century, even those from higher places in society. Queen Victoria knew it the best as the mother of nine children. It is worth mentioning that her entire offspring survived until maturity, which was a rarity in those times (des Cars, 2014). Queen Victoria, who was called a 'Grandmother of Europe', had a very resolute, and even shocking look on maternity. (Misztal, 2010).

In 1837, being only eighteen, Alexandrina Victoria inherited the throne. After years of isolation in Kensington Palace she finally experienced freedom. Throughout her childhood Victoria was under such scrutinous supervision from her mother – duchess of Kent, that none of her subjects really knew her and what to expect from her (Waller, 2017). Their mother-daughter relations was not the best. Duchess of Kent listened to every advice of her advisor John Conroy, who tried to isolate Victoria with every possible method. Queen was known for her stubbornness, did not listen to her mother or her advisor, which caused multiple arguments in the palace. It is unsurprising that her first order was to move her bed from mother's bedroom, which gave her some long-awaited privacy (Morato, 2018). A few weeks after inheriting the throne, young queen moved to Buckingham Palace. Because of her marital status, she had to take her mother as a chaperone. But still she put her in the rooms farthest from the Queen's. Duchess of Kent voiced her disapproval of her daughters not finding time to spend with her. In front of the populace, they tried to keep up appearances of warmth but it was well-known that their mother-daughter relations were cold (Waller, 2017).

First months of Victoria's reign went smoothly. The Queen could enjoy freedom and independence (Warowny, 2019). The problems began in 1839, when Victoria started to show domineering tendencies, and her will power (Greville, 2007). At the beginning of the year, the Queen was involved in two scandals. The first included lady Flora Hastings who was the Duchess of Kent's lady-in-waiting. The second is called 'Bedchamber Crisis'. The Queen defended her prime minister from resigning and did not let him leave his duties (Waller, 2017).

1. Queen Victoria's attitude to motherhood

After the events in the court, more people started to say that Queen Victoria is in an appropriate age to marry a suitor. The topic was very controversial. Queen thought of marriage with disdain, because she was afraid of being controlled by her future husband. She preferred to enjoy freedom and independence she already had. What is more, she often expressed her opinion of following Elisabeth I and remain alone (Erickson, 1998).

There was a family agreement that Victoria were to marry her cousin Albert of Saxe-Coburg and Gotha. The idea came from her uncle Leopold (des Cars, 2014). Earlier, Victoria and Albert met only once, in spring of 1836. After the meeting, the Queen forgot about her cousin. She kept saying that she was not obliged to marriage with Albert (Escher, 1912). Nevertheless, in autumn of 1839 Albert, together with his brother Ernest, came to London, Victoria's attitude changed as she saw that Albert changed and looked more handsome. Despite prejudice, he left a very positive impression (Esher, 1912). Only four days later, Victoria decided to marry her cousin. According to court protocol, the Queen had to notify her suitor about marriage plans because Albert as a person of a lower social status could not propose. This duty fallen on Victoria (Babilas, 2012), who wrote about the entire event in her diary: "He came to the Closet where I was alone, and after a few minutes I said to him, that I thought he must be aware why I wished them to come here, and that it would make me too happy if he would consent to what I wished (to marry me). We embraced each other, and he was so kind, so affectionate. I told him I was quite unworthy of him (...) I really felt it was the happiest brightest moment in my life" (Esher, 1912).

The wedding took place on 10 February 1840 in London and grabbed attention of general populace and the press. The scandal with Lady Flora and 'Bedchamber crisis' sank into oblivion. Even the outraged voices of the Tories reminding that Albert was German, quieted down. In that moment, only the marriage of current monarch in many years, was of any importance (Bidwell, 2000). Wedding party

took place in Buckingham Palace, then spouses went for "three-day" long honeymoon to Windsor (Misztal, 2010) Victoria, in her diary, admired affectionate words which Albert used after coming to the Castle and also asked God for help in fulfilling her marital obligations (Hibbert, 2000).

Next day, the couple woke up early, which was immediately commented on by malicious observers saying that after such a short wedding night could not bring a successor (Misztal, 2010). The suspicion was baseless as it turned out, because Queen was expecting at the end of March (Bidwell, 2000).

Victoria, after learning of her pregnancy, saddened. Because of her condition, she had to give up her activities like horse riding or dancing until late night. Because of that, she could not find any entertainment and her constant nausea and worsened mood did not improve her already weakened mental state (Erickson, 1998). Pregnancy proceeded without complications. The one exemption was a failed assassination attempt on Queen's life which only increased her popularity (Greville, 2007).

According to century-old tradition, every birth of a royal child had to proceed in the presence of many ministers and members of secret royal council. Because they were male, Victoria disagreed and when she went into labor, everyone had to leave the room. With her only her husband, doctor and a nurse stayed. (Erickson, 2000).

Queen's daughter was given to wet nurse immediately after birth because Victoria declined breastfeeding, as it was a tradition in English aristocracy. It is worth mentioning that the Queen herself was breastfed by her mother (Misztal, 2010).

19th century was indeed a period when many social issues changed. Thanks to archived correspondence of the Queen, we now know what dove her to her decisions which also concerned her later children. Her views today could be considered shocking. She claimed for instance that a human has a beautiful and incredible talent of giving life and immortal soul but the role of mother is degraded to an animal. According to her, a breast feeding woman were to feel like a cow (Hibbert, 2000), and maternity would be a "dark side of marriage" (Misztal, 2010).

In a short period of time the Queen was expecting again. The second pregnancy was more troubled than the first and over seventeen hour long delivery heavily strained mother's health. In November of 1841 long-awaited son was born – Albert Edward, Prince of Wales and later in life King Edward VII who was called Bertie by his family (Strachey, 2022).

After her second pregnancy, Victoria's health deteriorated and she started suffering from depression which heavily influenced her family life. She mentioned on many occasions that in difficult moments she is grateful to the Providence mostly for her wonderful husband, who was a pillar for her (Hibbert, 2000). In times when no man was concerning himself with pain and suffering of woman during labor, Albert was truly exceptional spouse. He spend a lot of time with his wife during pregnancy and even took her place in some royal duties. Victoria regarded her husband as a role model of every virtue and she criticized men that did not show respect and empathy to women (Misztal, 2010).

Despite determined views on maternity, Victoria knew perfectly well that one of the duties of a woman living in 19th century should be giving birth. As other women knew, the male was responsible for family life. She accepted her role as a mother. She wrote that she was leaving everything to God and if His will is to give her numerous offspring, she would do everything to bring up her children as exemplary and useful for the country (Benson, Esher, 1908).

At first, Victoria and Albert, only when their duties allowed, spent a lot of time with their children. They tried to show the society that despite their obligations and status, they are also parents that play with their children – bobsledding, Christmas dinner, and showing that they are a family with traditions (Misztal, 2010). Albert, as befits a stereotypical father in 19th century, came up with a detailed pedagogical plan for their children. He knew from the beginning that Vicky and Bertie will be very important. Especially Prince of Wales, who one day will be the successor of Victoria. Albert employed governess Lady Lyttelton to take care of the children (Hubbard, 2012). Program written by Albert was effective in case of Vicky, being only two years old, she was a very sensitive and emotional child but

what is more important very intelligent (Wyndham, 1912). The problem was the oldest son who did not show any interest in education (Misztal, 2010). He was very violent and his attitude to siblings was unfriendly and Albert's plan was not effective. Victoria would criticize her oldest son for laziness, and weak character (Erickson, 1998). Bertie would turn out a disappointment for their parents. Carefully selected teachers, strict discipline, complete ban on playing and trying to passing on as much knowledge as possible would make Vicky recipient of more love, than her brother (Marx, 2006).

Parents, trying not to focus on problems from Bertie, decided to focus on other children. Third pregnancy went much smoother than the previous. She was feeling well, did not faint, and what is more in sixth month of pregnancy she was attending new year activities. Being twenty four, Victoria birthed another daughter – Alice (Erickson, 1998) One year later Alfred was born, then Helena and during the Revolutions of 1848 another daughter Louise, then Arthur and Leopold and the last child was Beatrice who was born in 1857. It is worth mentioning that every child lived until adulthood. An average life expectancy in 19th century was 45 years and average of Victoria's children was 75 years (Bidwell, 2000). Reasons for concern was only Leopold who had hemophilia (Waller, 2017).

With one exception of the eldest son, the labor of every Queen's child went without complications. In the times of progressiveness in many subjects, the way of thinking about labor stayed constant and outdated. It was a popular belief that the woman must suffer during childbirth, because it was a punishment for Eve's sin in Eden. When an option for mitigating some pain during labor, the Queen decided to take chloroform (Misztal, 2010). By doing this, she wanted to show that using then modern technology can be beneficial and she encouraged others to follow her example. In contrast on her views on innovativeness, she was also very superstitious, as she wore the same nightgown during every childbirth, making the gown yellowish (Waller, 2017)

Victoria was very interested in her children in the beginning of her motherhood but the interest diminished in time. She was never at ease with children, the reason probably being the fact that she grew up alone, isolated from her peers. Family happiness was unknown to her and she felt full of life only with Albert (Misztal, 2010). She only saw her children once or twice a day. It does not surprise then, that she did not have a strong connection to them (Hubbard, 2012). Princess Alice ate dinner with her whole family when she was already fourteen (Misztal, 2010). We can say that a role-change occurred. In times when the woman was supposed to take care of upbringing, in royal family, Albert was spending more time with children than with the Queen, which was her grief (Misztal, 2010). It was Albert that cared about royal family's image as a model to others. He tried to make their family life full of love, respect, and devoid of arguments and rows. That was the concept of how the family should look like in Victorian era (Waller, 2017).

Despite the strong-minded and negative view on motherhood, it brought the Queen a lot of popularity. A common image of Victoria was a model mother and wife (Erickson, 1998). Many of her subjects thought that through marriage and parenting, she changed a lot. She became more calm and composed. The people that spend their days with the Queen, not only family but also courtiers and servants had a very different experience (Waller, 2017). Being thirty-eight years old, Victoria had nine children. She fulfilled her duty that was mentioned to her by uncle Leopold – she became a mother of a big family. Motherhood had her attention, but gave her no joy in life (Erickson, 1998).

2. Marriage difficulties

Albert, throughout his life was prepared to be wed to Queen Victoria. He was aware that it would not be a care-free undertaking. He knew that there would be difficulties as he was lower in hierarchy than his wife (Strachey, 2022). The problems began right after official marriage proposal. Before the wedding they had to focus on finance and laws of the prince. The Queen tried to force a law that would give Albert a salary of 50 000 pounds. The parliament opposed this notion and gave him only 30 000 mentioning

spitefully that salary is still too high as it was on par with yearly income of duchy of Saxe-Coburg (Waller, 2017).

Another problem was the position of the prince in the court. Albert was expecting recognition and aristocratic title, but the parliament once again vetoed the idea and explained that the prince could interfere in internal dealings of England (Warowny, 2019). In the end Albert was called Prince Consort (Waller, 2017). He was perturbed by the fact that his wife had a crown and is higher in hierarchy, that is why he decided to dominate their relationship (Misztal, 2010). It is worth noting that British society was not happy with choosing a German cousin as husband. For many "hated" House of Hanover was a symbol of a failed monarchy. Victoria tried to improve this image from the beginning but when she agreed to marry a German prince, xenophobic tendencies manifested in society. It is unsurprising that the press was dominated by caricatures and opinions which laughed at Albert and often called him "foreign and a popish intruder" (Bidwell, 2000).

Right after the ceremony, prince consort started home reforms. He wanted his presence to be seen that is why he decided to take care of people having too much influence on the Queen. First to be fired was governess of Victoria – Baroness Lehzen, then following changes in parliament – prime minister Lord Melbourne. Additionally Albert tried to do everything to reconciliate the Queen with her mother Duchess of Kent which he managed to doo (Morato, 2018).

The biggest challenge of Albert was changing a strong and independent woman to follow his example and change her behavior (Waller, 2017). The prince knew that Victoria was, at times, ruthless woman with explosive temperament. That was why he set a goal of changing her character and strived to make her subservient. At first she tried to resist every method by crying, being in hysterics, and acting offended. Albert stubbornly continued his efforts (Bidwell, 2000). She knew his wife well, so he knew not to talk with her when she was annoyed. He avoided emotional conflicts with Victoria and his way for argumenting was writing letters, where he expressed his disapproval for her behavior (Misztal, 2010).

The reason for many rows in their relationship, besides the characters of the spouses, could be complexes. Victoria perceived herself on a lower intellectual level than her husband. She was annoyed that Albert many times avoided explaining complex scientific theories, which she would still not comprehend. The prince on the other hand was aware of his lower social status. He thought that he should hold an office higher, or at least the same as his wife (Misztal, 2010).

When arguments started, Albert often escaped to his work. Research absorbed him and every minute of his life. He loved to give speeches on conferences, meet people of science, read scientific reports. That was why he wanted people to be interested with newest technological achievements and he decided to organize the Great Exhibition in 1851 (Strachey, 2022). Victoria was on the other hand, a complete opposite of her husband as she loved to play cards until late hours of the night or dancing, which was a reason for many conflicts. With those habits, Albert knew how to fight. In short time Victoria became dependent of him to such a degree that instead of asking prime minister Lord Melbourne for every advice, now she was asking Albert. The position of the prince changed, The slow and morose work on Victoria brought desired effect – the wife became fully dependent on her husband (Waller, 2017).

Many admired Albert for his work put into changing and shaping the character of Victoria but it must be noted that the work had its consequences. During their 20 years of marriage, Albert scrupulously fulfilled not only family but also country's duties. It was common knowledge then that the Great Britain was ruled by a "two-person monarchy", which was not always unanimous (Bidwell, 2000). A very interesting story about marriage arguments is mentioned by a biographer of the Queen–Lytton Strachey. He wrote that one night an annoyed prince closed himself in a room and irritated Queen Victoria knocked on the door. "Who's there?" – asked the prince. "Queen of England" answered Victoria. Prince did not do anything. After a while a louder knocking was heard. The same question and answer was exchanged. After a few minutes a softer knocking. Albert once again asked "Who's there?". The answer was completely different this time because Victoria said "It's me Albert, Your wife" and the door immediately opened

(Strachey, 2022, p.146). This scene shows perfectly the situation in their marriage and problems that appeared. Most often a small disagreement would change into full-blown rows. Victoria always had to admit making a mistake and ask husband for forgiveness. Constant fighting had an impact on Albert's health. After twenty years of marriage the prince changed. His posture and character were different. He sometimes was irritating, cold and snippy. He escaped his wife more often, and disappeared in his work which had an impact on his health. Additionally after Vicky left the court he saddened and no other child could fill the void left by his beloved daughter (Erickson, 1998).

In 1861 prince's organism was exhausted, and the face did not resemble it's 20 year predecessor (Strachey, 2022). He was complaining about various ailments, often walked looking sad, dejected and sore. When, at the end of the year, his son's affair came to light Albert decided to act. He took his son for a walk in very cold and windy day to talk. After a few days he showed symptoms of flu and later problems with walking and breathing. Albert died on 14th December of 1861 (Misztal, 2010).

Victoria was forty-two on the day of her husband's death. For her, the time stopped. From this moment on she backed off from public life (Marx, 2006). Sadness and grief was only deepened by the anger she felt for her son and successor. She blamed Bertie for Albert's death, despised him. She claimed that the son who inherited the worse traits, took her the one who she truly loved (Erickson, 1998).

Sorrow and grief after Albert's death made Victoria "widow of Windsor" wear black until the end of her own life. For her the marriage was over but the family was still with her and expanding. After the death of Albert she did not forget about her children, she married off four of them. With years passed she was not the most important person in her childrens' lives, most of them had their own families. Victoria tried to interfere in their life but she lacked the authority once possessed by her (Misztal, 2010). Near the end of the 19th century closest family of Victoria had over 70 members and her offspring claimed the thrones of Europe, which is why she gained a moniker of "Grandmother of Europe".

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The meaning of life and health – a comparative study of the concepts of Aaron Antonovsky and Viktor Frankl

Sens życia a zdrowie – studium porównawcze koncepcji Aarona Antonovsky'ego i Viktora Frankla[1]

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Abstract: The presented paper analyses the interdependencies between the meaning of life and health. The noo-psychotheoretical concepts derived from the logotherapeutic trend of Victor Frankl (1984, 2009, 2018) and the phenomenon of health in salutogenetic orientation by Aaron Antonovsky (1979, 1992, 2005) have been compared. As a result, the importance of a sense of meaning in the process of achieving health and the essence of the sense of meaning as one of the elements of health have been outlined.
Keywords: logotherapy, noo-psychotheory, sense of coherence, sense of meaning, noetic dimension, health

Abstrakt: W niniejszym artykule przeanalizowano wzajemne zależności między sensem życia a zdrowiem. Porównano wywodzące się z nurtu logoterapeutycznego Victora Frankla (1984, 2009, 2018) koncepcje noo-psychoteoretyczne oraz fenomen zdrowia w orientacji salutogenetycznej Aarona Antonovsky'ego (1979, 1992, 2005). W rezultacie nakreślone zostało znaczenie poczucia sensu w procesie osiągania zdrowia oraz istota poczucia sensu jako jednego z elementów zdrowia.
Słowa kluczowe: logoterapia, noo-psychoteoria, poczucie koherencji, poczucie sensu, wymiar noetyczny, zdrowie

Introduction

The ordeal of the Nazi concentration camps is a special thread connecting the revolutionary concepts of the Austrian psychiatrist and psychotherapist Viktor Frankl (2009) and the Israeli-American sociologist of medicine Aaron Antonovsky (1979). They found a phenomenon that was thoroughly human in inhuman suffering. They were fascinated by the strength with which a person in a borderline situation clings to life that is understood much more broadly than just avoiding death.

Frankl, as a prisoner of concentration camps, subjects life in the face of annihilation, absurdly deprived of all dignity, to a subtle and penetrating analysis (Schimmoeller, Rothhaar, 2021). By becoming a free man, although shattered by the baggage of experience, he becomes convinced that life never loses its meaning, and that suffering can become its deepest moral source. Antonovsky's scientific interests were also centered around survivors of the Holocaust (Cierpikowska, Sęk, 2019). The researcher was particularly concerned about the question of why people

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Sipowi.pdf

maintain, or regain quickly, both somatic and mental health, despite the burden of tragic life circumstances. The essence of the theoretical considerations of both scientists is the fascination with the extraordinary predisposition of humans, which is conceptualized at various levels as well-being, health or happiness, as well as the potential to achieve them despite the most unfavorable circumstances.

1. Noo-psychotheory and the meaning of life

Noo-psychotheory is a contemporary trend in existentially oriented psychology and psychotherapy (Popielski, 2018). It is a kind of structuring and continuation of Frankl's (2009) concept of man, philosophy of life and psychotherapy based on the search for meaning – logotherapy.

One of the pillars of Frankl's thought is the question of free will, which opposes the deterministic conception of man (Frankl, 2018). It defines a specific type of personal freedom that does not exempt from general conditions and does not distance oneself from responsibility. It is implemented through self-experience and personal self-qualification of existence (Popielski, 2008). It expresses freedom to interpret phenomenologically one's own existence and to adopt an attitude towards fate. Another aspect of the concept of free will is directly related to personal responsibility for who a person becomes. The ideas developed on the basis of psychology and psychiatry, regardless of the adopted paradigm, describe the concepts of a human being in terms of soma – psyche, as a reactive system with specific properties and a way of functioning determined by adaptation to external factors, implementing certain innate potentialities (Zamiara, 1992; Pietras, Witusik, Mokros, Sipowicz, 2019). Frankl opens a closed circle of biological and environmental conditions, expanding the vision of human existence to the noetic (spiritual) area, which is filled with freedom to implement values. "Man is sometimes driven by his drives, but attracted by meaning" (Frankl, 2018, p. 62), and thus the decision as to whether he wants to fulfill this meaning remains within the scope of his freedom.

Using the philosophical anthropology of Max Scheler, Frankl found theoretical and empirical arguments for considering the phenomenon of spirituality as a being separate from the body and psyche (Lehman, Klempe, 2015). The bio-psychological dimension of human functioning is the basis of existence, but its formation is subjectively incomplete, being in some way closed by biological and environmental determinism. The soma and psyche are the starting point in the process of "becoming" a person, they are the area of expression, and not the essence, of existence, as the specific shape of personal existence is given through the "quality" of the noetic area (Popielski, 2018). The man achieves the noetic dimension through self-transcendence (Frankl, 1984) – going beyond the psychosomatic area of functioning towards self-reflection, making himself the object of observation and moral evaluation.

The logotherapeutic trend is recognized as the third Viennese school of psychotherapy (Russo-Netzer, Ameli, 2021). Frankl, constructing the theoretical foundations, stands on the shoulders of giants, Freudian psychoanalysis and Adlerian individual psychology, at the same time arguing firmly with the existing theories of needs and references. The pursuit of "superiority", conceptualized by Freud as the will of pleasure (Lear, 2015), and by Adler as the will of power (Oberst, Stewart, 2012), Frankl considered not as a metamotivation of human existence, but as derivatives of the will of meaning (Frankl, 2009). It is precisely the will of meaning that constitutes the man's fundamental and supreme aspiration, determining the direction and quality of his existence. According to Frankl (2018), the feeling of happiness or experiencing pleasure is a kind of a by-product of the realization of meaning, while the sense of personal strength and power, or achieving success has a value as long as it is a necessary means to find and fulfill meaning. Aaron J. Ungersma (1961, after: Frankl, 2018) illustrated perfectly the position of Frankl's will of meaning in relation to the Freudian will of pleasure and the Adlerian will of power. According to his aphorism, the level of maturity of a small child allows to be guided in life by the principle of pleasure, the adolescent youth will act according to the principle of power, while the motivation, or driving force, of a fully mature and formed person is the will of meaning.

For a deeper understanding of Frankl's considerations, one can refer to the author's personal experience, which turned out to be both a confirmation of the concept of logotherapy, developed by him already in the 30s of the twentieth century (Ameli, Dattilio, 2013), as well as an incentive for further explorations. As a prisoner of concentration camps during World War II, he noticed that people leading a life full of physical and mental torment are able to be happy in their own way, thus increasing their chances of survival (Frankl, 2009). The seemingly absurd reaction to the borderline situation is explained by the basic assumptions of logotherapy. Man immersed in the axiological universe perceives meaning even in the most tragic circumstances, finding the most difficult kind of fulfillment in the dignified enduring of his own fate.

The ailment of postmodern reality is the substitution of an authentic experience of an existence filled with meaning through the search for pleasure and the achievement of success in life. Meanwhile, Frankl's personal experience with the Holocaust shows clearly how fragile these points of reference are. Suffering, in fact, is a thoroughly human and essentially inevitable experience, and therefore a "seeker of eternal happiness", in the pursuit of pleasures and success, is unconditionally doomed to failure in the face of inevitable fate.

The meaning of life in psychological terms is understood as a subjective sense of purpose and experiencing values; understanding oneself and the world; self-esteem; a stock of life goals; self-regulation mechanism and coping with existential situations (Vos, Vitali, 2018). The operability of such a definite concept, however, does not fully encompass the logotheoretical concept of the meaning of life, located in the noetic (spiritual) area rather than the psychic one. Frankl (2018) understood meaning as an implied meaning[2] existing outside of the person at the transsubjective level. Meaning is therefore always discovered, it is impossible to invent – it exists in an objective way, but we experience it through subjective cognition, often making mistakes and wandering. Meaning is always read at an intuitive level through a sensitive conscience and is a signpost in the postmodern world of axiological entropy. It does not show what man "must"', what he is "allowed to", but what he "should" in his freedom and in the face of his own responsibility (Frankl, 1984).

Man fulfills the meaning of his existence through the implementation of values. There are three ways to do this: (1) through what he gives to the world himself; (2) through what he draws from the world and (3) through the attitude he takes toward fate (Frankl, 2018). The first two ways are naturally accessible to man – because a little talent and power is enough to shape the world and the senses to be able to live and experience. Attention should also be paid to their limitedness and exhaustibility. It is not difficult to suddenly find oneself in such a life situation, in which both action and experience will turn out to be significantly limited or impossible to fulfill (e.g. the experience of illness). The third way is associated with the ability to endure inevitable fate and suffering. When the man is unable to change his situation, he always has the opportunity to overcome it by implementing the values associated with his own attitude (Frankl, 1984). The logotheoretical thought carries a certain tragic optimism (Russo-Netzer, Ameli, 2021). Even if a person has already lost everything and is deprived of the possibility of realizing the meanings resulting from the value of creation and experience, he still has to fulfill the meaning invariably hidden in suffering (Frankl, 2018). From this perspective, it becomes clear that human life never loses its meaning.

The acquisition of the capacity to suffer is the supreme act of self-formation. The noetic qualities of freedom and responsibility (Popielski, 2008) place before man a constant need to decide–about something, about someone, but above all about himself. Each provision should be understood as its own decision, which shapes the decisive person. In the act of self-transcendence, man is able to rise above his own psychological and somatic conditions in order to choose the attitude he will take towards himself

2 However, always ad personam and ad situationem. Frankl (1984) assumes the existence of a supersense – an absolute sense, but he states that understanding it exceeds the human cognitive capabilities.

and towards the world. Thus, he has the freedom to shape his own character and take responsibility for who he becomes, thus realizing values and fulfilling meanings in the highest moral way.

2. The concept of a sense of coherence as a determinant of health in a salutogenetic approach

As a prisoner of concentration camps, Frankl (2009) noted that if only a person knows why it is worth living, he/she will be able to endure any suffering. The thoughts of Aaron Antonovsky (1979) followed a similar path, when in the 1970s he studied the adaptation to the climacteric among women of Jewish origin who survived the atrocities of extermination camps during World War II. The sociologist discovered with amazement that less than twenty years after the trauma of the Holocaust, as many as 29% of the women surveyed led a satisfying life, maintaining a relatively high level of somatic and mental health (Cierpiałkowska, Sęk, 2019; Espnes, Moksnes, Haugan, 2021).

Analysing the results of these studies, Antonovsky showed a certain perversity, thus setting out a new paradigm in thinking about health – the salutogenetic orientation. It is noteworthy that the researcher did not follow the obvious trail of the majority result obtained by 71% of women who could not cope with the deeply traumatic experience. In contrast, he became interested in a much smaller group of women who managed to shape their further life in a satisfactory way. Antonovsky observed with amazement: "To relive the unspeakable nightmare of the prison camp, to have the status of a displaced person for many years, and then to rearrange one's life in a country affected by three wars... and get out of it without much harm to health!" (Antonovsky, 2005, p. 10). Asking the question about the factor that allows a person not only to survive, but, above all, to preserve the potential to achieve multidimensional well-being, led Antonovsky to develop a concept fundamental to the salutogenetic orientation, namely a sense of coherence.

The human body is in a dynamic state of heterostasis, being inherently exposed to contact with ubiquitous stressors, understood as psychosocial and physico-biological requirements, to which the body does not have at its disposal ready-made or automated adaptive reactions (Antonovsky, 1979). In the salutogenetic orientation, health is therefore understood as a continuous process of responding to stressors, which is tuning in to the requirements in a way that allows maintaining or restoring the optimal level of external and internal balance of the system. (Heszen, Sęk, 2007). Thus, health is perceived as a dynamic continuum of conditions on the health-disease axis, and not as a dichotomy in which categorization is based on the occurrence of pathological symptoms. It is the result of a transaction between stressors and the immune resources possessed, the modulator of which is a sense of coherence (Mittelmark, Bull, 2013).

In simplified terms, the sense of coherence can be described as an "attitude towards stressors" (Antonovsky, 1992), which can be characterized as "I can cope". It has the character of an individual disposition to orientation and determines primarily the cognitive assessment of the situation and the available resources, although it also includes the emotional and motivational aspect. People with a strong sense of coherence are much less likely to perceive stimuli as stressors, while stressors are more likely to be assessed as non-threatening (Antonovsky, 2005).

The sense of coherence is defined as "a person's global orientation, expressing the degree to which a person has a poignant, enduring, though dynamic sense of certainty that (1) the stimuli coming in during life from the internal and external environments are structured, predictable and explainable; (2) there are available resources to enable the subject to meet the demands of these incentives; (3) these requirements are seen as a challenge worth the effort and commitment" (Antonovsky, 2005, p. 34). The first component, the sense of intelligibility, refers to the degree to which a person perceives internal and external stimuli as meaningful, coherent and orderly information. The sense of resourcefulness reflects the extent to which a person perceives the possessed resources as adequate and sufficient to meet the demands associated with coping with these stressors. The sense of meaningfulness, as the third

component of the sense of coherence, is centered around the question: "is it worthwhile?". It expresses the level of emotional involvement as well as the feeling that effort, commitment and dedication make sense when facing life's difficulties (Antonovsky, 1979).

Many cross-sectional studies have demonstrated a positive correlation between the sense of coherence and health condition, as well as health-promoting behaviors (Pallant, Lae, 2002), with this correlation being much stronger for mental health (Eriksson, Lindstorm, 2006).

3. The meaning of life and health–in search of a common denominator

Looking at the concepts developed by Frankl and Antonovsky, it can be noticed that the fundamental thread connecting the theoretical considerations of both researchers is the question of what animates human existence, giving it a vital drive towards health and life despite unfavorable circumstances. Comparing the concepts of the will of meaning and the sense of coherence, which are basic for noo-psychotheory, one can notice an analogy – the unpredictable fate or suffering that a person has to face can be identified with the requirements posed by stressors. The man is entangled in particular situations, the sum of which defines the landscape of an individual's life, constantly confronting the world. The key issue is the question of the factor that enables the man to fulfill worthily the broadly understood existence.

The location of both concepts in different dimensions is the main difficulty in sorting out the interdependencies. Antonovsky (1979) places the construct of a sense of coherence (which is "the key to psychosomatic health") on the plane of human mental functioning, encompassing cognitive as well as emotional and motivational processes. In our opinion, the construct of a sense of coherence is consistent with contemporary concepts of cognitive psychology and the concept of individual differences.

In contrast, Frankl (2009) states that beyond psychological mechanisms there is a noetic dimension and he sees in it an openness to experiencing meaning as a metamotivation for human existence. Both constructs have a connotation similar to some extent, because they draw the man towards life and broadly understood vitality, but they are implemented at different levels. Unlike Antonovsky's, Frankl's concept is contained in the current of existential psychology and partly in considerations philosophical and theological in nature. From the point of view of the division of psychology into different subdisciplines, Antnovsky's concept and Frankl's concept are complementary to each other, and one is a closure, a supplement to the other. However, from the perspective of the philosophy of science, the combination of Frankl's and Antonovsky's concepts is transdisciplinary and even transversal, connecting the various subdisciplines of psychology, and psychology with philosophy. Attention should also be paid to the compatibility of both these concepts, complementary to each other, with Christian personalism. We believe that such an approach to both concepts is a new proposal to understanding these theories.

Many researchers embed meaning on the basis of psychological processes in the context of coping with stress (Park, Folkman, 1997). In this approach, human spirituality, and therefore the noetic dimension of personality and a sense of meaning (giving meaning), constitute the elements of the mechanism of coping with stressors (Heszen, 2019). By reducing the noetic dimension of the personality to the level of mental processes, it is therefore possible to perceive its properties in terms of immune resources that, through a sense of coherence, enable effective coping with stressors, directing a person towards health.

Stressors should be understood as any kind of "requirements for which there are no ready-made or automated adaptive reactions", and these requirements can be both psychosocial and physico-biological in character (Antonovsky, 1979, p. 72). Health should therefore be understood as a continuous process of responding to stressors and tuning in to them in a way that guarantees maintaining or restoring the optimal level of organization (the so-called dynamic external and internal balance of the system) (Cierpikowska, Sęk, 2019). The concept of stressor has been burdened wrongly with pejorative connotations. Meanwhile, according to the definition presented

above, the stressor can be perceived as a challenge, not as a ready determinant of failure. A stimulus to which the body does not have a ready response may potentially be bivalent: either positive or negative (Cierpikowska, Sęk, 2019), which is conditioned by a subjective assessment. This evaluation process is determined by the immune resources that characterize the particular subject, which constitute the potential to reduce effectively the tension caused by the stressor. Confronting endo- and exogenous requirements with a range of individual-specific resources allows a subjective determination of the efficiency in terms of meeting them, and thus assessment of the individual stressors as positive, threatening or neutral.

The aforementioned generalized immune resources should be understood as any characteristic features of an individual, group or living environment that make it possible to reduce the state of tension effectively (Langeland, Wahl, et al., 2007). Among them, Antonovsky (1979) lists the resources related to values and attitudes, which can be understood from the perspective of noo-psychotheory as properties of the noetic dimension of human existence.

It should also be recalled that the sense of meaningfulness is a key pillar of the construct of the sense of coherence, and Antonovsky admits that he was inspired by Frankl's concepts. The sense of meaningfulness is paramount to the sense of coherence, because it has the power to activate or block human potential by modulating the intensity of other components. A high level of sense of meaningfulness can compensate for a lack of resourcefulness by generating an extremely strong motivation to look for the missing resources. In turn, a high level of a sense of intelligibility and resourcefulness turns out to be worthless, unless a man sees the point in committing himself to overcoming difficulties (Antonovsky, 2005).

In the salutogenetic orientation, health is operationalized in an extremely broad way as a sense of multidimensional well-being, or a subjective assessment of quality of life. This well-being is determined by a wide range of emotional, psychological and social factors, among which the meaning of life is also located (Keyes, 2014). A certain pool of empirical studies that confirm the relationship between a sense of meaning in life and well-being should be mentioned (King, Hicks, Krull, DelGaiso, 2006; Mascaro, Rosen, 2005; Reker, 2005; Steger, Frazier, 2005; Steger, Frazier, Oishi, Kaler, 2006; Urry et al., 2004).

The phenomenon of the meaning of life located in the salutogenetic orientation is therefore considered as (1) one of the stocks of immune resources necessary to cope with stressors; (2) one of the three pillars of the sense of coherence (sense of meaningfulness); (3) one of the determinants of well-being, and thus health.

In order to outline the full picture of the convergence of both phenomena, one should also trace the opposite direction of dependence, namely the concept of health on the basis of noo-psychotheory. Looking at the above considerations, one could get the impression that the sense of the meaning of life is a construct that is somehow non-autonomous and subordinate to the concept of the sense of coherence as one of its elements. Such an interpretation would be an oversimplification, as the sense of the meaning of life is the central concept of noo-psychotheory, providing a coherent and holistic concept of understanding the human existence and, therefore, also of defining health.

According to Frankl's dimensional ontology (2018), the man is considered as a unity of the biological, mental and noetic dimensions. Thus, from this perspective, health is understood in a holistic way as "the fact of the proper somatic, mental and noetic functioning of the individual, which allows a person to fully, multidimensionally develop and mature, to be and to become" (Popielski, 2018, p. 216). The balance of functioning of these three areas is disturbed in the event of a violation of any of them. It means that the difficulties experienced in the noetic sphere can translate into somatic and/or mental disorders, and this relationship occurs multidirectionally between the three dimensions of existence (Gierus, Popielski, 2011).

To define the abnormalities in the noetic dimension of existence, Frankl (2009) coined the concept of noogenic neurosis, which can be understood in simple terms as the result of frustration of the will of meaning (existential void), and thus the reduction or disappearance of the sense of meaning of life. It should

be emphasized that noogenic neurosis may manifest itself similarly to nosological units formerly referred to as psychogenic neuroses (Aleksandrowicz, 1998), and therefore as somatic, experiencing and behavioral disorders. Empirical research indicates that a strong sense of the meaning of life promotes both mental and somatic health (Reker, 1994; Popielski, 2018), however, the lack of scientific exploration in this area should be emphasized.

According to Frankl (2009), the desire to discover meaning is the most basic and fundamental motivation of humans, and thus an expression of health. However, there are theories according to which the search for meaning should be seen as an expression of frustration of needs (Steger, Kashdan, Sullivan, Lorentz, 2008). Reker (2000), on the other hand, points out that both perspectives are justifiable, and that the search for meaning can be both positive for health (affirmation of life) and negative (a symptom of dysfunction).

Health in the sense of noo-psychotheory is perceived as one of the values, and therefore a phenomenon that the man should implement, assuming responsibility for it. Loss of health is associated with suffering, towards which a person is able to adopt an attitude, transcending the conditions associated with the disease. While recognizing the meaning of suffering will not cure somatic and mental disorders, it is of great importance both in the process of recovery and in accepting irreversible limitations, or a terminal state.

Conclusion

The relation between the meaning of life and health is described both in the model of coping with stress in salutogenetic orientation and on the basis of noo-psychotheory. However, both Frankl's (1984, 2009, 2018) and Antonovsky's (1979, 1992, 2005) concepts are derived from reflection on the deep sense of the meaning of life, which is a phenomenon that directs the man towards health and towards life. The analysis of both theories indicates that Antonovsky's concept of the sense of coherence is based on the concept of Viktor Frankl, as written by Antonovsky himself. The similarity of these concepts can also be explained by psychobiographical aspects, because both Antonovsky and Frankl were Holocaust victims who experienced the ordeal of a concentration camp.

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The meaning of resilience in adulthood

Znaczenie odporności psychicznej w okresie dorosłości[1]

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Abstract: This article presents an extensive description of resilience in adulthood in the modern world. Considering difficulties with defining resilience, the study discusses differences and similarities between the concepts of resilience and resiliency. I take into account broad definition of resilience referring to many scientific perspectives and conclude that resilience should be perceived as a dynamic process. The meta-analysis of the relations between the factors indicates the presence of many direct and indirect components related to resilience. However, only some of them are supported by scientific evidence. The article reviews publications on the importance of selected factors of resilience, especially in the context of adulthood and challenges of today's world. I accentuate the topic of mental health during the spread of SARS-CoV-2 virus and the consequences of the COVID pandemic in the context of worldwide population. The social-economic crisis accompanied by a high level of anxiety highlights the demand for resources that will serve as protective factors. The ongoing war in Ukraine also needs to be taken into consideration as it affects mental health of refugees, witnesses of the war as well as individuals who provide selfless help. This article explores the importance of resilience in adulthood in the context of health pointing to a negative relationship with negative mental health indicators, a positive relationship with positive mental health indicators, and a relationship between resilience and personality traits. What is more, I discuss the ability of emotional disengagement, patterns of physiological reactions and compare resilience to the somatic immune system. In the analysis, I draw on experimental studies of the relationship between immunity and cognitive functions to indicate the cognitive component, namely the cognitive resilience.
Keywords: resilience, resiliency, adulthood, global crisis, COVID-19 pandemic, mental health, cognitive resilience

Abstrakt: Niniejszy artykuł ma na celu przedstawienie szczegółowej charakterystyki odporności psychicznej w populacji dorosłych w dobie współczesności. Biorąc pod uwagę trudności definicyjne odporności psychicznej, uwzględnione zostały różnice i podobieństwa pomiędzy konceptami odporności [*resilience*] i prężności [*resiliency*] psychicznej. W artykule omówiona została szeroka definicja odporności, odwołująca się do wielu perspektyw naukowych, uwzględniająca wniosek o konceptualizacji odporności jako dynamicznego procesu. Metaanaliza powiązań czynników wskazuje na występowanie wielu czynników pośrednio i bezpośrednio związanych z konceptem odporności psychicznej, jednak tylko część odznacza się silnymi dowodami naukowymi. W artykule dokonano przeglądu piśmiennictwa z zakresu z zakresu znaczenia wybranych czynników odporności psychicznej, zwłaszcza w kontekście dorosłości i wyzwań współczesności. W prezentowanych rozważaniach na szczególną uwagę zasługuje wątek zdrowia psychicznego w okresie rozpowszechnienia wirusa SARS-CoV-2, oraz następstw globalnej pandemii COVID w kontekście populacyjnym. Doświadczenie społecznego kryzysu gospodarczo-ekonomicznego, jak również towarzyszący społeczeństwu lęk, skłania do dalszego poszukiwania zasobów, które będą pełniły funkcję czynników ochronnych. Nie bez znaczenia pozostaje również aktualnie tocząca się wojna w Ukrainie, która odciska piętno na codziennym funkcjonowaniu psychicznym zarówno uchodźców, świadków, jak i jednostek niosących bezinteresowną pomoc. Artykuł ma celu omówienie znaczenia odporności psychicznej w dorosłości w kontekście zdrowia, wskazując na ujemny związek z negatywnymi wskaźnikami zdrowia psychicznego, dodatni związek z pozytywnymi wskaźnikami zdrowia psychicznego, czy powiązania odporności z cechami osobowości. W rozważaniach nad znaczeniem odporności omówiona została umiejętność odangażowywania emocjonalnego, wzorce reakcji fizjologicznych oraz porównanie odporności psychicznej do somatycznego układu odpornościowego. Celem niniejszego artykułu jest również wskazanie na poznawczą komponentę, mianowicie na odporność poznawczą. W tym zakresie omówiony został związek odporności z funkcjami poznawczymi na podstawie badań eksperymentalnych.
Słowa kluczowe: odporność psychiczna, prężność psychiczna, dorosłość, globalny kryzys, pandemia COVID-19, zdrowie psychiczne, odporność poznawcza

Introduction

For several decades, mental health has been understood not only as the absence of pathology but more importantly as a broadly defined well-being (WHO, 1948, 2005; Heszen & Sęk, 2007). Resilience is a positive element associated with mental health of an individual (Zautra et al., 2010) as well as with its

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Francz.pdf

resource (Czabała & Kluczyńska, 2015). It works as a buffer and has a preventive effect in difficult situations that exceed the average level of coping. Resilience incorporates factors and mechanisms that determine the level of protection against unfavorable fate and also promotes health and reduces harm in aversive conditions (Davydov et al., 2010).

Resilience has many definitions (Liu et al., 2020). It is a complex concept, multidimensional and dynamic in its nature (Southwick, Charney, 2012; Rutter, 2012). It can be understood as a dispositional property or a relatively fixed resource of an individual to cope with unfavorable life events [resiliency, ego-resiliency, personal resilience, psychological resilience] (Block & Block, 1980; Block & Kremen, 1996; Fredrickson, 2001; Klohnen, 1996; Uchnast, 1998, among others) inherently related to neurochemical pathways (Charney, 2004; Feder et al., 2011). Resilience can also be perceived as a process of overcoming negative life events [resilience, mental toughness] (Luthar et al., 2000; Waller, 2001) as well as a developmental outcome (Sikorska, 2016).

1. Problems with definition

Despite many proposals to separate terms *resilience* and *resiliency*, due to the ambiguity in terminology and proposed definitions, scientific literature written in English frequently uses the broad term of resilience that consists of two definitions that are differentiated in Polish (Chmitorz et al., 2018). What is more, definitions and measurement scales for both terms are often used alternately under the name of *resilience* (e.g., Helmreich et al., 2017; Cooper et al., 2013).

Ogińska-Bulik and Juczyński (2008), Polish scholars, take similar approach and propose a unifying understanding of resilience. Although their *Resilience Measurement Scale* SPP-25 refers to personality dispositions in the measurement factors, authors define *resilience* as a mechanism of self-regulation which "is universal and should protect an individual from the negative outcomes of experienced events, both traumatic and those from everyday life."(Ogińska-Bulik & Juczyński, 2008, p.52). The author of this article leans towards the second, broader perspective, opting for the unification, not the separation of the presented constructs.

Contemporary researchers pay great attention to the way we understand the term *resilience,* as there is no fixed definition or consensus on what exactly it is (Liu et al., 2020). Scholars have proposed that it should include the basic factors associated with resilience, namely, trigger factors related to difficult circumstances, outcomes, mechanisms, and factors promoting resilience (Fisher et al., 2018). Nevertheless, a unified definition of the term is needed (Chmitorz et al., 2018).

2. Definition

Taking into consideration a complete research on resilience, this construct could be defined as a trait, mechanism, and a process of self-regulation related to the sense of control. It is responsible for the ability to "self-repair" and recover after encountering difficulties or a threatening experience, thereby representing a type of mental flexibility. An individual is able to adapt to changing situations and stressors by perceiving surrounding stimuli as favorable and using available resources. Resilience is also a positive adaptation to changing life conditions and dealing with stress (Block & Block, 1980; Borucka, 2011; Borucka & Ostraszewski, 2012, Masten & Powell, 2003, Ogińska-Bulik & Juczyński, 2008, Sikorska, 2016; Tugade & Fredrickson, 2004).

The American Psychological Association (2012) defines resilience as a process of positive adaptation to unfavorable conditions, adversity, trauma, tragedy, danger, and to considerable sources of stress, such as problems in family and close relationships, serious health issues, problems in the workplace or financial stress. Mental resilience can also be defined as a set of personal attributes or skills used to cope with a stress level higher than average (Nadolska & Sęk, 2007). However, given the complexity and multidimensionality of resilience, personal attributes used in a certain sphere of life may turn out to be insufficient in others. (Southwick & Charney, 2012).

Davydov et al. (2010), on the basis of research on neuroscience, behavioral sciences and also from the individual, group and cultural levels, propose to consider psychological resilience as a complex and multidimensional system of forces interacting at those multiple levels. They conclude that interdisciplinary research is crucial to understand such a multidimensional phenomenon. Since resilience related to positive experiences can stem from positive and protective childhood experiences, a longitudinal approach is essential to understand mechanisms and factors that interact with it.

Another approach describes resilience in terms of mental health with regard to a stress charge (Chmitorz et al., 2018) or as using one's cognitive skills to effectively cope with stress (Greenberg, 2006). Due to its complexity, resilience is more than just a psychological trait or biological phenomenon, hence, it requires a multifaceted approach and an interdisciplinary approach (Southwick & Charney, 2012).

Resilience can be described on three levels: cognitive, emotional and behavioral (Ogińska-Bulik & Juczyński, 2008). The level of people's resilience is determined by how they cope with life events and hardships, how they process and cognitively elaborate on the acquired information, and what actions they take in response. Each sphere individually, as well as all of them together, interact with each other and are crucial in terms of measurement. More importantly, those three discussed areas are significant for interventions that lead to developing and strengthening resilience, thus improving functioning of an individual.

Chmitorz et al. (2018) state that currently resilience is viewed more often as an outcome-oriented or process-oriented construct and not as a personal trait. It is a dynamic process of adaptation. What is more, they assert that personality correlates, previously referred to as a resilient or tough personality (see Kobasa, 1982), are one of many risk or protective factors sustaining or restoring health. Therefore, the level of resilience is modifiable and lays the groundwork for psychological interventions. Ijntema et al. (2019) state that perceiving resilience only as a static entity is no longer legitimate; instead, resilience should be viewed as a dynamic process.

3. Meta-analysis of links between factors of psychological resilience

In the scientific literature, there is plentiful of factors directly and indirectly related to the concept of resilience. However, as the systematic review of conducted studies shows, not all of them are supported by strong scientific evidence. Among the factors that recur in observational studies (cross-sectional or longitudinal)and are backed by strong evidence in research findings are: active coping (e.g. problem-solving, planning), self-efficacy, optimism or positive attributional style, social support, cognitive flexibility (e.g. positive reappraisal, acceptance of negative situations and emotions), religiousness, spirituality or religious coping, positive emotion or positive affect, hardiness, self-esteem, having meaning or purpose in life, and sense of coherence. Factors supported by moderate evidence in research include internal locus of control, flexible coping, hope, and humor. Whereas altruism is considered a factor with little scientific evidence (Helmreich et al., 2017).

4. Resilience in the contemporary world

Resilience is not a new concept. Albeit, it was introduced in the 1950s', it has gained popularity in the last two decades. Heszen-Niejodek and Wrześniewski (2000) stress the dynamic development of psychological research on health and illness and state that this tendency is likely to continue. They list the following reasons behind this psychological trend: changes in the course of diseases and in the causes of death in the socio-civilizational context, belief that psychological factors have an influence on physical and mental health, which was proven repeatedly, and the specific nature of modern medicine which is more relevant and hasmore impact in social reception, but at the same time is a substantial source of stress among patients. Furthermore, in the 21st century, the direction of the patient-doctor relationship as well as aspirations of individuals to solve their own health problems has been changing. The economic factor and rising healthcare costs also have to be taken into consideration.

The interest in psychological resilience has its proponents and is often studied among groups at-risk or among populations experiencing difficult and even traumatic events. Research focuses mainly on populations exposed to difficult life events, disasters, war, post-traumatic stress or professional burnout. However, over the years, the issues of resilience gained more attention from popular science, especially its practical use- with many programs aiming at strengthening resilience in the lives of individuals.

With today's understanding of resilience shifting from a purely self-regulatory role to concept of the full health and well-being, social groups focused on raising their consciousness, self-development and pushing their own limits are getting more interested in psychological resilience (e.g. Hanson & Hanson, 2018; Hughes et al., 2019; Schiraldi, 2017).

5. Mental health in modern times

Society begins to understand the importance of emotions in human life and mental health in daily functioning. This tendency can be observed in the modern world changed by the global pandemic of the SARS-CoV-2 virus causing the COVID-19. Socio-economic crisis as well as the public fear (Shanahan et al., 2020) of getting infected and complications, prompts people to seek guidance and instruction on how to support their mental health (a growing number of popular science articles and radio programs on mental health and resilience proves that).

Despite the fact that the elderly are more likely to experience negative consequences of the virus, young people were also affected by the pandemic. Studies show that the experienced isolation and loneliness of the elderly can exacerbate their health problems (Grossman et al., 2021); however, younger generations are also subjected to negative mental health effects caused by the pandemic (Gambin et al, 2021; Killgore et al., 2020; Sokół-Szawłowska, 2021; Talarowska et al., 2021).

Pfefferbaum and North (2020) point out that the risk of contagion related to COVID-19 pandemic, the government imposing restrictions concerning public health affecting the freedom of individuals, constantly increasing financial losses, and inconsistent and conflicting messages from the authorities lead to widespread emotional stress, compromised sense of security, confusion, emotional isolation, stigmatization and thus an increased risk of psychiatric disorders, especially symptoms of post-traumatic stress disorder (PTSD), anxiety, depressive and obsessive-compulsive symptoms or addiction (Chatterjee et al., 2020; Cullen et al., 2020; Fiorillo & Gorwood, 2020; Ornell et al., 2020; Pfefferbaum, &North, 2020; Shuja et al.,2020). From this perspective, public health is at risk on both individual and social side.

Hence the claims that the COVID-19 epidemic situation is accompanied by a global "parallel epidemic" related to mental health problems. It can be categorized in four groups: the general population, the population with pre-existing mental disorders or addictions, the population with increased risk of getting ill due to carrying help, and the population of individuals infected with COVID-19 (Vigo et al., 2020). In 2014, the socio-economic costs associated with mental health were already estimated to be enormous (Wynne et al., 2014). Meanwhile, the social and economic situation today continue to deteriorate and is yet to show its magnitude.

The ongoing war in Ukraine is also a strong factor as it impacts the daily mental functioning of both refugees and individuals providing selfless aid. Mental health in times of war is compromised. A great demand for organizations providing psychological assistance, which we observe since the beginning of Russian invasion of Ukraine, highlights the necessity for extensive prophylaxis and prevention through developing protective factors.

6. The meaning of resilience in adulthood

Resilience plays an important role in many facets of a life of an individual, i.e., it has an impact on the emotional sphere, cognitive and social functioning, and somatic health. All of these areas are submitted for an extensive global research. Most of the research refers to childhood, or to the adults exposed to aversive or traumatic events (e.g. war veterans,

soldiers or professions more prone to occupational burnout), and to specific clinical groups (selected somatic diseases, such as cardiac patients, oncology patients, or those dealing with chronic pain, and psychiatric disorders, such as those suffering from affective disorders, anxiety, PTSD, or those affected by schizophrenic experiences).

The psychological resilience shows a strong relationship with mental health (e.g. Hartley, 2011; Hu et al., 2015; Gao et al., 2020; Zhang et al., 2017; Mortazavi & Yarolahi, 2015). It is negatively related to negative mental health indicators such as anxiety, depression, feelings of stress or negative emotionality, and positively related to positive factors such as optimism, life satisfaction, positive affect, self-efficacy, self-esteem or social support (Lee et al., 2013).

A meta-analysis of the relationship between the resilience and personality traits indicates that resilience is negatively related to neuroticism and positively related to extraversion and conscientiousness (Ogińska-Bulik & Juczyński, 2008), as well as to openness and agreeableness (Oshio et al., 2018). Similar relations exist between mental health and those traits (Ogińska-Bulik & Juczyński, 2008a).

Not only does resilience have an impact on the evaluation of stressful situations making an individual more resilient to stress, but it also protects from maladaptation (Ogińska-Bulik & Juczyński, 2008). As Farber and Rosendahl (2018) report in a systematic review and meta-analysis of studies conducted on a population of more than 15,000 somatically ill patients, there is a strong link between their resilience and mental health in the context of depressive symptoms, anxiety and distress.

Gloria and Steinhardt (2013) point out that resilience has a moderating effect on the relation between stress and symptoms of depression and anxiety. What is more, they state that positive emotions can enhance psychological resilience directly and indirectly through the mediating role of coping strategies, particularly adaptive coping. Resilience and mental health mediate the relationship between loneliness and mental and physical quality of life of the elderly (Gerino et al., 2017).

A number of studies shows a positive relation between higher levels of positive emotions in individuals and their higher resilience compared to people with lower levels of resilience as well as the ability of individuals with higher resilience to stimulate positive emotions (through play, witty remark or humor) as a way to cope with hardships of everyday life and adversity (Tugade & Fredrickson, 2004). The status of negative emotions, on the other hand, is not so clear-cut, although it is inferred that people with higher levels of resilience have lower levels of depression and anxiety (Bonanno et al., 2007).

Individuals with higher levels of resilience are characterized by a greater ability to emotionally disengage from both positive and negative emotions (Yi et al., 2020). Additionally, they tend to focus on more positive information (Isaacowitz, 2005). Individuals with higher resilience perceive and generate positive emotions with more ease than individuals with lowered levels of resilience that tend to notice the negative (Anthony & Jensen, 2006).

Davydov et al. (2010) compare the concept of resilience to the somatic immune system. In their view, such a comparison allows us to understand how potential threats can be modified or buffered and how psychological disorders can be prevented. Simultaneously, science can engage in a discussion about multidimensionality of protective barriers related to resilience, from adaptive to maladaptive reactivity, and the interplay between psychological, biological, and social interactions in order to develop an adaptive exchange between tolerance and vulnerability to stress.

Research by Lu, Wang and You (2016) point out the adaptive patterns of physiological responses to repetitive stress in individuals characterized by higher levels of subjectively assessed psychological resilience. They report that individuals characterized by high scores on the resilience scale present higher respiratory sinus arrhythmia (RSA), as well as a significant return to baseline RSA, heart rate, and systolic and diastolic blood pressure, compared to those characterized by lower scores on the resilience scale. When exposed to the repetition of stressful stimuli those individuals showed greater habituation of systolic and diastolic blood pressure through more significant reductions in both indices.

7. Resilience and cognitive functions

A cognitive resilience is a specific area of resilience defined as the ability to overcome the negative effects of failure or problems associated with the level of performance of cognitive functions. It is responsible for cognitive functions performed under stress such as attention, memory and decision-making. The efficiency of cognitive functions depends on many situational, emotionally-motivational or dispositional factors. Individual variables such as coping, sense of control, self-efficacy, level of optimism, level of anxiety, cognitive appraisal, level of expertise, affectivity, motivation, effort, social support and other personal characteristics play significant role (Staal et al., 2008).

Cognitive resilience depends on the ability to adapt to individual and internal factors (such as senses) as well as to external factors (such as a stressful stimuli or cultural expectations). It is also essential for maintaining health in adulthood, especially from a perspective of the life course and aging (Stine-Morrow & Chui, 2012).

Cognitive resilience is particularly important for executive functions (Staal et al., 2008). As Parsons et al. (2016) report, cognitive control or executive functions can be trained with cognitive tasks involving, for example, working memory, which, in turn, is related to reducing stress reactivity, dysphoria and anxiety. Moreover, computer programs aimed at training cognitive control have shown that it is possible to minimize depressive symptoms in every day-life (Motter et al., 2016).Therefore, it is possible and crucial to act upon cognitive resilience in a life of an individual through creating a properly oriented training and using learning mechanisms – especially when behavioral outcome can be measured (Staal et al., 2008).

A proposed model for information processing created after an attempt to conceptualize cognitive resilience incorporates such components as situation, mapping system, errors in information processing and executive functions which influence adequate or inadequate response (Parsons et al., 2016). As research shows, attention control is positively correlated with resilience (Schäfer et al., 2015). Moreover, cognitive function training that does not involve emotion affects neuronal mechanisms reducing the amygdala's reactivity to negative information (Cohen et al., 2016).

Despite the fact that the level of resilience among patients diagnosed with schizophrenia, bipolar disorder, and the control group differs significantly, it is not moderated by changes in cognitive functions; however, they are observed to change in patients (through tests measuring verbal comprehension, executive functions, and working memory) (Deng et al., 2018). Also, resilience may be important for improving the neuronal network of the orbitofrontal cortex in patients with mild cognitive impairment (Son et al., 2019).

Summary

In the modern times, the process of successfully overcoming negative life events appear to be crucial for maintaining mental health in adulthood. Resilience is a mechanism that has a buffering and preventive effect in difficult situations that exceed the average level of coping. Moreover, it incorporates factors and mechanisms that determine the level of protection against unfavorable fate and also serves to promote health and reduce damage in aversive conditions. It is a process of positive adaptation to unfavorable environmental conditions, substantial sources of stress, adversity, trauma, or tragedy. Resilience is a relevant factor in overcoming the negative effects of failure, or problems associated with the level of performance of cognitive functions. Thus, it seems necessary to introduce intervention programs to strengthen resilience on a populational level.

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Identification of low gamma-glutamyl transferase familial intrahepatic cholestasis – benign recurrent intrahepatic cholestasis in a 22-year-old woman: a case report and literature review

Łagodna nawracająca cholestaza wewnątrzwątrobowa z małą aktywnością gamma-glutamylotranspeptydazy (GGTP) – opis przypadku 22-letniej pacjentki oraz przegląd literatury tematu

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Abstract: *Introduction:* Benign recurrent intrahepatic cholestasis (BRIC) is a rare genetic disorder characterized by recurrent episodes of cholestatic jaundice that may last days to months. It can start at any age, but often in a first decade of life. The syndrome does not lead to progressive liver dysfunction and cirrhosis. Between cholestatic episodes patients have no symptoms and laboratory levels are within the norms. The exact mechanism of cholestasis in BRIC and many other cholestatic conditions is poorly understood. Syndrome the first time was described in 1959r., in 2004 was proposed the following diagnostic criteria. The report presents a 22-year-old woman with the diagnosis of jaundice with an accompanying severe pruritus (first episode of BRIC). *The aim:* This article describes clinical presentation, laboratory abnormalities, and proposed etiologic factors responsible for BRIC. We intend to report this case due to rarity of this disease in Poland. *Clinical case:* Described as a clinical case course features of the BRIC. Knowledge of this entity is important issue as an early recognition that might prevent performance of expensive diagnostic algorithm. The laboratory tests and the whole clinical picture had conclusive results. Moreover, despite negative genetic test, the authors were sure that it is BRIC. *Conclusions:* BRIC is a disease not leading to progressive liver dysfunction and cirrhosis. It should be remembered the characteristic symptoms of BRIC, a very low level of GGT accompanied by jaundice and itching. It has a great diagnostic importance (by shortening the procedure algorithm), allowing for a quick diagnosis. BRIC is associated with good prognosis in most cases. However, some patients presented with intermittent cholestasis may progress to PFIC and develop permanent cholestasis and porto-portal fibrosis and progressive liver damage. Therefore, patients diagnosed with BRIC require hepatological care.
Key words: cholestasis, BRIC (benign recurrent intrahepatic cholestasis), PFIC(progressive familial intrahepatic cholestasis), low GGT, jaundice.

Abstrakt: *Wprowadzenie:* Łagodna nawracająca cholestaza wewnątrzwątrobowa (BRIC) to rzadko występująca , genetycznie uwarunkowana, dziedziczona autosomalnie recesywnie choroba, która charakteryzuje się nawracajacymi epizodami cholestazy z towarzyszącym świądem skóry. Wyróżnia się dwa typy BRIC, odpowiednio BRIC-1 i BRIC-2. Choroba należy do grupy rodzinnych cholesaz wewnatrzwątrobowych. Objawy żółtaczki mogą pojawić się w każdym wieku, zwykle jednak występują przed drugą dekadą życia i mogą utrzymywać się przez kilka tygodni do kilku miesięcy. Jak wskazują wyniki badań molekularnych mutacje genetyczne leżą u podłoża etiopatogenetycznego choroby–rozwoju zaburzeń funkcjonowania mechanizmów przezblonowego transportu kwasów żółciowych. *Cel badania:* W naszej publikacji prezentujemy przypadek 22-letniej pacjentki z rozpoznaniem pierwszego epizodu BRIC. W pracy analizujemy przebieg kliniczny, algortytm diagnostyczny oraz leczenie w świetle przeglądu piśmiennictwa tematu. Podsumowując, w oparciu o obraz kliniczny korelujący z odchyleniami w badaniach biochemicznych, po wykluczeniu innych przyczyn cholestazy oraz pomino negatywnych wyników badań molekularnych w kierunku typowej mutacji, należy postawić rozpoznanie BRIC. *Konkluzja:* Prezentowany kliniczny przypadek BRIC naszej pacjentki wskazuje na trudności diagnostyczne zwłaszcza w trakcie pierwszego epizodu choroby. Charakterystyczny obraz kliniczny wraz z profilem odchyleń w badaniach laboratoryjnych, w tym małą aktywnością GGTP, stanowi cenną wskazówkę diagnostyczną ułatwiającą rozpoznanie. U większości pacjentów z rozpoznaniem BRIC rokowanie jest dobre. Jednak z uwagi na możliwość klinicznej progresji do PFIC z następowym uszkodzeniem wątroby ta grupa pacjentów wymaga dalszej obserwacji w hepatologicznej.
Słowa kluczowe: cholestaza, łagodna nawracająca cholestaza wewnątrzwątrobowa (BRIC), postępująca rodzinna wewnątrzwątrobowa cholestaza (PFIC), małe stężenie, GGTP, żółtaczka

Introduction

Benign recurrent intrahepatic cholestasis (BRIC) is a rare autosomal recessive condition characterized by intermittent episodes of severe pruritis and jaundice that may last from few days to months. BRIC was described by Summerskill and Walshe in 1959 (Summerskill, Walshe, 1959). Although the syndrome does not lead to progressive liver dysfunction and cirrhosis, symptoms occurring with each attack may be associated with significant morbidity. The diagnostic criteria proposed by Tygstrup are in use today and include a history of several episodes of jaundice separated by symptom-free interval of at least 6 months in the absence of an inciting drug or toxin (Tygstrup, Jensen, 1969). Laboratory values consistent with intrahepatic cholestasis, severe pruritus secondary to cholestasis, liver histology demonstrating centrilobular cholestasis, normal intrahepatic and extrahepatic bile ducts confirmed by cholangiography.

Low gamma-glutamyl transferase (GGT) familial intrahepatic cholestasis presents with recurrent episodes of cholestasis without progressive liver disease. This is a genetic autosomal recessive disease. It can start at any age, but often in a first decade of life with appearing attacks lasting from several weeks to months. A characteristic phenomenon in this disease is low or normal serum levels of GGT enzyme. There are 2 forms of the disease – mild and severe. The milder forms are known as BRIC1 and BRIC2 and severe forms are known as progressive familial intrahepatic cholestasis–PFIC1 and PFIC2. The different forms are caused by mutations. PFIC1 and BRIC1 have a mutation in a gene ATP8B1, which encodes FIC1 protein (familial intrahepatic cholestasis 1). PFIC2 and BRIC2 have mutations in a gene named ABCB11, which encodes a BSEP protein (bile salt export pump)[1] (Sohn, Woo, Seong et al., 2019; van Ooteghem, Klomp, van Berge Henegouwen et al, 2002). Sometimes the patients do not have mutations in either of these genes. This situation suggests that there are other gene forms and mutations which are yet to be discovered. Low GGT familial intrahepatic cholestasis occurs in equal percentage within males and females. Generally, this disease is very rare (Sohn, Woo, Seong et al., 2019).

It is unclear what is the stimulus for the BRIC attacks. Important is that BRIC1 and BRIC2 are self-limiting and are not causing progressive, chronic liver damage. The first symptoms before attacks are not specific. It could be fatigue, weakness and loss of appetite. Next time patients have or could have following symptoms which are: intense itchiness, yellowing of the skin, mucous membranes, whites of the eye may follow, liver may be enlarged, weight loss because absorption of nutrients and vitamins is impaired[2] (Ermis, Oncu, Ozel et al., 2010). Between cholestatic episodes patients have no symptoms and laboratory levels are within the norms. Liver biopsies are characterized histologically by intrahepatic cholestasis with preservation of normal liver architecture (van Ooteghem, Klomp, van Berge Henegouwen et al, 2002). BRIC is associated with good prognosis in most cases and does not usually lead to liver fibrosis. However, progression from BRIC to PFIC has been reported in the literature (van Ooteghem, Klomp, van Berge Henegouwen et al, 2002). We should remember that pruritus may be a devastating symptom causing a significant reduction of life quality (Ołdakowska-Jedynak, Jankowska, Hartleb et al., 2014).

1. The Aim

The BRIC clinical case report aims to highlight the importance of making a correct diagnosis. It has great importance for the treatment algorithm (quick diagnosis), but also significantly affects the patient's well-being–the patient can be informed regarding benign nature of this disease.

1 https://rarediseases.org/rare-diseases/low-gamma-gt-familial-intrahepatic-cholestasis
2 ibidem

2. Clinical case

A 22-year-old woman was admitted to the Clinic on May 13th, 2019 with the diagnosis of jaundice with an accompanying severe pruritus. Patient did not have any other symptoms, any other concomitant diseases and did not take any medicine permanently (sometimes metamizole). In the past, patient had two operations: left inguinal hernia surgery and skin plastic post-burn surgery years ago. At the beginning of 2018 when the patient was pregnant itching has appeared however cholestasis was at the normal level.

During clinical examination, patient had deep icterus, there was yellow discoloration of the skin and scleral icterus. A few scratch marks were noticed over patient's body. No evidence of hepatomegaly, ascites or encephalopathy. General condition was good, normal body weight. The patient did not feel any stomach pain and ultrasound of the abdomen did not present any pathologies.

Before the patient was admitted to the Clinic, on April 18th, 2019 the first symptoms appeared: epigastric pain, chest pain, back pain. Patient was admitted to emergency room in another hospital. Liver function tests were deranged. Showed elevated liver and cholestatic enzymes, bilirubin within the norm. Other biochemical parameters including renal function tests and serum electrolytes were normal. The ultrasound of the abdomen showed the features of microcholelithiasis, biliary colic was diagnosed.

On May 1st, 2019 another episode of abdominal pain appeared presenting jaundice accompanied by pruritus. Results of laboratory test were the following: alkaline phosphatase (ALP), gamma glutamyl transferase (GGT), alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels were decreased. Virology (hepatitis C, B CMV, EBV and HIV) and immunological serology (ANA, AMA, SMA) were all negative. The patient denied any alcohol or drug abuse. No liver diseases were known in the family history. Ultrasound examination revealed normal liver morphology without signs of obstructive cholestasis. Magnetic resonance cholangiopancreatography (MRCP) showed normal intra and extra hepatic biliary tree and pancreatic ductal system. MRCP did not show choledocholithiasis. Due to the lack of therapeutic options, the patient was transferred to our Clinic on May 13th, 2019.

Table 1. The main parameters during the first hospitalization (13.05.2019 and 16.05.2019) and the following month (28.06.2019)

	13.05.2019	16.05.2019	28.06.2019
ALT [5 – 41U/l]	133	81	11
AST [5 – 37U/l]	115	51	14
ALP [40 – 129U/l]	185	171	86
GGT [< 60U/l]	7	5	9
Bilirubin [0.30 – 1.20mg/dl]	38	35	2
Albumin [3.50 – 5.20g/dl]	4.52		
PT [9.4 1– 2.5sec.]	10.2	10.6	12.4
PLT [150–400k/ul]	419	317	267

ALT, alanine aminotransferase; AST, aspartate aminotransferase; GGT, gamma glutamyl transferase; ALP, alkaline phosphatase; PT, prothrombin time; PLT, blood platelet

After admission to our Clinic conducted laboratory tests of ALP and bilirubin levels were elevated with the low level of GGT. The prothrombin time, albumin, CRP, amylase, lipase and lipid profile were within the range. Liver biopsy was not performed because in control laboratory tests we saw idiopathic low level of all parameters. Interestingly, GGT activity was always relatively low (table 1).

For the treatment we used hydroxyzine, rifampicin and ursodeoxycholic acid (UDCA). After 1,5 months the parameters were still idiopathically low, liver function improved dramatically, patient was visibly less icteric, and the pruritus had stopped. We recommended genetic testing ABCB11 and ATP8B1, but it was negative. Based on the whole clinical picture we were convinced that it was BRIC.

3. Discussion

BRIC is a rare genetic disorder characterized by intermittent episodes of jaundice and pruritus. The exact mechanism of cholestasis in BRIC and many other cholestatic conditions is poorly understood. We report a patient with characteristic

features of BRIC, occurring frequently with insistent symptoms. In 2004 Luketic and Shiffman proposed the following diagnostic criteria of BRIC: 1. at least two episodes of jaundice separated by a symptom-free interval lasting several months to years, 2. consistent laboratory data with intrahepatic cholestasis, 3. normal or minimally elevated GGT level, 4. severe pruritus secondary to cholestasis, 5. centrilobular cholestasis evident on a liver biopsy, 6. normal intra- and extrahepatic bile ducts shown on cholangiography 7. absence of factors known to be associated with cholestasis (Luketic, Shiffman, 2004). This case report does not meet all mentioned assumptions. Diagnosis was made by classical clinical presentation. The very important laboratory symptom, which we should stress is low level GGT. In this case we see it clearly. The patient had first episodes of jaundice and didn't have the biopsy. Also, the genetic test appeared negative.

The treatment of BRIC is symptomatic and medication therapy involves relieving symptoms, such as pruritus. Therapeutically, in moderate cases, conservative treatment with cholestyramine, 5-adenosylmethionine, steroids, phenobarbital, UDCA or rifampicin may be applied (Ołdakowska-Jedynak, Jankowska, Hartleb et al., 2014). In this case we used hydroxyzine, rifampicin and UDCA.

As a result of the treatment, itching has stopped. Our patient made an uneventful recovery within six and half weeks. The patient has been in remission for about a half of year. Also, there is no specific treatment available to prevent attacks or limit their duration. Opinion on UDCA treatment is divided. Some authors say that patients respond poorly to the above treatment, while others just the opposite (Gupta, Kumar, Bhatia, 2005). There are few reports that early pharmacological treatment may reduce the duration of the cholestatic episodes, most observations showed that use of UDCA or bile salt sequestrants were ineffective for both therapy and prevention of forthcoming episodes. Data concerning rifampicin treatment are equivocal. The long-term rifampicin treatment should be used with caution because of its potential hepatotoxic effect. In addition, there are few reports about treating cholestatic pruritus using Molecular Adsorbent Recirculation System (MARS) or Fractioned Plasma Separation and Adsorption System (Prometheus). Prometheus is probably more effective than MARS. Patients who were treated using Prometheus check into higher reduction clearance rates of protein-bound and water-soluble substances. Bile salts removal was the same in both systems. So, Prometheus may be more efficient in removing low molecular pruritogens and non-pruritogenic toxins other than bile salts, which are responsible for development of cholestatic attacks (Ołdakowska-Jedynak, Jankowska, Hartleb et al., 2014). Fortunately, our patient did respond to commenced treatment and Prometheus was not needed. Our patient was treated with conservative medication with complete recovery.

Conclusions

In conclusion, BRIC is a rare syndrome and does not lead to progressive liver dysfunction and cirrhosis. However, some patients presented with intermittent cholestasis, typical BRIC, may progress to PFIC and develop permanent cholestasis and porto-portal fibrosis and progressive liver damage. Therefore, patients diagnosed with BRIC require hepatological care.

BRIC should be considered in the differential diagnosis of cholestasis. Knowledge of this entity is important issue as an early recognition can prevent performance of expensive diagnostic algorithm and patient can be counseled regarding benign nature of this disease.

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Mental health and the COVID-19 pandemic

Zdrowie psychiczne a pandemia COVID-19[1]

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Abstract: *Introduction:* The disease caused by the SARS-CoV-2 virus poses a significant threat to human life and health. It is highly contagious and therefore spreads rapidly and is fatal in severe cases. The main objective of this article is to present the impact of the COVID -19 pandemic on mental health. Method: Based on a review of the current literature using the paradigm of evidence-based medicine (EBM), the main mental health problems resulting from the pandemic were presented. A PubMed search engine supporting the MEDLINE database and Google Scholar were used in data collection. The criterion for searching articles were papers published since 2020 that were available in Polish or English. *Results:* The SARS-CoV-2 virus infection itself, as well as the outbreaks associated with the pandemic, causes a number of negative mental health consequences. These may manifest not only as individual symptoms or syndromes, but also disorders or groups of disorders and complex psychopathological problems. All of these phenomena can overlap and also occur in the course of COVID -19 and its complications. Data available from the literature review shows that about 30% of people suffer from mental health problems during a pandemic, with more than 50% reporting mental health problems. Neglect of mental health during a pandemic can lead to an accumulation of disorders that can manifest over years. *Conclusions:* There are many ways to combat the negative effects of the pandemic, which can be implemented at different levels. The impact of COVID -19 on the mental health of individuals needs to be studied and precisely defined, as this is essential for planning short- and long-term medical, informational and organisational interventions. The full potential of many scientific disciplines should be harnessed to mitigate the negative impact of the pandemic.
Keywords: COVID-19, mental health, pandemic

Abstrakt: *Wstęp:* Choroba wywołana przez wirus SARS-CoV-2 jest istotnym zagrożeniem dla życia i zdrowia ludzi. Jest silnie zakaźna, przez co szybko się rozprzestrzenia, a w ciężkich przypadkach jest śmiertelna. Głównym celem artykułu jest przedstawienie wpływu pandemii COVID-19 na zdrowie psychiczne. *Metoda:* Na podstawie przeglądu aktualnego piśmiennictwa opartego o paradygmat EBM (Evidence-Based Medicine) przedstawiono główne problemy zdrowia psychicznego, będące konsekwencją pandemii. Podczas zbierania danych wykorzystywano wyszukiwarkę PubMed obsługującą bazę MEDLINE, oraz Google Scholar. Kryterium, które zastosowano przy wyszukiwaniu artykułów, to prace opublikowane od 2020 roku dostępne w języku polskim lub angielskim. *Wyniki:* Samo zakażenie wirusem SARS-CoV-2, jak i związane z pandemią obostrzenia wywołują szereg negatywnych konsekwencji dla zdrowia psychicznego. Mogą się one objawiać jako pojedyncze objawy lub zespoły objawów, a także jako zaburzenia lub grupy zaburzeń oraz złożone problemy o charakterze psychopatologicznym. Wszystkie te zjawiska mogą się na siebie nakładać, a także pojawiać się w przebiegu COVID-19, jak i jako jego powikłania. Z danych dostępnych z przeglądu literatury wynika, że w trakcie pandemii ok. 30% osób cierpi na zaburzenia psychiczne, a ponad 50% badanych zgłasza psychologiczny dystres. Zaniedbanie zdrowia psychicznego w czasie pandemii może spowodować narastające zaburzenia, które mogą ujawniać się przez kolejne lata. *Wnioski:* Istnieje wiele możliwości zwalczania negatywnych skutków pandemii, które wprowadzać można na różnych poziomach. Wpływ COVID-19 na stan psychiczny poszczególnych populacji należy badać i precyzyjnie określić, gdyż jest to niezbędne do planowania krótkoterminowej i długoterminowej interwencji w obszarach: medycznym, informacyjnym i organizacyjnym. Do zahamowania rozprzestrzeniania się negatywnych skutków pandemii należy wykorzystywać cały potencjał płynący z wielu dyscyplin nauki.
Słowa kluczowe: COVID-19, pandemia, zdrowie psychiczne

Introduction

The disease caused by the SARS-CoV-2 virus poses a significant threat to human life and health. It is highly contagious and therefore spreads rapidly and is fatal in severe cases (Fardin, 2020). There is no doubt that it also has a negative impact on mental health of the population and causes numerous emotional

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Zalews.pdf

problems (Ornell et al., 2020). It usually involves a forced change in daily activities, combined with a great sense of insecurity and anxiety. Due to the complexity and multidimensionality of the problem, as well as the potential long-term impact, this is an important area. Globally, the pandemic has increased all mental health assessment indicators. Data available from the literature review (different study groups and study methods) shows that during a pandemic about 30% of people suffer from mental health problems, with more than 50% reporting mental health problems (Gibson et al., 2021; Xiong et al., 2020).

These data points to the need for preventive as well as therapeutic and curative measures to be implemented. All forms of primary intervention for psychiatric disorders associated with post-traumatic syndromes described in the literature emphasised that the most important form in an emergency is to remove the patient from the danger zone and place him or her in a safe place. In the case of a pandemic, there is no suitable place of refuge. If mental health is neglected during this time, it can lead to a growing disorder that can manifest itself for years. Today's COVID -19 situation is costing societies so much that the long-distance effects of the trauma could affect 20% or even a larger percentage of the population that was alive at the time of COVID -19 (Heitzman, 2020). Already at the beginning of the pandemic, an increase in the prevalence of depressive disorders, anxiety disorders and increased stress levels was noted (Liu et al., 2020).

On 12 March 2020, the Polish Psychiatric Society and the National Consultant Psychiatrist issued an appeal in which they unequivocally called for the mental health consequences of the pandemic to be recognised for people from different social groups (Appeal of the Polish Psychiatric Society and the National Consultant Psychiatrist, 2020). It draws particular attention to the situation of young people, the vast majority of whom are experiencing a crisis situation of this magnitude for the first time, and the need to take measures that could reduce the negative consequences of the pandemic. Mental health problems associated with COVID-19 may occur in patients infected with SARS-CoV-2 as well as in patients with mental disorders diagnosed before the pandemic (Rogers et al., 2020). The global situation related to COVID -19 has also shown that mental health is an indispensable component of public health.

The main objective of this article is to present the impact of the COVID -19 pandemic on mental health.

1. Method

Based on a review of the current literature using the paradigm of evidence-based medicine (EBM), the main mental health problems resulting from the pandemic are presented. Data collection used a PubMed search engine supporting the MEDLINE database and Google Scholar. All articles used were archived in electronic form–as PDF files. The criterion for searching articles were articles published since 2020 and available in Polish or English.

2. Results

2.1. Consequences of a pandemic

The COVID -19 pandemic has two types of mental health consequences. The first is related to the direct effects of the SARS-CoV-2 virus on the functioning of the patient's nervous system, while the second is related to long-term stressors (de Sousa Moreira et al., 2021). The negative impact of a pandemic on mental health can manifest as individual symptoms or syndromes, as well as disorders or groups of disorders and complex psychopathological problems. All of these phenomena may overlap and also occur during the course of COVID -19 and its complications. The effects of the virus on the nervous system include: disorientation, impairment of intellectual capacity and cognitive functions (including the so-called 'covid fog'), chronic fatigue, psychomotor retardation (de Sousa Moreira et al., 2021). Reactions to prolonged stress are reported in the literature to be increasingly common in the population. These reactions are most common: anxiety, depressed mood, nervous tension, anger, impulsivity, irritability, frustration, depressive disorders, sleep disorders, psychotic disorders, PTSD

and ASD, occupational burnout (de Sousa Moreira et al, 2021; Szczesniak et al., 2020; Vuren et al, 2021). The COVID-19 pandemic is also responsible for increased consumption of stimulants, including alcohol (Calina et al., 2021) and drugs (Dubey et al., 2020). In addition, an increased risk of suicide in the population was noted during this period and an increase in suicide rates was reported as a negative impact of the quarantine (Rothman, Sher, 2021).

2.2. Limitation of contacts

The introduction of all kinds of restrictions limited social contact to a maximum and often prevented people from leaving their homes. This situation led to the phenomenon of social isolation, which was accompanied by feelings of loneliness, fear or even boredom. Social isolation, which is a typical experience during a pandemic, can have far-reaching effects, manifesting in depressive symptoms, PTSD and other mental disorders (Brooks et al., 2020). The mere fact that they were left alone with household members in a confined and often small space was an extremely stressful factor. Victims of domestic violence were in a particularly vulnerable situation (Fiorillo et al., 2020; Ganz et al., 2020).

2.3. Pandemic acute stress disorder

Acute stress disorder in response to a pandemic, while not a postponed flight-defence response, may be linked to the occurrence of a sudden stressor that has enormous consequences or to a stressor that sets in motion a sequence of events that lead to destruction that the patient cannot in any way stop or avoid. The diagnostic criteria for acute pandemic stress disorder can be mapped against the diagnosis of acute stress disorder (Heitzman, 2020). Immediate exposure to traumatic experiences extends to all communities affected by the pandemic, and the extent varies. It is possible to become a victim of COVID-19 by means of direct exposure to a life-threatening situation, to be an eyewitness to such an event, or to fall into a risk group through direct contact with an infected person, which is associated with the occurrence of negative consequences. Being informed about the death or impending death of relatives is also considered to be a traumatic experience. The most common and characteristic feature of the clinical picture of pandemic acute stress disorder is the persistent anxiety response over a prolonged period of time and the inability to detach from the ongoing experience of the trauma. One observes a chronic persistence of fear and a sense of helplessness, and given the impossibility of escape, in extreme cases, states of panic, despair and a sense of hopelessness. The symptoms of pandemic acute stress disorder fall into the diagnostic categories of individual obsessions, dissociative symptoms, depressed mood, and avoidance symptoms and hyperarousal (Heitzman, 2020).

2.4. Risk groups

Groups at risk for mental disorders include the elderly and chronically ill, for whom the course of COVID-19 can be most dramatic, causing them to experience prolonged isolation and a painful reduction in contact with their loved ones during the pandemic (Aliberti, Raiola, 2021). This group undoubtedly includes children and adolescents who have been unable to pursue their education and pursue their interests among their peers due to the restrictions imposed by the epidemic, the lockdown and the introduction of distance learning (Jones et al., 2021). A United Nations Children's Fund report on the condition of young people during the pandemic points to a number of negative and very worrying phenomena: 27% of young people felt anxious during the pandemic, 15% were depressed, 46% felt less motivated to engage in previously attractive activities and 35% felt less motivated to carry out their daily duties (UNICEF, 2020). Medical professionals are the occupational group most affected by stress and its negative mental health consequences, as well as occupational burnout, during a pandemic (along with other groups directly involved in the fight against the pandemic). Working in the health sector during this period involves: working longer hours, often in uncomfortable personal protective equipment, e.g. overalls; dealing with death, fear and danger on a daily basis; worrying about loved ones (Chatzittofis et al., 2021). Each of the above risk groups has different

psychological needs, symptoms of psychological discomfort, stress and fatigue. A different organisational and informational message, as well as a specific medical-sanitary regime, must be adapted for each group. In justified cases, also therapeutic and therapeutic treatment (Heitzman, 2020).

2.5. Other stressors

Also contributing to the mental crisis during the pandemic was the constant access to information and media coverage, which constantly emphasised worrying statistics and mortality rates and fuelled the information with images. Ministers' messages, which were not always coherent, may have worried some, as did the complete unpredictability of the extent and duration of the restrictions imposed (Pedrosa et al., 2020). The psychological distress associated with COVID-19 may also result from psychosocial factors, such as: lack of or limited access to testing and medical care; increased workload; fear of infecting family members; restriction of personal freedom; economic hardship (Pfefferbaum, North, 2020).

2.6. Protective factors

The full potential of many scientific disciplines should be harnessed to mitigate the negative impact of a pandemic. To protect mental health, the principles of a healthy lifestyle are recommended. Sleep hygiene and regulation of daily rhythms with adequate time for rest are of great importance (Robillard et al., 2021). Minimising exposure to negative content of media messages is recommended (Neill et al., 2020). If you have limitations, continue your previous professional, educational or social activities as much as possible, including online activities (Balanzá-Martínez et al., 2020). Ensure an age-appropriate level of physical activity (Amatriain-Fernández et al., 2020) and a balanced diet and, if necessary magnesium supplements, omega-3 fatty acids or B vitamins, which have a positive effect on nervous system function (Villadsen et al., 2021). Do not hesitate to seek professional help if needed, including a psychiatrist and neurologist, and take the pharmacotherapy they recommend. Neurological rehabilitation programmes are increasingly being used as part of the treatment of after covid complications, with elements of psychological techniques such as relaxation training. It is also noted that it is useful to use psychological and psychotherapeutic services and support groups offered by various agencies. Many of these forms of support are free and available online (Arden, 2020).

Conclusions

The SARS-CoV-2 virus infection itself, as well as the COVID -19 pandemic-related restrictions, cause a number of negative mental health consequences. There are a number of ways to address these effects, which can be introduced at different levels, as they are likely to be exacerbated in the long term. When researching the topic, one should also not forget the social prejudices and the dangers of spreading the dangerous views of the so-called vaccination opponents and pandemic deniers–corona sceptics. The impact of the pandemic on the mental state of population must be studied and precisely determined, as this is essential for planning short- and long-term measures in the medical, informational and organisational fields.

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What enables elite athletes to maintain vigour during a pandemic? The importance of personal resources in coping with stress

Co umożliwia elitarnym sportowcom utrzymanie wigoru podczas pandemii? Znaczenie zasobów osobistych w radzeniu sobie ze stresem

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Abstract: Purpose of the study was to establish the relationship between the level of vigour during the first wave of the COVID-19 pandemic and selected personal resources for coping with stress: sense of coherence, hope for success and coping strategies. Participants of research were 57 individual sports players have been preparing for the Olympic Games in Tokyo, including 29 women and 28 men (aged 18 to 39 (M = 26.61, SD = 5.562). Methods: in the study conducted in April 2020, the following questionnaires were used: *Profile of Mood State (POMS), The Hope for Success Questionnaire (HSQ), The Life Orientation Questionnaire (SOC- 29), The Inventory for Measuring Coping with Stress (Mini COPE).* ***Results:*** significant relationships between vigour and two components of the sense of coherence were established: the sense of meaningfulness (r = 0.566; p <0.001) and the sense of manageability (r = 0.478; p <0.001), both dimensions of hope for success: willpower (r = 0.485; p <0.001) and the ability to find solutions (r = 0.272; p = 0.041) and such strategies of coping with stress as: active coping (r = 0.419; p = 0.001), helplessness strategy (r = -0.456; p <0.001). *Conclusions:* Strong relationships between vigour and the components of the sense of coherence confirm its important role in coping with stress by athletes during a pandemic, especially in maintaining a positive mood. Maintaining vigour by the athletes of the elite is fostered by hope for success, understood as a personality disposition. Active stress management strategies can be an effective way to maintain positive effect during the stressful period of a pandemic. Helplessness, in turn, can lower its level.
Keywords: Affective states, Coherence, Coronavirus, XXXII Olympic Games, Well-being

Abstrakt: Celem badania było ustalenie związku między poziomem wigoru podczas pierwszej fali pandemii COVID-19 a wybranymi zasobami osobistymi do radzenia sobie ze stresem: poczuciem koherencji, nadzieją na sukces oraz strategiami radzenia sobie. W badaniu wzięło udział 57 indywidualnych sportowców przygotowujących się do igrzysk olimpijskich w Tokio, w tym 29 kobiet i 28 mężczyzn w wieku od 18 do 39 lat (M = 26,61; SD = 5,562). Metody: w badaniu przeprowadzonym w kwietniu 2020 r. wykorzystano następujące kwestionariusze: *Profil Stanu Nastroju (POMS), Kwestionariusz Nadziei na Sukces (HSQ), Kwestionariusz Orientacji Życiowej (SOC-29), Inwentarz Mierzenia Radzenia Sobie ze Stresem (Mini COPE).* ***Wyniki:*** stwierdzono istotne związki między wigorem a dwoma składowymi poczucia koherencji: poczuciem sensowności (r = 0,566; p < 0,001) oraz poczuciem zaradności (r = 0,478; p < 0,001), obydwoma wymiarami nadziei na sukces: siłą woli (r = 0,485; p < 0,001) i umiejętnością znajdowania rozwiązań (r = 0,272; p = 0,041). Zaobserwowano istotne zależności strategie radzenia sobie ze stresem jak: aktywne radzenie sobie (r = 0,419; p = 0,001) i strategię bezradności (r = -0,456; p <0,001). Silne związki między wigorem a elementami poczucia koherencji potwierdzają jego istotną rolę w radzeniu sobie ze stresem przez sportowców podczas pandemii, zwłaszcza w utrzymaniu pozytywnego nastroju. Utrzymywaniu wigoru przez sportowców z elity sprzyja nadzieja na sukces, rozumiana jako dyspozycja osobowości. Aktywne strategie radzenia sobie ze stresem mogą być skutecznym sposobem na utrzymanie pozytywnego efektu w stresującym okresie pandemii, z kolei bezradność może obniżyć jej poziom.
Słowa kluczowe: Dobrostan, Koherencja, Koronawirus, XXXII Igrzyska Olimpijskie, Stany afektywne

Introduction

In times of a pandemic, athletes also experience stress and depression (Rodrigues, Cesar, 2020; Şenışık, Denerel, Köyağasıoğlu, Tunç, 2020). However, an important indicator of affective well-being is not only the level of negative mood states such as depression or anxiety, but also the intensity of positive states, especially vigour (Shirom, 2011).

1. Vigour – desired affective state

Vigour as an important element of mood relates to an individual's feelings about physical strength, emotional energy and cognitive recovery. It represents an affect of moderate intensity, which is an important energy resource (Shirom, 2011). Standing on the opposite extreme to exhaustion, vigour means having a high level of energy (Schaufeli, Salanova, González-Romá, Bakker, 2002). According to Shirom (2011), the fact that it is related to the drive to act and is related to motivational processes speaks in favour of choosing vigour as an indicator of optimal functioning. Meta-analyzes and numerous studies have shown that vigour is associated with physical activity. Even one-time physical exercise increases the level of subjective vigour or energy arousal (Reed, Ones, 2006). Also systematically undertaken physical activity contributes to an increase in the level of vigour. Limitation of physical activity can cause a decrease in vigour (Eberth, Smith, 2010). On the other hand, vigour is one of the factors determining sports achievements in competitive sports (Coté, Horton, MacDonald, Wilkes, 2009). Professional athletes usually show considerable vigour, as well as smaller intensity of depression, anxiety and fatigue than those non-athletes sports (Puffer, McShane, 1992). Beginning with the classic "profile of the Morgan Iceberg" (1987), positive moods are associated with good performance, while negative moods are usually associated with weaker sport performance. Athletes often attribute unsatisfactory scores to their inability to "get in the right mood" (Lane, Terry, 2017). In the light of the above reports, it seems advisable to focus on vigour as an indicator of well-being and a factor determining the effectiveness of an athlete's performance.

2. Coherence as a resource

During a pandemic, a reduction in vigour can be expected, not only because of severe stress, but also because of reduced physical activity. It is therefore important to determine what resources of the individual used in the process of coping with stress allow to maintain vigour despite the negative experiences of elite athletes during the COVID-19 pandemic. We assume that vigour will depend on how effectively athletes deal with the stress of a pandemic. According to the salutogenic concept of Antonovsky (1987), the health costs of stress depend not only on stressors, but also on the so-called generalized immune resources and sense of coherence. Generalized immune resources are properties of an individual or collective subject that influence how stressors are assessed, how high the tension is and how the individual copes with stress (Pasikowski, 2000). One of such resources may be hope for success, understood as the belief in having competences enabling success (Snyder, Sympson, Michael, Cheavens, 2000). Hope positively correlates with positive emotions, negatively with negative ones (Łaguna, Trzebiński, Zięba, 2005) and buffers the impact of stress on mental well-being (Bernardo, Yeung, Resurreccion, Resurreccion, Khan, 2018).

The sense of coherence is understood as the global orientation of a person, expressing the degree of belief of an individual that: 1) the stimuli coming from the internal and external environment are structured, predictable and explainable; 2) resources are available to meet the demands of these stimuli; 3) these requirements are a challenge worth the effort and commitment (Antonovsky, 1987). The sense of coherence has been shown to be related to various measures of physical health, positive mood (Sęk, Pasikowski, 2001) and anxiety, depression, negative emotions, stress intolerance, aggression and auto-aggression (Eriksson, Lindström, 2005). According to Mayer and Thiel, the sense of coherence should be treated as the basic factor determining not only physical and mental health, but also high sports performance in elite athletes. The sense of coherence is understood as the global orientation of a person, expressing the degree of belief of an individual that: 1) the stimuli coming from the internal and external environment are structured, predictable and explainable; 2) resources are available to meet the demands of these stimuli; 3) these requirements are a challenge worth the effort and commitment (Antonovsky, 1987). The sense of coherence has been shown to

be related to various measures of physical health (Hakanen, Feldt, Leskinen, 2007), positive mood (Sęk, Pasikowski, 2001) and anxiety, depression, negative emotions, stress intolerance, aggression and auto-aggression (Eriksson, Lindström, 2007; Hakanenet al., 2007). According to Mayer and Thiel (2014) the sense of coherence should be treated as the basic factor determining not only physical and mental health, but also high sports performance in elite athletes. The aim of the study was to establish the relationship between the level of vigour during the first wave of the COVID-19 pandemic and selected personal resources in coping with stress: a sense of coherence, hope for success and coping strategies among Polish elite athletes practicing individual disciplines. The focus on vigour results from the postulates of positive psychology (Seligman, Steen, Park, Peterson, 2005) and the willingness to determine what factors determine one of the dimensions of mental well-being of elite athletes during the pandemic.

3. Research Methods

3.1. Participants

The study group consisted of 57 Polish potential Olympians aged between 18 and 39 (M=26.61, SD=5.562), including 29 women (52.7%) and 28 men (49.1%), practicing individual sports disciplines such as athletics, rowing, fencing, shooting, sport climbing, badminton, swimming, modern pentathlon, taekwondo, sailing, wrestling, canoeing, judo, cycling, equestrianism and weightlifting. Their professional experience ranged from 4 to 25 years (M=14.59, SD=5.981). The athletes were members of the national team, they won medals in the national championships, European and World Championships, and medals in the Olympic Games. Each of the subjects was included in the preparation for the Olympic Games.

Athletes were invited by national sports associations. The University Senate Ethics Committee of the Józef Pilsudski University of Physical Education in Warsaw agreed to conduct the study.

3.2. Psychological tools

The appropriate scale of *The POMS (Profile of Mood State*) Mood Profile Questionnaire by McNair, Lorr and Droppleman (1971), in the Polish version, developed by Dudek and Koniarek (1987) was used to measure vigour. Vigour subscale of Profile of Mood State (POMS) includes 8 items concerning how subjects felt over the previous week with five-point ordinal scale (0–*not at all*, 1–*a little*, 2–*quite a bit*, 3–*moderately*, and 4–*extremely*) (McNair et al., 1992).The theoretical variability of the vigour scale is 0-32.

The sense of coherence was measured using the *Life Orientation Questionnaire* (*SOC- 29*) in the Polish adaptation of Koniarek, Dudek and Makowska (1993). It allows to estimate the general level of the sense of coherence, as well as the levels of its three components, i.e. the comprehensibility, manageability and meaningfulness. It consists of 29 statements.

The Hope for Success Questionnaire (HSQ) by Snyder, Irving and Anderson (1991) in the Polish adaptation of Łaguna, Zięba and Trzebiński consists of 12 statements. The result is the sum of points, which determines the overall level of hope for success. Within its scale, measurement of two components can be performed: Pathway (ability to find solutions), Agency (willpower) (2005).

The Inventory for *Measuring Coping with Stress (Mini COPE* developed by C.S. Carver (1997) is a self-report tool, used to measure coping dispositions, i.e., to assess typical responses and feelings in situations of intense stress. The Polish version of the Mini-COPE (Juczyński, Ogińska-Bulik, 2009) consists of 28 statements. As a result of the factor analysis, 7 factors were distinguished: 1. active coping (which consists of active coping, planning and positive reframing), 2. helplessness (using psychoactive substances, ceasing activity and self-blame), 3. seeking support (seeking emotional and instrumental support), 4. avoidance behaviours (self-distraction, denial, discharge). The other factors correspond to the strategies 5. turning to religion, 6. acceptance and 7. sense of humor.

All the questionnaires used are characterized by satisfactory psychometric properties.

3.3. Procedure

The survey was conducted electronically. Initial information concerned the purpose of the analyzes, the participant's consent to a psychological examination. Informed consent to participate in the study was also concluded. The invited players were of legal age. The study was supported by the Senate Ethics Committee. Informed consent started participation in the study. Only after completing the form, the competitor could fill in the appropriate questionnaires.

4. Results

4.1. Statistical analyses

In the first step, the basic descriptive statistics of the investigated quantitative variables were calculated along with the Kolmogorov-Smirnow tests, checking the normality of the distributions of the investigated quantitative variables. In the case of the scales of the sense of comprehensibility and resourcefulness, the distributions similar to the normal distribution were noted, in the case of all other studied variables, the distributions different from the Gaussian distribution were noted. In such a situation, additional verification of the skewness of the distributions of these variables is recommended. If it is in the range of +/- 2, it can be assumed that the distribution of the studied variable is not significantly asymmetric to the mean (George, Mallery, 2019). Such skewness values were noted for all tested variables. Therefore, it was decided that statistical analyzes would be performed using parametric tests, the r-Pearson correlation coefficients were calculated and a regression analysis was performed using the stepwise method.

4.2. Differences between men and women

Table 1 presents the analyzes of the studied variables. Searching for factors related to the level of vigour was performed comparing the results depending on gender using the one-dimensional analysis of variance. There were no statistically significant differences between women (M = 19.34, SD= 6.08) and men (M = 19.64, SD= 6.30); F (1.55) = 0.033; p = 0.857, therefore, further analyzes were conducted for both sexes together. It was also found that the level of vigour did not significantly correlate with age (r = 0.146; p = 0.283) and sports experience (r = 0.152; p = 0.261).

Table 1. Descriptive statistics of the researched quantitative variables

Variables	M	SD
Vigour	19,49	6,14
Pathway (ability to find solutions)	26,84	3,46
Agency (willpower)	26,07	4,04
Hope for success	52,91	6,79
Comprehensibility	46,33	6,87
Manageability	49,14	7,12
Meaningfulness	44,44	7,87
Active coping	2,28	0,55
Helplessness	0,26	0,42
Seeking instrumental support	1,61	0,84
Cessation of action	0,83	0,46
Turning to religion	0,62	0,77
Acceptance	2,50	0,60
Sense of humor	1,16	0,66

4.3. Vigour correlates

In order to establish the relationships between vigour and psychological variables of coherence and hope for success, the Pearson r-correlation coefficients were calculated.

The vigour level was the higher the stronger the sense of coherence in its two components: meaningfulness (r = 0.566; p <0.001) and manageability (r = 0.478; p <0.001). The relationship with manageability reached the trend level (r = 0.256; p = 0.055). The high level of vigour was accompanied by large agency (willpower) (r = 0.485; p <0.001) and pathway (ability to find solutions) (r = 0.272; p = 0.041). Among the strategies of coping with stress, a significant positive correlation was noted for active coping (r = 0.419; p = 0.001), in the case of turning to religion it reached the level of tendency (r = 0.242; p = 0.069). A significant negative cor-

relation linked vigour with helplessness (r = -0.456; p <0.001). Statistically significant relationships are presented in Figure 1.

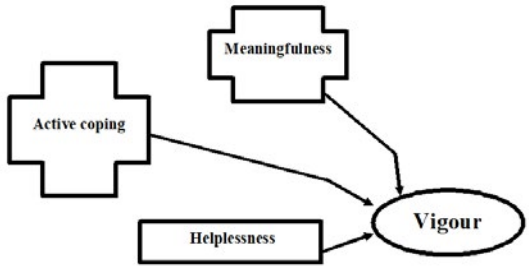

Figure 1. Positive (the shape of pluses) and negative (the shape of minus) significant relationships between the studied variables and vigour

4.4. Vigour's predictors

In the next step, it was decided to check which of the variables correlated with vigour.

The sense of meaningfulness was clearly the strongest predictor. In the first step of the regression analysis, it explained the variability of the vigour level in less than 27% (corrected R2 = 0.307; F (1.55) = 25.86; p <0.001). In the second step, the helplessness strategy was introduced into the equation–the only negative predictor. Adjusted R2 increased significantly to 0.384; F (2.54) = 18.44; p <0.001; ΔR2 = 0.086; F changes (1.54) = 7.82; p = 0.007). Active coping was the third vigour predictor. Its introduction resulted in a significant increase in R2 to 0.445; (ΔR2 = 0.069; F change (1.53) = 6.98; p = 0.011). The level of meaningfulness, helplessness strategies and active coping were introduced to the model in three steps; F (3, 53) = 15.98; p <0.001. Together, these variables explained almost 45% of the variability in the level of vigour of the respondents.

Table 2. Variables explaining the level of vigour of the athletes

Variable	B	SE	Beta	t	p
(Constant)	-0,191	4,208	–	-0,045	0,964
Meaningfulness	0,313	0,084	0,402	3,726	<0,001
Helplessness	-4,255	1,530	-0,292	-2,781	0,007
Active coping	3,016	1,142	0,273	2,642	0,011

A high level of vigour should be required in athletes with a strong sense of meaningfulness, who often use an active coping strategy and rarely use a helplessness strategy. The results of the last step of the regression analysis are described in Table 2.

Discussion

A vigorous person is characterized by an energetic attitude to the world, heuristic ways of solving problems and efficient use of energy (Schaufeli et al., 2002). Vigour is a positive state of mood and, according to Shirom (2011), it is an important indicator of optimal psychological functioning of people undertaking physical effort, and thus also athletes. In the face of severe stress and the forced limitation of physical activity caused by the COVID-19 pandemic, maintaining an optimal level of vigour is a challenge not only for athletes themselves, but also for people who provide them with psychological support.

The study established significant relationships between the level of vigour in the first wave of the COVID-19 pandemic and selected psychological properties of elite athletes, which, according to the salutogenic concept of Antonovsky (1987) and the results of previous studies, may determine the health costs of the stress relationship in terms of mental well-being. The importance of the sense of coherence, the key construct of this concept, was confirmed. The strongest positive correlate and predictor of vigour was the sense of meaningfulness, which, according to the author of the salutogenic concept, plays a special role in shaping the sense of coherence (Antonovsky, 1997). It is a belief that it is worth engaging in situations that constitute challenges related to the sense of meaning and value of one's own life.

During a pandemic, maintaining fitness is an important challenge for athletes. Research by Pillay and the team (2020) shows that most athletes during the pandemic trained on their own every day, usually for 30-60 minutes with moderate intensity. However, a significant proportion of the respondents felt depressed and needed additional motivation to maintain physical activity, preferring sedentary behaviour in their free time.

A correlate, but not a predictor of vigour, was also manageability, i.e. the belief of an individual that he has means or resources, both personal and social, that allow him to actively influence a difficult situation (Antonovsky, 1997). Previous research results indicate that a strong sense of coherence can reduce negative stress responses and increase vigour (Urakawa et al., 2012).

The lesser importance of manageability in maintaining vigour during a pandemic is also confirmed by the fact that the dimensions of hope for success did not allow predicting the level of this positive mood. The belief in strong will was associated with vigour to a moderate degree, while the belief in the ability to find solutions was weakly (but significantly) related. However, neither of the two components of hope for success was a predictor of the level of vigour. Of course, hope for success is not the same as the sense of manageability, but it has a similar regulatory significance and is the closest to this component of the sense of coherence.

Active coping, which consists of taking actions to improve the situation, planning what to do, and seeing the situation in a more positive light, turned out to be a positive predictor of vigour. Similar dependencies were found in the study of people in the work environment (Kaiseler et al., 2014). A positive attitude to stress determined more coping efforts. A positive attitude was related to vigour and more effective performance of tasks (Casper et al., 2017).

Problem-focused strategies are believed to be adaptive in situations where active coping is effective. Then they reduce the perceived stress. In the situation of sports rivalry, athletes are more likely to use task strategies (Litwic-Kamińska, Izdebski, 2016). Research results confirm that problem-focused strategies better serve the level of athletic performance than strategies focused on emotions or avoidance (Nicholls et al., 2012). Problem-focused coping, including active coping, was associated with positive affect and a higher self-esteem of athletic performance (Ntoumanis, Biddle, 2000). Positive emotions and positive moods, including vigour, can be treated as effects of effective coping (Louw, 2007).

The negative predictor of vigour was the strategy of helplessness (criticizing and blaming oneself, giving up efforts to achieve goals and using psychoactive substances to alleviate unpleasant emotions). The circumstances of a pandemic may create conditions for the use of ineffective, passive coping strategies leading to lower vigour (Louw, 2007).

It is also possible that a person experiencing a depressed mood, including a decline in vigour, withdraws from acting naturally. On the other hand, withdrawing from an activity and not trying to change the situation may further depress mood. And finally, the relationship between cessation of action and vigour may result from the fact that both variables are associated with depression. The symptom of depression is both a decrease in psychomotor drive and the level of vital energy (vigour), as well as a sense of helplessness, inability to plan and implement actions and a tendency to blame oneself (Gurvich et al., 2020).

The vigour state is mainly determined by the sense of meaningfulness. Individuals with a generally stronger sense of coherence and hope for success, who are considered relatively constant personality variables, show higher levels of vigour. Acceptance as both a positive and passive coping strategy turned out to be a positive predictor of vigour. This in conjunction with the positive relationship of vigour with coherence and hope for success, indicates that there is no need for increased stimulation to achieve a high level of vigour. Perhaps the maturity of the individual and its better understanding of the experienced experiences (in our study the sense of meaningfulness, acceptance) lead to mechanisms that trigger additional energy potential. In turn, helplessness (as a passive and negative coping strategy) reduces vigour.

Some mistakes were not avoided in the article. The analyses were conducted for both genders together, and the study included a small group of elite athletes. The observed regularities can only be applied to this group of players. Our respondents constitute a unique group and it is difficult to identify such very active and physically fit people with the entire population. Vigour was measured once. Such tests should be carried out repeatedly, preferably with individual observation of each athlete, to better assess the optimal level of vigour. Based on the obtained results, it can be concluded that during a pandemic, the level of vigour of elite athletes is associated with constant personality variables that determine the way of coping with pandemic stress and the coping strategies used.

Determining whether this regularity is universal or applies only to a pandemic situation requires further research under neutral conditions, without burdening the catastrophe with strong stressors.

There are doubts about the vigour measurement tool. Profile of Mood it has long been used, but is still often used to measure the affective states of athletes (Andrade et al., 2013; De Andres- Reran et al., 2019).

Conclusions

Vigour is a desirable affective state, treated as an indicator of mental well-being that favors higher athletic results. Its importance has already been analyzed by other researchers (Curran et al., 2015) who have suggested that its decrease may lead to a decrease in sports performance due to a decrease in motivation, concentration and other mental abilities related to sports (Lane et al., 2010).

Maintaining mental well-being, including the optimal level of vigour is especially important during the COVID-19 pandemic, when mood depression is usually noted. It is also a challenge for people who exceed the limits of their own abilities on a daily basis–players of the sports elite. These athletes are engaged in intense physical activity on a daily basis. During the pandemic they were forced to reduce it which could further worsen the mood (Russell et al., 2003; Schutzer, Graves, 2004).

The results of the study indicate that maintaining a high level of vigour is supported by a strong sense of coherence and frequent use of active coping strategies, and rare reliance on strategies that indicate helplessness. Further questions arise here: what level of vigour is optimal for the surveyed players and whether there is a critical level beyond which the effectiveness of performing sports tasks decreases significantly. These issues require further research.

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Parental attitudes of mothers raising sons with Crohn's disease

Postawy rodzicielskie matek wychowujących synów z chorobą Leśniowskiego-Crohna[1]

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Abstract: The article describes the issues and presents research on parental attitudes of mothers towards somatically ill children. The analysis of the issue includes the mother's point of view as well as the child's point of view. The conducted research shows a relationship between the assessment of parental attitudes of mothers and their assessment of their sons suffering from Crohn's somatic disease. They point to the differences in the perception of mothers' parental attitudes from these two perspectives. They also show the relationship between the child's age and the mother's attitude. The study included 30 mothers and their 30 teenage sons suffering from Crohn's disease.
Keywords: Crohn's disease, motherhood towards a sick child, parental attitudes of mothers

Abstrakt: Artykuł opisuje problematykę i przedstawia badania dotyczące postaw rodzicielskich matek wobec dzieci chorych somatycznie. Analiza zagadnienia obejmuje perspektywę matki, a także punkt widzenia dziecka. Przeprowadzone badania ukazują związek między oceną postaw rodzicielskich matek a ich oceną według synów, cierpiących na chorobę somatyczną Leśniowskiego-Crohna. Wskazują na różnice w postrzeganiu postaw rodzicielskich matek z tych dwóch perspektyw. Pokazują również zależności między wiekiem dziecka a postawą matki. Badaniami objęto 30 matek i ich 30 borykających się z chorobą Leśniowskiego-Crohna nastoletnich synów.
Słowa kluczowe: choroba Leśniowskiego-Crohna, macierzyństwo wobec chorego dziecka, postawy rodzicielskie matek

Introduction

The fundamental condition for the proper development of a child and their sense of happiness is the experience of love (Błasiak, 2012). One of the first social relationships of a human being is their relationship with their mother. Motherhood is based on unconditional love, full of safety and acceptance, and is related to biological, psychological and social dimensions. The secure attachment style impacts the ability to build good interpersonal relationships as well as the overall quality of life (Matysiak-Błaszczyk, Jankowiak, 2017). Taking care of the child, the mother passes on them multigenerational values and patterns of behaviour. Maternal love becomes the source of everything that determines the essence of humanity (Błasiak, 2012).

The diagnosis of a chronic illness in children is a shocking situation for their parents, which generates a lot of negative emotional states, such as a decline in self-esteem, depressive episodes, blaming oneself for the illness, despair, as well as hostility towards the external environment, among others (Maciarz, 2006). The child's illness gives rise to a psychological crisis in the parent, which results in a deterioration of the relationship between the child's caregivers. More often

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Werysz.pdf

than mothers, fathers deal with this difficult situation by using defence mechanisms such as escaping problems, negation, blaming the mother for the illness, among others (ibidem). Mothers, who are more emotionally attached to their children, usually accept them despite their illness and are actively involved in the treatment. Every mother experiences her child's illness differently and the way she fulfils her parental role depends on the support she gets from the loved ones, mainly the child's father (ibidem). The most beneficial conditions for development and maturation of the child are obtained when both the father and the mother are involved (cf. Więcławska, 2017). Psychological predispositions of the person along with strong emotional bonds between the mother and the father and between the parents and the child become extremely important for the proper engagement in the care of the ill child. Due to the child's illness, the parental role becomes even more difficult for the parent to fulfil (Żelichowska, Zawadzka, 2019). They have to face the demands of being a caregiver and additionally struggle with many challenges and difficulties (Kręcisz-Plis, 2020). These difficulties often lead to a change in the existing ways of operating and loss of control, which results in a situation of chaos and disorganisation (Szymanowska, 2014). The adults have to reevaluate their earlier life and are still expected to properly fulfil their parental role. The mother of an ill child fulfils her caregiving role while remaining in a crisis situation that requires constant changes due to frequent new, non-normative events and life circumstances (ibidem). Even after having adapted to this crisis situation, parents can experience episodes of despair, fear for the child's future or the feeling of exhaustion and resignation (Żelichowska, Zawadzka, 2019).

The present study focuses on parental attitudes in mothers of children with somatic illness. The analysis comprises the perspective of mothers as well as the point of view of their children. The aim of the studies presented in the article was to verify whether there is a relationship between the assessment of parental attitudes made by the mothers and the assessment thereof made by their sons who suffer from the somatic Crohn's disease. The study involved 30 mothers and their 30 sons aged 13-17, in the age of puberty, and struggling with Crohn's disease (Piotrowski, Ziółkowska, Wojciechowska, 2014), 60 people in total.

1. Crohn's Disease (CD)

A chronic disease belongs to pathologies characterised by long duration and slow progression (WHO, 2009, after: Ziarko, 2014). Its cause is considered hard to identify, while its symptoms are described as ones that can last endlessly (Falvo, 2005, after: Ziarko, 2014). People who suffer from chronic diseases require, on the one hand, professional medical help and on the other – other specialised interventions (for example psychological assistance) which help them adapt to the new, often very difficult life situation. Psychological assistance should be provided mainly in periods of remission and be concerned also with the patient's life outside hospital (Ziarko, 2014).

Władysława Pilecka (2007, p. 16) defines a chronic disease based on the fact of falling ill and describes it as a 'potential stressor which transform the existent situation of a child and their family into a different one that involves given requirements and limitations they themselves and their parents must face'. This disorder can therefore bear an influence on the functioning of an entire family system, because introduction of a given change impacts all its members. Chronic diseases can start in every stage of life but in the case of children they are much worse to tolerate. According to Małgorzata Skórczyńska (2007), physical plays or plays with peers often become impossible or limited due to the chronic illness. Additionally, sometimes the child with a chronic illness is unable to participate in school activities and spends a lot of time with their adult caregivers and medical staff, which may result in them feeling isolated and different from their peers (ibidem).

Crohn's disease (CD) is classified as a chronic and still incurable illness. It is characterised by periods of exacerbation and partial or complete remission. It affects mainly young people. The peak incidence occurs between the ages of 15 and 35, but the first symptoms of the disease can appear at any age. The disease constitutes a huge psychological, physical and social burden due to its duration, lack of cure and the possible risk of different complications (Chrobak-Bień, Gawor, Paplaczyk, Małecka-Panas, Gąsiorowska, 2017).

Typical symptoms of Crohn's disease are stomach pains, weight loss and chronic diarrhea. Children often experience non-specific symptoms, such as fatigue, nausea, recurring fevers, joint pains. There is also an increased risk of extraintestinal symptoms: delayed growth and weight gain, anemia and delayed puberty, which contribute to the dysfunction of the entire body (Albrecht, 2016).

It is a difficult experience for a child. They are dependent on their relatives' care, their development and functioning are different from the adopted standards and bring many unknown and unforeseeable facts (Zasępa, Kuprowska-Stępień, 2016). This experience is also difficult for the family, especially the parents, who adjust their daily responsibilities to the child's illness. The disability directly and indirectly affects many areas of the youth's life and determines its quality. Teenagers, who are in the period of development incomparable to the others (cf. Kuty-Pachecka, Stefańska, 2015), can perceive the chronic illness as an impediment that is especially burdensome, shameful and impossible to accept (Cepuch, Gniadek, Śręba, 2015).

The illness is characterised by alternating periods of exacerbation and remission influenced by complex pathogenesis, where inflammation plays the crucial role (Petagna, Antonelli, Ganini et al., 2020). The duration of the remission phase is different in each patient and depends on the treatment method and the diet adopted.

Treatment options for Crohn's disease depend on the localisation of alterations, severity of the disease as well as occurrence of complications, but the treatment may vary depending on the reaction to therapy and tolerance of different kinds of treatment by the patient. The treatment does not involve only medicines – those used on a daily basis and during exacerbations – but also an appropriate lifestyle, diet and surgical procedures performed on the patient (Wiercińska, 2022). The aim of every form of treatment is to improve the quality of the patient's life as well as induce and maintain the remission for as long as possible.

Thanks to the right treatment, children and teenagers can develop in a way that is appropriate for their age, attend school and engage in activities with their peers. However, the illness generates different kinds of limitations, especially when a correct diagnosis has not yet been made. The children may not be able to attend school or focus on learning. Their contacts with peers also become limited (Skórczyńska, 2007).

2. Parents' attitudes towards children with chronic diseases

Motherhood is a state which is considered obvious and natural and is subject to intense evaluation. The nature of this evaluation is mainly positive (Bartkowiak, 2015). Motherhood is on one hand a beautiful period in the woman's life, while on the other, it can be a period full of experiences of different kind. Women often learn about themselves and how much they can bear and offer to their child. This is because sometimes, due to different reasons, motherhood is not a period of joy. One of them can be the illness of a child that alters the life of the entire family, has an impact on life's priorities and often results in rejecting or even hurting the child (Glaser, 2011).

However, the most common situation is when mothers stay in hospitals with their children and their presence prevents negative effects of the children's hospitalisation. The mother is an invaluable source of knowledge about her child's habits and becomes a source of support by helping with hygienic care and organising child's free time. Her stable presence satisfies one of the most important needs, i.e. the need for safety, and at the same time has a positive effect on the emotional state of the young patient. The presence of mother near the child stimulates their development (Bogusz, Mazurek, Kopański et al., 2020).

Every illness that affects a child is a strong emotional experience for parents. It surely becomes a traumatic experience for both the child and their caregivers. It can have a detrimental effect on the functioning of the entire family. It can contribute to structural changes within a family related to the division of roles and duties, but also constitute a source of conflict between parents, and in extreme situations lead to destruction of a family (Stawecka, 2016). On the contrary, according to Leokadia Szymczyk (2016), the difficult situation caused by the child's illness can stimulate cohesion of a family and increase cooperation and communication

skills of its members. However, there is no doubt that a child's illness is related to the experience of acute stress in parents. This can lead to maladaptive or irrational behaviours (Maciarz, 1998). Sometimes, parents who are seemingly adjusted to the child's illness intentionally, albeit irrationally, do not fulfil doctors' recommendations. They ignore them, for example by changing doses of the medicines taken by the child, because they think they are able to deal with the child's illness on their own. These instances of irrational behaviour of the parents who act 'in good faith' can harm the children and worsen their health (ibidem).

The child's illness may lead to serious conflicts within a family, as parents may blame each other for it. The disease may therefore become the factor that provokes improper behaviours in parents, which may transform into active rejection and passive neglect of the child (Iwaniec, Szmagalski, 2002).

Referring to the active rejection, certain specific characteristics can be indicated:

- anger and aggression towards a child who, for example, cries in pain;
- hostility towards a child – sometimes parents who cannot deal with stress and fear for the ill child blame them for being ill;
- physical distance – the illness becomes a barrier for physical contact with a child, closeness between a child and their parents is disturbed;
- excessive criticism towards a child, lack of appreciation for their achievements – parents often have high expectations towards the ill child, who is unable to meet them, which provokes negative emotions in parents;
- lack of positive reinforcement towards a child who needs acceptance and motivation to action;
- excessive stringency towards a child – limiting a child and excessive control may lead to their lack of independence;
- the ill child as an object of caregiving activities – forgetting that a child needs to play and be included in different activities to develop properly;
- Isolating a child from family and peers, which may be the consequence of parents' fear for a child's health, concern for social reactions or their overprotectiveness (Glaser, 2011).

Passive neglect – both physical and emotional – takes place when a child is not properly taken care of by their parents – parents do not care about:

- proper clothing of the child;
- hygienic care;
- ensuring fulfilment of basic needs such as food or proper amount of sleep;
- child's safety, they are left on their own;
- emotional needs of the child, they are not interested in their problems;
- proper development of a child (Pilecka, 2002).

Hurting a child with a chronic illness can also result from a certain lack of knowledge, for example in a situation where parents do not have sufficient knowledge about their child's illness or are unaware of the limitations the illness can cause and demand to much from the child (Iwaniec, Szmagalski, 2002). Too high demands set by the parents for their ill child can induce or increase stress or frustration, because a child with limitations experiences many difficulties meeting these demands (Maciarz, 1998).

A significant threat for appropriate relationships between parents and ill children is the crisis that appears after the period of getting used to the illness. This long period when parents prepare for the new lifestyle – the life with the child's illness – is so exhausting for them that has become known in the literature as the 'burnout' syndrome (ibidem). It is the effect of the excessive and long-term burden of taking care of the ill child, control over their treatment and responsibility for their education. The state of burnout can be recognised by low motivation of parents to fight for their child. They are discouraged, but at the same time love their child and fear for their health. In this situation, parents often distance themselves emotionally from their child and hence may be less engaged in the treatment and education of the child. All these factors can result in the attitude of excessive tolerance in parents, which may lead to disturbances in the overall development of the child (ibidem).

The attitude of excessive leniency towards the ill child may result in the child not learning the desired social and moral norms. They will also show deficiencies in control of their behaviour or emotional

reactions – their behaviour may be inadequate to the situation, for example laughter in a situation that is dramatic or requires a serious approach. Additionally, the process of a child becoming independent may be disturbed as well as their sense of safety (Iwaniec, Szmagalski, 2002).

A chronic disease is a factor that poses threat to a family and its proper functioning. Parents tend to strongly focus on the fight against the disease and forget about the psychological needs of the child that have to be met. This is why in a situation like this, it is crucial for the family to obtain support from the outside, both from other members of the family and specialists. This will allow them to avoid threats resulting from the illness (such as improper behaviours and parental attitudes towards a child), which often lead to hurt and emotional deficits in a family. It is vital to obtain support of the specialists, which helps parents avoid threats and allows the process of adjustment to the child's illness to result in the development of effective methods of dealing with this very difficult situation. It allows them to adopt an active and creative attitude towards the child's illness (Stawecka, 2016).

Among the attitudes presented by the parents of ill children there is also overprotection. It is characterised by the fear for the child's health and safety and, as a result, limiting of their activity, participation in different social situations and engagement in relationships with their peers. Additionally, the caregivers ensure excessive comfort satisfying all of the child's needs (Janion, 2007).

Some parents may adopt the attitude of avoidance or rejection towards their ill children. It is characterised by a weak emotional bond between the caregiver and the child. The adult is sometimes indifferent towards the psychological needs of the child and focuses mainly on satisfying their material needs, for example through expensive gifts. The interactions between the adult and the child may seen correct, but in reality they are a source of distress and lack of satisfaction for both of them. The parent feels disappointed with the fact that their child is ill and their emotional frigidity and distance are sometimes felt by the child who feels less accepted as a result. The above behaviours translate into emotional and social development disorders in the youth (ibidem). They lead to emotional frigidity in children, their inability to build stable relationships and distrust towards other people (Juroszek, 2017).

Ewa Janion (2007) also points out that parents of ill children rarely present an overly demanding attitude towards them. However, she highlights the fact that most often they present the attitude of overprotection towards their ill children, and are excessively demanding towards their healthy children. The healthy children are burdened with numerous chores, including care of their ill sibling (Glac, 2020). The demands they place on their healthy children often compensate for the lack of demands towards their ill child (Janion, 2007).

There are three main parental attitudes adopted as a response to the child's illness: overprotection, excessive leniency and rejection of the ill child. The last one is mostly present in families with disordered emotional bonds and affected by pathology. The illness rarely becomes a trigger for the rejection of the child by caregivers (Obuchowska, 2005, after: Ziółkowska, 2010).

Overprotection manifests mainly when the child's illness is serious and parents, who develop a symbiotic bond with the child, try to protect them from a potential remission or health deterioration. Overprotection is sometimes a sign of a lack of acceptance for their autonomy and independence. Parents often feel that their child is safe only when they are close to them and their view of the illness is often unrealistic and unfortunately this is the view they often present to their child. Parents' behaviour becomes an impulse for the child to abandon the attempts to deal with their situation. The child backs out of any activities that would improve the quality of their life. They become helpless, have a lower self-esteem and a sense of being different from their peers (Ziółkowska, 2010).

Excessive leniency of parents towards the ill child usually manifests in a lack of any limits set for the child. The adults try to compensate for the child's difficult life situation, which can be unfavourable for the environment, as the child often manipulates people to get what they expect. With time, this parental attitude causes the child's problems with expressing empathy for others and adjusting to the extrafamilial environment and has a negative influence on the development of their healthy

sibling (ibidem). Excessive limiting of the child's freedom may lead to their revolt, aggression and occurrence of emotional disturbances (ibidem). Overprotection and excessive leniency towards the child make it impossible for them to live positive experiences resulting from the overcoming of challenges and therefore defeating their weaknesses (Antoszewska, 2011).

3. Description of the applied methods and the mode of data collection

The study used the Parental Attitudes Scale (Skala Postaw Rodzicielskich – SPR), version for teenagers – 'My Mother' ('Moja Matka') by Mieczysław Plopa and the Parental Attitudes Scale (Skala Postaw Rodzicielskich – SPR- M), version for the mother by Mieczysław Plopa. The study group consisted of 30 mothers aged 31-53 and their 30 sons suffering from Crohn's disease, aged 13-17. The boys involved in the study underwent biologic treatment every two months after having used many different forms of therapy. Some of them were in the remission phase and the therapy gave them a chance to maintain this state, while others sought remission through biologic treatment. Most of the mothers in the study were professionally active. During hospital visits where their sons underwent biologic treatment, the women assisted their children and spent some time (usually a few hours) at a hospital. The study was carried out in paper form in the hospital. The teenagers and their mothers were asked to fill in the questionnaires during treatment.

4. Research Results

4.1. Differences in the assessment of parental attitude of mothers between the children's and the mothers' assessments

The first step was to verify if the assessment of mothers' parental attitudes differs between children and mothers. Student's *t*-test (*t*-Studenta) was used for the dependent samples (Table 1).

The analysis showed statistically significant differences in the attitude of acceptance-rejection, autonomy, protecting, demanding and inconsistency. The children assessed mother's acceptance and provided autonomy higher. They considered the mothers to be more protecting, more demanding and more inconsistent than the women in their self-assessment.

4.2. Relationship between the assessments of mothers' parental attitudes made by mothers and children

The Pearson correlation coefficient (Table 2) was used in order to verify if the mothers' assessments of parental attitudes were related to these attitudes as viewed by the children.

The analysis showed a statistically significant and positive relationship between the autonomy given by the mother in her view and acceptance and autonomy as viewed by the child. It means that the more autonomy the mothers give to their children in their view, the more accepted and autonomous the children feel.

Table 1. Comparison of means of the assessment of the mothers' parental attitude between the assessment of the children and their mothers

	Child (n = 30)		Mother (n = 30)				
	M	SD	M	SD	t	p	Cohen's d
Acceptance-Rejection	59.87	5.47	44.97	2.31	12.49	<0.001	2.28
Autonomy	49.50	9.10	33.33	6.85	11.85	<0.001	2.16
Protecting	57.60	6.72	40.67	5.66	21.70	<0.001	3.96
Demanding	41.70	8.54	30.30	6.53	10.67	<0.001	1.95
Inconsistency	33.47	6.01	20.73	5.74	7.84	<0.001	1.43

Table 2. Relationship between the assessments of the mothers' parental attitudes made by the mothers and the children

		Acceptance-Rejection (child)	Autonomy (child)	Protecting (child)	Demanding (child)	Inconsistency (child)
Acceptance-Rejection (mother)	Pearson's r	-0.29	-0.07	-0.19	0.21	0.02
	relevance	0.114	0.695	0.316	0.256	0.933
Autonomy (mother)	Pearson's r	0.47	0.59	-0.38	-0.46	-0.72
	relevance	0.009	<0.001	0.037	0.010	<0.001
Protecting (mother)	Pearson's r	-0.08	-0.19	0.78	0.17	-0.05
	relevance	0.663	0.316	<0.001	0.364	0.777
Demanding (mother)	Pearson's r	-0.50	-0.65	0.51	0.73	0.56
	relevance	0.005	<0.001	0.004	<0.001	0.001
Inconsistency (mother)	Pearson's r	-0.06	-0.21	0.48	0.26	-0.15
	relevance	0.755	0.269	0.007	0.165	0.441

However, autonomy in the mother's assessment is negatively related to protecting, demanding and inconsistency in the child's assessment. This means that the more autonomy the mothers give to their children in their view, the less protecting, less demanding and more consistent they are according to their children.

Protecting in the view of the mother is positively related to protecting as view by the child.

In turn, demanding as viewed by the mother is negatively related to acceptance and autonomy in children's assessment. It means that the more demanding the mothers are in their assessment, the less accepted and autonomous the children are in their own view. Demanding in the mother's assessment is also positively related to protecting, demanding and inconsistency as viewed by the child. It follows that the more demanding the mothers are, the more demanding, protecting and inconsistent they are in the children's view.

Additionally, lack of mother's consistency is positively related to protecting. It follows that the more inconsistent the mothers are, the more overprotection they provide. All of the above relationships are strong or moderately strong.

Table 3. Relationship between the age of the mother and the child and the parental attitudes of the mothers

		Age of the child	Age of the mother
Acceptance-Rejection (child)	Pearson's *r*	-0.13	-0.01
	relevance	0.493	0.945
Autonomy (child)	Pearson's *r*	-0.18	0.05
	relevance	0.348	0.786
Protecting (child)	Pearson's *r*	-0.02	0.05
	relevance	0.916	0.793
Demanding (child)	Pearson's *r*	0.09	-0.07
	relevance	0.648	0.702
Inconsistency (child)	Pearson's *r*	-0.01	0.07
	relevance	0.948	0.715
Acceptance-Rejection (mother)	Pearson's *r*	0.42	0.19
	relevance	**0.022**	0.323
Autonomy (mother)	Pearson's *r*	-0.15	0.10
	relevance	0.418	0.617
Protecting (mother)	Pearson's *r*	-0.08	-0.17
	relevance	0.666	0.376
Demanding (mother)	Pearson's *r*	0.09	-0.13
	relevance	0.653	0.481
Inconsistency (mother)	Pearson's *r*	-0.33	0.00
	relevance	0.073	0.986

4.3. Relationship between the age of the mother and the child and parental attitudes of the mothers

The last analysis used the Pearson correlation coefficient to verify whether there is a relationship between the age of the mother and the child and parental attitudes of the mothers as viewed by the children and the mothers (Table 3).

The analysis showed only one statistically significant relationship – the one between the mother's attitude of acceptance in her assessment and the child's age. This means that the older the children are, the more accepting the mothers become.

5. Discussion and Conclusions

As the literature shows (Szałowska, Pilarz, Tkaczyk, 2013), little research is done on chronic diseases in children in Poland. A chronic illness experienced by the youngest becomes a significant psychological and medical problem, as it concerns not only the child, but also impacts the functioning of their closest environment, i.e. their family (ibidem). The illness may contribute to a change in parental attitudes of their parents. Most often, two extreme attitudes are observed – the parent excessively concerned and overprotective of the child or the one who rejects them (ibidem).

The tendency towards the given attitude in the parent of an ill child depends also on the nature of the disease. It is sometimes the case that parents manifest different parental attitudes depending on the type of the chronic illness their children suffer from (ibidem). In the research by Maria Kózka, Mieczysław Pereka and Katarzyna Łudzik (2009), the parents of children with a diagnosed heart condition manifested undesirable attitudes – domination, helplessness and focus. In contrast, the research conducted by Dorota Szałowska, Eliza Pilarz and Marcin Tkaczyk (2013), which measured parental attitudes in the parents of children with chronic kidney disease, showed that the prevailing attitude of the mothers of such children is the protective attitude. A research on parental attitudes towards ill children suffering from various chronic diseases was also conducted in the Children's Memorial Health Institute in Warsaw (Stawicka-Wasienko, 2008, after: Szałowska et al., 2013). The attitudes were measured with M. Plopa's tool, just like in the present study. The research showed that the mothers of chronically ill children manifested the attitude of greater autonomy and inconsistency towards their ill children (ibidem).

The own research focused on the relationships between the mothers' subjective assessment of their attitudes towards their somatically ill children and the assessment of these attitudes made by their ill children. The study with the use of Student's *t*-test (*t*-Studenta) revealed statistically significant differences in acceptance-rejection, autonomy, protecting, demanding and inconsistency. The children assessed the mothers' attitudes higher than themselves and considered them more accepting, protecting, demanding, inconsistent and autonomous. These effects are strong.

As a result of the child's illness and care provided to them, the mothers often experience the so-called 'burnout', which may result in inadequate fulfilment of parental duties (Janion, 2005). The growing sense of guilt in the parent becomes an additional problem. It is related to the crisis of the parental identity, because in the parent's view, the child both lives and suffers from the illness because of them (Theofanidis, 2007). The parents of the ill children may concentrate excessively on their offspring by limiting their independence, for example providing them too much assistance in everyday duties (Janion, 2005). This leads to the dependence of the ill children from their caregivers (ibidem). Sometimes, due to fatigue resulting from the hardships of raising a child, parents reject them by manifesting negative behaviours towards them. These behaviours are characterised by: demonstrating negative feelings towards the child, verbal and physical aggression towards the child as well as showing disapproval towards them (ibidem). Sometimes, caregivers of the ill children allow them for whatever they want and are obedient to their demands, which most often results from the need of compensating the child's difficult life (Ziółkowska, 2010).

The analysis of the relationship between the assessments of parental attitudes of mothers made by the mothers themselves and the children suffering from the somatic Cronh's disease showed some correlations. All relationships were found to be strong or moderately strong.

A statistically significant and positive relationship between the autonomy given by the mother in her view and acceptance and autonomy as viewed by the child has been observed. It follows that the more autonomy the mothers give to their children in their own view, the more accepted and autonomous these children feel. Chronically ill children may experience anxiety resulting from the pain and suffering caused by the disease as well as fear of loneliness and loss of the loved ones (Pecyna, 2000). For this reason, they often worry about worsening of their contact with the mother, who becomes their source of the sense of safety and love. The sense of safety is built during childhood and those who did not experience it then feel fear of not being accepted by their immediate environment in puberty. They develop an anxious attitude, and the sense of not being able to satisfy numerous needs and lack of freedom of taking up their own activities result in anger as well as aggressive and auto-aggressive behaviours in such children (ibidem). The family becomes the first group which teaches the child social behaviours and shows them certain rules and norms. The attitude of family members as well as their ways of dealing with stressful situations impact the development and formation of the personality and views in the child (ibidem). This may imply that the ill children surveyed might have experienced the feeling of safety and closeness in the relationship with their mothers, which is why they do not interpret mothers' attitude of autonomy as a manifestation of rejection by their mothers.

The conducted research also showed that the autonomy in the mother's assessment is negatively related to protecting, demanding and inconsistency in the child's assessment. This means that the more autonomy the mothers give to their children in their view, the less protecting, less demanding and more consistent they are according to their children. Protective parents often relieve their child of various duties, are sometimes inconsistent and limit their freedom and independence (Bochniarz, 2010). It follows that if the parent manifests the attitude of autonomy, the child may commensurably feel that the adult does not manifest overprotection and their actions are more consistent.

The statistical analysis also showed that protecting in the view of the mother is positively related to protecting as view by the child. If mothers are overprotective, children often feel this protection. It is therefore not surprising that some somatically ill children recognise that the parents are sometimes overprotective towards them. Children who are overprotected by their parents may feel frustrated, because they crave independence, so they rebel and manifest aggressive behaviours (Antoszewska, 2011). Children notice behaviours of their parents and not always react to them in the same way.

The studies presented in this research also showed that demanding as viewed by the mother is negatively related to acceptance and autonomy in the children's assessment. It means that the more demanding the mothers are in their own assessment, the less accepted and autonomous the children feel in their own view. The literature (Skórczyńska, 2007) reports that as a result of a chronic illness of the child, many parents are unwilling to set them limitations, which is why they overprotect, spoil and isolate them from the world because of the disease. It also happens that parents of chronically ill children manifest a negative demanding attitude, negative rejecting attitude or negative liberal attitude towards their offspring (Mess, Kulpa, Jerczak, Ceglecka, Ornat, Sielski, Pirogowicz, 2014). Among the mothers of children suffering from cancer, as much as 34% display an increased demanding attitude, while in the case of mothers of children with allergic diseases it is 38%. The rejecting attitude is observed in 15% of mothers of children with oncological illnesses, and in the case of children with allergic diseases it is 30%. The negative liberal attitude is presented by as much as 47% of mothers of children suffering from cancer and 49% of mothers of children suffering from allergic diseases (ibidem).

Demanding in the mother's assessment is also positively related to protecting, demanding and inconsistency as viewed by the child. It follows that the more demanding the mothers prove to be, the more demanding, protecting and inconsistent they

are in the child's view. According to the literature (Janion, 2007), mothers of the ill children often present the lenient attitude. The demanding attitude is most often observed towards the healthy siblings (ibidem). The overprotective attitude is often related to the attitude of inconsistency (Bochniarz, 2010).

Lack of mother's consistency is positively related to protecting. It means that the more inconsistent the mothers are, the more overprotection they provide. The attitude of inconsistency is often related to the overprotective attitude (ibidem). On the one hand, the parent gives the child the permission to do everything and on the other, they worry about the life and safety of the child, which is why they try to limit their autonomy (ibidem).

The obtained results showed only one statistically important relationship between the mother's attitude in her assessment and the child's age and concerned the attitude of acceptance. It follows that the older the children were, the more accepting the mothers became towards them. The literature (Szałowska, Pilarz, Tkaczyk, 2013) sometimes argues that the duration of the child's illness does not impact parental attitudes of parents. However, according to Andrzej Twardowski (1991, after: Doroszuk, 2017), in order for the parent to totally accept their child's disability, regardless of the type of disorder, they must go through several phases of emotional reactions caused by the illness. In his view, the process of acceptance can last even up to several years (ibidem). This thesis is consistent with the obtained results, which show that the older the children become, the more accepting the mothers are towards them, because they have managed to work through and come to terms with the fact that their child struggles with an illness. The duration of the child's illness may therefore have an influence on the relatives' adjustment and acceptance of the situation.

Conclusions

A child's illness is a difficult experience for parents and often triggers a crisis of a family life. Reactions of different family members to the news about the child's illness vary, as they depend on the personality of the given person, their sensibility and the level of involvement in the relationship with the patient (ibidem). The child's perception of their illness depends on their developmental age, emotional maturity, parental attitudes and relationships between family members (ibidem). A chronic illness is a stressor that has a negative impact on a person and disturbs the internal and external balance. The social situation of a child, i.e. their relationships with relatives and support provided by them (Maciarz, 2006), has a significant role in the way a child approaches their illness (cf. Trębicka-Postrzygacz, 2017).

The mother of an ill child often feels disappointment resulting from the deprivation of her expectations about the child's health (ibidem). Only a deep analysis of these desires through appreciation of other valuable qualities in the child allows them to come to terms with despair and accept the child as they are. Additionally, the mother who receives support from others, for example her husband, is able to better function in her parental role in relation to the ill child. Familial and extrafamilial bonds are key in alleviating the mother's crisis resulting from her child's disability (ibidem).

A chronic illness has a significant influence on psychological development of a child (Kieniewicz-Górska, 2002). Especially older children can feel different resulting limitations, for example the sense of dependence on relatives and the sense of loss of autonomy (Małkowska-Szkutnik, 2014). The child may also feel anxious about their disease, the more so if they notice their parents' fear and hopelessness due to the illness. The child observes all the behaviours of their caregivers, which is why it is important for the parent to be the source of support, love and acceptance (Kieniewicz-Górska, 2002), which is the basic form of recognition (Senko, 2015). A frequent parental mistake is overprotection of the child. This attitude creates an unnatural atmosphere within the family, as life consists also of difficult experiences and there is no possibility to always protect themselves from them. In turn, excessive leniency towards the ill child disturbs their sense of safety through the lack of limitations (Kieniewicz-Górska, 2002). It is vital that parents of ill children notice that, while struggling against the disease, their children still have the right for self-fulfilment and can make their own

decisions and undertake physical or social activities. Additionally, the child has the right to actively participate in their own treatment, because it develops their sense of responsibility. Therefore, parents should be aware that the way they approach their children's illness influences the way they themselves will deal emotionally with their disease, which constitutes a difficult life experience (ibidem).

The present article have focused on parental attitudes of mothers towards their children with somatic illness. The study conducted as part of the research presents behaviours of mothers of children suffering from the chronic Crohn's disease. The relationship between the mother's view of her parental role and the interpretation of their child was observed. A parent sometimes tries to protect the child from different information, but children are alert and perceptive. They can analyse things that happen in their environment and adequately interpret their parents' emotions. It is therefore important that the parent talks with the child and adjusts the message to the developmental age and abilities of the child (ibidem).

It is worthwhile to broaden the studies presented in the article in the future and include the perspective of healthy siblings of somatically ill children on parental attitudes of mothers. It would certainly be interesting to compare the assessments of mothers and their healthy children concerning parental attitudes of mothers towards the healthy children and compare the obtained results with the assessments of mothers and their somatically ill children concerning parental attitudes of mothers towards the ill children.

The woman who becomes a mother evaluates her parental role within the context of the child's health, the way they develop and their achievements. An illness or developmental disorder in a child is still a reason for an unfavourable assessment (Maciarz, 2006). Many women struggle with difficult situations which do not bode well for the future. Among them, there are mothers of chronically ill, disabled or mentally challenged children. Therefore, a parent of a chronically ill child needs a constant support of their relatives as well as, in many cases, a specialist (Żelichowska, Zawadzka, 2019).

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Cardiovascular disease risk factors in the Lubelskie Voivodeship in 2008-2018 – part I: smoking

Czynniki ryzyka chorób układu krążenia na terenie województwa lubelskiego w latach 2008-2018 – część I: palenie tytoniu

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Abstract: *Background:* Smoking is one of the most common cardiovascular risk factors. It is responsible for 7 million deaths annually in the world. Another 1.2 million people die from passive smoking. Nicotinism causes a chronic inflammatory process, oxidative stress, and it also works by increasing adrenergic arousal. The Cardiovascular Diseases Prevention Program implemented by Primary Healthcare Clinics is designed to assess the risk factors for cardiovascular events in patients. This provides an opportunity for an early response and appropriate action. *Methods:* A retrospective analysis of data obtained by the National Health Fund as part of the implementation of 86,485 preventive cards of the Cardiovascular Diseases Prevention Program in the Lubelskie Voivodeship in 2008-2018 was carried out. The analyzes were performed using the IBM SPSS Statistics for Windows, version 25 program. The chi-square test and the Pearson linear correlation between the quantitative features were used to test the relationship between the two qualitative features. Significant predictors of a risk factor for cardiovascular disease were determined using multivariate logistic regression. The significance level was assumed to be $\alpha = 0.05$ for two-tailed tests. *Results:* Tobacco smoking was declared by 26.5% of all respondents. It was significantly more often declared by men. The percentage of smokers increased with age–the highest was obtained for the group of 55-year-olds. Smoking cigarettes was significantly more often reported by people with primary education (44%), manual workers (33%) and retirees / pensioners (35%). Smoking tobacco escalated the risk of being diagnosed with arterial hypertension by 16.5%. It significantly influenced the risk of diabetes–even by 33.9%. It raised the risk of hypercholesterolaemia by 17.1% compared to never-smokers as well. *Conclusions:* The prevalence of nicotinism is alarmingly high. The effective implementation of the Cardiovascular Diseases Prevention Program provides an opportunity to educate on a large scale and identify patients at high risk of a cardiovascular event. Assessing the risk of death on the SCORE scale can motivate patients to change their lifestyle and make them aware of the impact of smoking on increasing this risk.
Keywords: cardiovascular diseases, risk factors, tobacco smoking

Abstrakt: *Wstęp:* Palenie tytoniu jest jednym z najbardziej rozpowszechnionych czynników ryzyka sercowo-naczyniowego. Na świecie odpowiada za 7 milionów zgonów rocznie. Kolejne 1,2 miliona osób umiera z powodu biernego palenia tytoniu. Nikotynizm wywołuje przewlekły proces zapalny, stres oksydacyjny, a także działa przez wzrost pobudzenia adrenergicznego. Program Profilaktyki Chorób Układu Krążenia realizowany przez Poradnie POZ ma za zadanie ocenę czynników ryzyka incydentów sercowo-naczyniowych u pacjentów. Daje to okazję do odpowiednio wczesnej reakcji i podjęcia stosownych działań. *Metoda:* Przeprowadzono analizę retrospektywną danych pozyskanych przez NFZ w ramach realizacji 86 485 kart profilaktycznych Programu „CHUK" na terenie województwa lubelskiego w latach 2008-2018. Analizy wykonano przy pomocy programu IBM SPSS Statistics for Windows, version 25. Do zbadania związku między dwiema cechami jakościowymi wykorzystano test chi-kwadrat oraz korelację liniową Pearsona między cechami ilościowymi. Istotne predyktory czynnika ryzyka chorób sercowo-naczyniowych określono za pomocą wieloczynnikowej regresji logistycznej. Za poziom istotności przyjęto $\alpha = 0{,}05$ dla testów dwustronnych. *Wyniki:* Palenie tytoniu zadeklarowało 26,5% wszystkich badanych. Istotnie częściej było ono deklarowane przez mężczyzn. Odsetek palących rośnie waz z wiekiem–najwyższy uzyskano dla grupy 55-latków. Palenie papierosów istotnie częściej podawały osoby z wykształceniem podstawowym (44%) oraz pracownicy fizyczni (33%) i emeryci/renciści (35%). Palenie tytoniu o 16,5% zwiększa ryzyko rozpoznania nadciśnienia tętniczego krwi. Istotnie wpływa na ryzyko wystąpienia cukrzycy – nawet o 33,9%. Zwiększa również ryzyko hipercholesterolemii o 17,1% w stosunku do nigdy niepalących. *Wnioski:* Rozpowszechnienie nikotynizmu jest niepokojąco wysokie. Efektywne przeprowadzanie programu CHUK daje sposobność, aby na szeroką skalę prowadzić edukację i identyfikować pacjentów wysoce zagrożonych incydentem sercowo-naczyniowym. Ocena ryzyka zgonu w skali SCORE może zmotywować pacjenta do zmian stylu życia oraz uświadomić wpływ palenia papierosów na zwiększenie tego ryzyka.
Słowa kluczowe: choroby układu krążenia, czynniki ryzyka, palenie tytoniu

Introduction

Smoking is the leading cause of mortality in the world. Globally, it is responsible for 7 million deaths each year, and a further 1.2 million people die from passive smoking (WHO, 2020). The use of tobacco is a known risk factor for many diseases, among them the leading group is lung cancer, but also urinary tract,

oral cavity, pharynx and esophagus, larynx, pancreas and stomach cancers. Nicotinism also contributes to the development of chronic obstructive pulmonary disease and cardiovascular diseases (Chang, Corey, Rostron, Apelberg, 2015).

It has been proven that smoking is a factor in the development of atherosclerosis through its influence on chronic inflammation, oxidative stress and an increase in adrenergic arousal and related disorders of vasoconstriction and vasodilation. It also causes a chronic prothrombotic state (Ross, 1999). Smoking affects the structure of atherosclerotic plaque–it is independently related to the presence of lipid-rich plaque (Kumagai, Amano, Takashima, Waseda, Kurita, Ando, Maeda, Ito, Ishii, Hayashi, Yoshikawa, Suzuki, Tanaka, Matsubara, Murohara, 2015). This type of plaque is described as less stable (Shah, 2015) and therefore is associated with a higher risk of cardiovascular events (Amano, Matsubara, Uetani, Kato, Kato, Yoshida, Harada, Kumagai, Kunimura, Shinbo, Kitagawa, Ishii, Murohara, 2011).

The impact of e-cigarette use on cardiovascular risk remains inconclusive. The first e-cigarettes appeared in 2007, therefore the perspective of their use in epidemiological and research terms is relatively short. It has been proven that nicotine from e-cigarettes is delivered more slowly to the body and reaches lower maximum levels (St Helen, Havel, Dempsey, Jacob, Benowitz, 2016). However, propylene glycol, which is the main component of fluids used in e-cigarettes, may cause irritation of the respiratory tract and probably contributes to the development of chronic inflammatory changes (Benowitz, Burbank, 2016).

The Cardiovascular Diseases Prevention Program implemented by Primary Healthcare Clinics is an activity fulfilling the assumptions of primary and secondary prevention. A prophylactic visit is an opportunity to implement medical education. A family doctor tries to control the risk factors, and on the basis of the screening tests performed, identifies patients in the early stages of the disease and starts treatment. Until July 1, 2022, the CHUK program was addressed to people on the list of Primary Healthcare physicians who were 35, 40, 45, 50, and 55 years of age in a given year, who had not previously been diagnosed with cardiovascular diseases and the had not participated in the program in the last 5 years (Minister Zdrowia, 2019).

Until the end of 2021, the European Society of Cardiology (ESC) recommended the use of SCORE cards for the assessment of cardiovascular risk (Conroy, Pyörälä, Fitzgerald, Sans, Menotti, De Backer, De Bacquer, Ducimetière, Jousilahti, Keil, Njølstad, Oganov, Thomsen, Tunstall-Pedoe, Tverdal, Wedel, Whincup, Wilhelmsen, Graham, SCORE project group, 2003). The Polish Society of Cardiology recommends the use of the SCORE card, which was subject to national recalibration–Pol-SCORE 2015 (Zdrojewski, Jankowski, Bandosz, Bartuś, Chwojnicki, Drygas, Gaciong, Hoffman, Kalarus, Kaźmierczak, Kopeć, Mamcarz, Opolski, Pająk, Piotrowicz, Podolec, Rutkowski, Rynkiewicz, Siwińska, Stępińska, Windak, Wojtyniak, 2015). The SCORE card is used to determine the risk of death from cardiovascular causes within 10 years and includes the assessment of gender, smoking, age, systolic blood pressure and total cholesterol level (Conroy et al, 2003). When a patient achieves a SCORE of <1%, he is classified as low risk, ≥1% and <5% moderate, ≥5% and <10% high, and ≥10% very high risk (Conroy et al, 2003).

1. Aim of the study

The main aim of the study was to assess the prevalence of smoking as a risk factor for cardiovascular diseases in the studied population.

2. Material and methods

A retrospective analysis of the data obtained by the National Health Fund as part of the Cardiovascular Diseases Prevention Program (CHUK) in the Lublin Province in 2008-2018 was carried out. The study population consisted of patients who met the criteria and were included in the Cardiovascular Disease Prevention Program. The sociodemographic variables (age, sex, place of residence, occupation, education), anthropometric variables (height, weight, BMI, arm circumference,

waist circumference), family history (occurrence of a father's heart attack and stroke before the age of 55, for mother age of 60) were assessed. The form helped to obtain data on current and past smoking physical activity over 30 minutes a day during the week, blood pressure, heart rate, laboratory test results (total cholesterol , LDL and HDL cholesterol, triglycerides, fasting glucose). The analyzes were performed using IBM SPSS Statistics for Windows, version 25 (IBM Corp., Armonk, N.Y., USA). The compliance with the normal distribution of a given feature was assessed using the Shapiro-Wilk test. The distribution of qualitative variables was described by giving absolute and relative frequencies. The chi-square test was used to test the relationship between the two qualitative features, and the Pearson linear correlation between the quantitative features. Significant predictors of cardiovascular disease risk factor were determined using multivariate logistic regression. The results of the analysis are presented as the odds ratio (OR) together with the 95% confidence interval (95% CI). The significance level was assumed to be $\alpha = 0.05$ for two-tailed tests.

3. Results

Data on 86,485 preventive visits were analyzed. The study population was dominated by women (61.3%), and men constituted 38.7% of the population. The highest reporting rate was observed in the 35 and 40-year-old age group–they constituted 48.6% of all respondents. 45-year-olds accounted for 19.8% of cases, 50-year-olds–17.8%, and 55-year-olds–14.3%. People with secondary education prevailed (36.7%), while nearly every fourth respondent had higher education. Blue-collar workers accounted for 31.4% of the respondents, white –collar workers–27.5%, farmers–19.7%, and 4.5% was retired/disability pensioner.

Smoking was declared by 26.5% of all respondents. The percentage of smokers in the past was lower (18.9%). Tobacco use was significantly more frequent among men (currently–35.3%, in the past–24%) than among women (currently 21%, in the past–15.8%). The percentage of people smoking cigarettes increased with age. In the group of patients aged 55, almost every third person used tobacco products (Tab. No. 1).

Smoking cigarettes was significantly more often declared by people with a lower level of education (Tab. No. 2) and manual workers and retirees / pensioners (Tab. No. 3).

There was a relationship between smoking and the prevalence of hypertension in the study population observed. Respondents who had never smoked, had a 16.5% lower chance of being diagnosed with hypertension compared to current smokers (95% CI: 0.795- 0.878, p <0.001). Smoking significantly influenced the chance of developing diabetes (glycaemia ≥126 mg / dl). The odds increased by 32.5% for current smokers compared to previous smokers (95% CI: 0.567-0.803, p <0.001) and for never smokers by 33.9% (95% CI: 0.571-0.766, p <0.001). Moreover, significant influence of smoking on the lipid profile was observed. In current smokers, it increased the risk of hypercholesterolaemia (T-Chol concentration ≥190 mg / dl) by 17.1% compared to non-smokers (95% CI: 0.801-0.859, p <0.001). The chances of obtaining an LDL ≥115 mg / dl result was 10.8% higher in current smokers than in non-smokers (95% CI: 0.862-0.923, p <0.001).

4. Discussion

Smoking is a particularly widespread cardiovascular risk factor in low- and middle-income countries. The WHO estimates that 1.3 billion people worldwide use tobacco (WHO, 2020). There is also a high rate of smoking in Europe. According to the Special Survey "Eurobarometer 458" of 2017, on average, every fourth citizen of the European Union used tobacco products (European Commission, 2017). Smoking in the region of Central and Eastern Europe was more frequent than in the entire continent (WHO, 2012), and Poland was ranked eighth among all European Union countries in terms of the frequency of smoking (European Commission, 2017).

Table 1. Smoking by age

Age [years]	35		40		45		50		55	
Smoking	n	%	n	%	n	%	n	%	n	%
currently	5 301	23,8%	4 787	24,2%	4 575	26,8%	4 443	29,5%	3 850	31,1%
In the past	3 772	17,0%	3 369	17,1%	3 175	18,6%	3 189	21,2%	2 881	23,3%
never	13 161	59,2%	11 600	58,7%	9 333	54,6%	7 410	49,3%	5 639	45,6%
p<0,001										

Table 2. Smoking by education

Education	primary		vocational		secondary		higher	
Smoking	n	%	n	%	n	%	n	%
currently	2 825	44,3%	8 826	35,1%	7 807	25,2%	3 033	13,8%
in the past	1 061	16,6%	5 011	19,9%	6 112	19,7%	3 906	17,8%
never	2 487	39,0%	11 293	44,9%	17 095	55,1%	14 994	68,4%
p<0,001								

Tabela 3. Smoking by occupation

Occupation	blue-collar worker		white-collar worker		farmer		retired/pensioner		other	
Smoking	n	%	n	%	n	%	n	%	n	%
currently	8 665	33,0%	3 666	16,0%	4 339	26,3%	1 383	34,8%	4 073	29,2%
in the past	5 585	21,3%	4 177	18,2%	2 640	16,0%	809	20,4%	2 723	19,6%
never	11 976	45,7%	15 123	65,8%	9 503	57,7%	1 777	44,8%	7 129	51,2%
p<0,001										

In the analyzed material, the prevalence of tobacco smoking was 26.5%, with the males predominating (M: 35.3% vs F: 21.0%, p<0,001). The described frequency of smoking is comparable to the available data on the problem of smoking in Poland, which estimates the incidence of smoking at 25.8-31.5% among men and 14.3-20.9% among women (Polakowska, Kaleta, Piotrowski, Topór-Mądry, Puch-Walczak, Niklas, Bielecki, Kozakiewicz, Pająk, Tykarski, Zdrojewski, Drygas, 2017; Zdrojewski, Rutkowski, Bandosz, Gaciong, Solnica, Drygas, Wojtyniak, Stokwiszewski, Pencina, Wołkiewicz, Piwonski, Jędrzejczyk, Grodzicki, Wyrzykowski, 2015; Podolec, Kopeć, 2006; Sulicka, J., Fornal, M., Gryglewska, B., Wizner, B., Grodzicki, 2006; Pinkas, Kaleta, Zgliczyński, Lusawa, Wrześniewska-Wal, Wierzba, Gujski, Jankowski, 2019). The above results refer to the nationwide population, and the data collected in my study only for the Lubelskie Voivodeship, which may affect the differences in the results obtained. In the WOBASZ study, the percentage of regular tobacco smokers for the Lubelskie Voivodeship was similar to the average for the entire country and amounted to 42% for men and 23% for women (Polakowska, Piotrowski, Tykarski, Drygas, Wyrzykowski, Pajak, Kozakiewicz, Rywik, 2005). It has been observed in many countries that many people have tried or given up smoking during the COVID-19 pandemic (Carreras, Lugo, Stival, Amerio, Odone, Pacifici, Gallus, Gorini, 2021; Kayhan Tetik, Gedik Tekinemre, Taş, 2021; Di Renzo, Gualtieri, Pivari, Soldati, Attinà, Cinelli, Leggeri,

Caparello, Barrea, Scerbo, Esposito, De Lorenzo, 2020; Jackson, Garnett, Shahab, Oldham, Brown, 2021). The available literature lacks up-to-date data on the prevalence of smoking in Poland, therefore it seems important to reassess the habits of Poles.

A higher percentage of smoking men was observed in the WOBASZ study (39%) and in the project assessing cardiovascular risk factors of Primary Health Care patients (38.7%) (Polakowska et al., 2021; Sulicka, et al., 2006), and the WOBASZ (23.8%) and NATPOL2011 (27.5%) studies described higher percentage tobacco users among women (Podolec, Kopeć, 2006; Sulicka, et al., 2006). A lower percentage of people smoking tobacco products was obtained in the study conducted in representative Polish population–25.8% for men and 19.2% for women (Pinkas et al., 2019) and document prepared by the National Institute of Public Health–National Institute of Hygiene assessing smoking prevalence on 23,1% in men and 14.9% in women (Poznańska, Rabczenko, Wojtyniak, 2020).

In the author's own material, the age of starting tobacco smoking was calculated on the basis of the difference between the current age and the number of years of smoking, and it was on average 25.48 years. According to various estimates, for Poland it is much less–from 18.4 to 20.13 years (Polakowska et al., 2017). Similarly, in the international GATS study, the age of tobacco initiation recorded in the 16 analyzed countries was even lower–from 16 to 20 years for daily smokers (Giovino, Mirza, Samet, Gupta, Jarvis, Bhala, Peto, Zatonski, Hsia, Morton, Palipudi, Asma, GATS Collaborative Group, 2012). The described difference in relation to the own results may indicate that the number of years of smoking is underestimated by the respondents participating in the CHUK preventive study.

According to the obtained results, the average number of cigarettes smoked daily was 14.84 cigarettes and did not differ significantly from the data obtained by Pinkas group (15.0 items) (Pinkas, et al., 2019) and the authors of the POLSCREEN study (16 items for men, 13 items for women (Podolec, Kopeć, 2006). However, in the WOBASZ and WOBASZ II study for men it was 20 and 15, respectively, and for women–13 and 10 (Polakowska et al., 2017).

Moreover, the "Lost in Italy" study examining the impact of lockdown due to the COVID-19 pandemic on the habit of smoking among Italians indicates that cigarette consumption increased by 9.1%. This trend was the most relevant in the groups of people with deteriorated quality of life, reduced duration of sleep, with increased level of anxiety and depressive symptoms (Carreras et al., 2021). Due to the above observations, it seems justified to conduct current socio-demographic research in Poland with an attempt to estimate analogous changes.

An ambiguous phenomenon that has not been assessed Cardiovascular Diseases Prevention Program is the use of e-cigarettes. A study by the National Institute of Public Health–National Institute of Hygiene indicates that in 2020 10.8% of men and 7.1% of women used only electronic tobacco products every day, and there was a clear group of respondents who regularly use traditional cigarettes and electronic products interchangeably. In younger age groups, the percentage of e-cigarette use was even higher–for the 30-39 age group, it was 4.3% of those who used only electronic tobacco devices, and 5.8% of those who used both types of tobacco products. Summing up of people who use traditional tobacco products and electronic cigarettes in an exclusive and interchangeable way, the percentage of regular smokers increased to 32.6% among men and 18.7% among women (Poznańska et al., 2020). The ESC guidelines indicate that e-cigarettes can help to fight with addiction. Their beneficial effect may be due to behavioral changes, however, evidence for the efficacy of e-cigarettes in smoking cessation is limited and there are no safety data for long-term use (Pisinger, Døssing, 2014; Piepoli, Hoes, Agewall, Albus, Brotons, Catapano, Cooney, Corrà, Cosyns, Deaton, Graham, Hall, Hobbs, Løchen, Löllgen, Marques-Vidal, Perk, Prescott, Redon, Richter, ESC Scientific Document Group, 2016), so they have not yet been recognized as a recommended method of smoking cessation. The use of electronic cigarettes is becoming more and more common, and therefore the inclusion of an e-cigarette question in the Cardiovascular Diseases Prevention Program screening survey is well-founded.

Conclusions

Tobacco smoking prevalence is high and is one of the most widespread cardiovascular risk factors. Thanks to the current data on the prevalence of nicotine addiction, we are able to estimate the problem, the trend of changes and react early, implementing effective preventive measures. It is important to effectively and universally conduct the prevention of cardiovascular diseases in Primary Healthcare Clinics, because it is an opportunity to implement education and modify behaviors that negatively affect the health of the population.

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Cardiovascular disease risk factors in the Lubelskie Voivodeship in 2008-2018–part II: the obesity epidemic

Czynniki ryzyka chorób układu krążenia na terenie województwa lubelskiego w latach 2008-2018 – część II: epidemia otyłości

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Abstract: *Introduction:* All over the world, the problem of excess body weight is being raised more and more frequently. In 2021. the number of obese people has tripled compared to 1975. Due to the constantly growing number of people meeting the criteria for overweight and obesity, it is becoming extremely important to implement preventive measures. Cardiovascular Diseases Prevention Program implemented in Poland as part of the National Health Fund program is a good opportunity to identify patients with abnormal body weight and to correct behavior and health education. *Material:* A retrospective analysis of data obtained by the National Health Fund as part of the implementation of 86,485 preventive cards of the Cardiovascular Diseases Prevention Program in the Lubelskie Voivodeship in 2008-2018 was carried out. The analyzes were performed using the IBM SPSS Statistics for Windows, version 25 program. The chi-square test and the Pearson linear correlation between the quantitative features were used to test the relationship between the two qualitative features. Significant predictors of a risk factor for cardiovascular disease were determined using multivariate logistic regression. The significance level was assumed to be $\alpha = 0.05$ for two-tailed tests. *Results:* The average BMI value was 26.12 kg / m2. 1st degree obesity was diagnosed in 14.3% of patients, 2nd degree–2.9%, 3rd degree–0.7%. Excess body weight was significantly more often observed among men. With the increase in the number of years in the study population, the occurrence of overweight and obesity was significantly higher. One unit increase in BMI was associated with a 13% increase in the risk of high blood pressure and a 12% increase in the risk of serum glucose ≥126 mg/dl. It also increased the risk of hypercholesterolaemia by 4.2% and of elevated LDL levels by 5.5%. *Conclusions:* The prevalence of obesity is extremely worrying. Excessive body weight undeniably translates into worse health of the population. The Cardiovascular Diseases Prevention Program at Primary Healthcare Clinics is a convenient opportunity to identify the factors leading to the development of obesity and to promote health-promoting behaviors.
Keywords: cardiovascular disease, obesity, risk factors

Abstrakt: *Wstęp:* Na całym świecie problem nadmiernej masy ciała jest coraz częściej podejmowany. W 2021r. ilość osób z otyłością uległa potrojeniu w stosunku do roku 1975 Z uwagi na stale rosnącą ilość osób spełniających kryteria nadwagi i otyłości niezwykle istotne staje się wdrażanie działań zapobiegawczych. Profilaktyka CHUK realizowana w Polsce w ramach programu NFZ jest dobrym momentem do identyfikacji pacjentów z nieprawidłową masą ciała oraz korekcji zachowań i edukacji zdrowotnej. *Metoda:* Przeprowadzono analizę retrospektywną danych pozyskanych przez NFZ w ramach realizacji 86 485 kart profilaktycznych Programu „CHUK" na terenie województwa lubelskiego w latach 2008-2018. Analizy wykonano przy pomocy programu IBM SPSS Statistics for Windows, version 25. Do zbadania związku między dwiema cechami jakościowymi wykorzystano test chi-kwadrat oraz korelację liniową Pearsona między cechami ilościowymi. Istotne predyktory czynnika ryzyka chorób sercowo-naczyniowych określono za pomocą wieloczynnikowej regresji logistycznej. Za poziom istotności przyjęto $\alpha = 0,05$ dla testów dwustronnych. *Wyniki:* Średnia wartość wskaźnika BMI wyniosła 26,12kg/m2. Otyłość I stopnia rozpoznano u 14,3% osób, II stopnia – 2,9%, III stopnia – 0,7%. Nadmierna masa ciała istotnie częściej była obserwowana wśród mężczyzn. Wraz ze wzrostem liczby lat w populacji badanej istotnie częściej obserwowano występowanie nadwagi i otyłości. Wzrost BMI o jedną jednostkę wiązał się ze zwiększeniem ryzyka nadciśnienia tętniczego krwi o 13%, a glikemii ≥126 mg/dl o 12%. Zwiększał również ryzyko hipercholesterolemii o 4,2%, a podwyższonego stężenia LDL o 5,5%. *Wnioski:* Stopień rozpowszechnienia otyłości jest niezwykle niepokojący. Nadmierna masa ciała w sposób niezaprzeczalny przekłada się na gorszy stan zdrowia populacji. Program profilaktyki CHUK prowadzony w POZ jest dobrym momentem na identyfikację czynników prowadzących do rozwoju otyłości oraz pozwala promować zachowania prozdrowotne.
Słowa kluczowe: choroby układu krążenia, czynniki ryzyka, otyłość

Introduction

Nowadays, we can speak of an "obesity epidemic". In 2021. The number of obese people has tripled since 1975 (WHO, 2021).In 2016, 39% of adults were overweight and 13% were obese. Most of the world's population lives in countries where overweight and obesity kill more people than underweight (WHO, 2021) . In 2016, among people aged 20 and over in Poland, 53% of women and 68% of men were overweight, and 23% of women and 25% of men were obese (NCD Risk Factor Collaboration, 2017). Increasingly disturbing data also apply to children. In 2016, 20% of girls and 31% of boys in Poland were overweight among people under 20, and 5% of girls and 13% of boys were obese (NCD Risk Factor Collaboration, 2017).

A commonly recognized criterion for assessing body mass is the body mass index (BMI). In adults, the normal values of BMI were 18.5–24.9 kg / m2. Overweight is diagnosed between 25.0 kg / m2 and 29.9 kg / m2. Obesity takes values equal to and greater than 30.0 kg / m2. There are three degrees of obesity: I degree (30.0-34.9 kg / m2), II degree (35.0-39.9 kg / m2), Grade III (greater than 40.0 kg / m2) (WHO, 2021). Obesity is a well-known risk factor for the development of CHSN, which is associated with increased mortality by causing low-grade chronic inflammation, insulin resistance, increased blood pressure, prothrombotic status, and dyslipidemia. (Pischon, Boeing, Hoffmann, Bergmann, Schulze, Overvad, van der Schouw, Spencer, Moons, Tjønneland, Halkjaer, Jensen, Stegger, Clavel-Chapelon, Boutron-Ruault, Chajes, Linseisen, Kaaks, Trichopoulou, Trichopoulos, Riboli, 2008; Sypniewska, 2007).

Diseases related to obesity include type 2 diabetes, gallbladder diseases, dyslipidemia, insulin resistance, sleep apnea, coronary artery disease, hypertension, osteoarthritis of the knees, hyperuricemia and gout, cancer (breast cancer in postmenopausal women, endometrial cancer, colon cancer), sex hormones abnormalities, fertility disorders, lower back pain, increased risk of complications under anesthesia (WHO, 2010). Apart from the projection on the somatic sphere, more and more often the significant influence on the behavioral and psychological sphere is emphasized (Jackson, Steptoe, 2017).

Most of the inhabitants of Poland are covered by the services of Primary Health Care (POZ) doctors (Windak, Niżankowski, Lukas, Tomasik, Panasiuk, Florek-Łuszczki, Paprzycki, Jankowska-Zdunczyk, Jakubiak, Łuczak, Lutomski, Golema, Kijowska, Barańska, Chmura, 2019). High availability of medical services in the conditions of a family doctor's clinic makes these entities a universal place for prophylaxis (GUS, 2018; GUS, 2019). The Cardiovascular Diseases Prevention Program implemented by Primary Healthcare Clinics makes it possible to identify patients at risk of cardiovascular diseases. By 1st July 2022 inclusion program inclusion criteria were age 35, 40, 45, 50 and 55 in a given year, no participation in CHUK program in the last 5 years and no cardiovascular disease diagnosis in the past (Minister Zdrowia, 2019). Prophylactic visit is an opportunity to educate and modify the patient's anti-health behavior.

1. Material and methods

A retrospective analysis of the data obtained by the National Health Fund as part of the Cardiovascular Diseases Prevention Program (CHUK) in the Lublin Province in 2008-2018 was carried out. The study population consisted of patients who met the criteria and were included in the Cardiovascular Disease Prevention Program. The sociodemographic variables (age, sex, place of residence, occupation, education), anthropometric variables (height, weight, BMI, arm circumference, waist circumference), family history (occurrence of a father's heart attack and stroke before the age of 55, for mother age of 60) were assessed. The form helped to obtain data on current and past smoking physical activity over 30 minutes a day during the week, blood pressure, heart rate, laboratory test results (total cholesterol , LDL and HDL cholesterol, triglycerides, fasting glucose). The analyzes were performed using IBM SPSS Statistics for Windows, version 25 (IBM Corp., Armonk, N.Y., USA). The compliance with the normal distribution of a given feature was assessed using the Shapiro-Wilk test. The distribution of qualitative variables was described by giving absolute and relative frequencies.

The chi-square test was used to test the relationship between the two qualitative features, and the Pearson linear correlation between the quantitative features. Significant predictors of cardiovascular disease risk factor were determined using multivariate logistic regression. The results of the analysis are presented as the odds ratio (OR) together with the 95% confidence interval (95% CI). The significance level was assumed to be $\alpha = 0.05$ for two-tailed tests.

2. Aim of the study

The aim of the study was to assess the occurrence of excessive body weight in the studied population as a risk factor for cardiovascular diseases.

3. Results

Data on 86,485 preventive visits were analyzed. The study population was dominated by women (61.3%), and men constituted 38.7% of the population. The highest reporting rate was observed in the 35 and 40-year-old age group–they constituted 48.6% of all respondents. 45-year-olds accounted for 19.8% of cases, 50-year-olds–17.8%, and 55-year-olds–14.3%. People with secondary education prevailed (36.7%), while nearly every fourth respondent had higher education. Manual workers accounted for 31.4% of the respondents, white-collar workers–27.5%, farmers–19.7%, and 4.5% of the respondents on retirement / disability pension.

The mean value of the BMI index for the study population was 26.12 kg / m2 (± 4.43). The minimum value was 13.3 kg / m2 and the highest recorded result was 71.5 kg / m2. Excess body weight was diagnosed in over half of the respondents–56.1%. Obesity of the 1st degree was diagnosed in 14.3% of patients, 2nd degree–2.9%, 3rd degree–0.7%.

Excess body weight was significantly more often observed among men than women (69.7% vs 47.5%; p <0.001). Both overweight and obesity were more frequently reported among men. However, grade III obesity was more common in women (M: 0.5% vs F: 0.8%; p <0.001).

With the increase in the number of years in the study population, the prevalence of overweight and obesity was significantly higher. The exception was grade III obesity, with occurrence comparable in all age categories (Table 1).

Higher levels of education were associated with lower spread of overweight and obesity. A significant difference was observed in the case of 3rd degree obesity, which affects more than two times more people with primary education than people with higher education (Table 2).

The highest prevalence of overweight was recorded in the group of blue-collar workers. Obesity was most often observed among farmers (Table 3).

One unit increase in BMI was associated with a 13.2% increase in the risk of hypertension (95% CI: 1.127-1.137, p <0.001), and a risk of blood glucose ≥126 mg/dlby 12.2% (95% CI: 1.110 -1.135, p <0.001). There was an effect of BMI on the lipid profile–an increase in BMI value by one unit increased the risk of hypercholesterolaemia (T-Chol concentration ≥ 190 mg / dl) by 4.2% (95% CI: 1.038-1.046, p <0.001) and LDL 115 mg/dl concentration by 5.5% (95% CI: 1.052-1.059, p <0.001).

4. Discussion

Data on the obesity epidemic are highly disquieting. In the European region, the prevalence of obesity is estimated at around 23%[1], and the 2017 Global Burden of Disease Study classifies excess body weight as the third most common cause of loss of life years (YLL) (Foreman, Marquez, Dolgert, Fukutaki, Fullman, McGaughey, Pletcher, Smith, Tang, Yuan, Brown, Friedman, He, Heuton, Holmberg, Patel, Reidy, Carter, Cercy, Chapin, Murray, 2018).

In representative epidemiological studies conducted in Poland, a lower prevalence of overweight in men was found in relation to the results obtained

1 Obesity Rates Across Europe – World Atlas, 2019, https://www.worldatlas.com/articles/the-fattest-countries-in-europe.html#:~:text=The average obesity rate,in Europe is 23.3%25. (access: 20.05.2020).

Table 1. BMI categories by age

Age [years]	35		40		45		50		55	
BMI rating	n	%	n	%	n	%	n	%	n	%
underweight	532	2,4%	273	1,4%	155	0,9%	117	0,8%	97	0,8%
normal	11 148	50,1%	8 885	45,0%	6 881	40,3%	5 616	37,3%	4 254	34,4%
overweight	7 358	33,1%	7 226	36,6%	6 802	39,8%	6 288	41,8%	5 371	43,4%
obesity I	2 509	11,3%	2 698	13,7%	2 594	15,2%	2 423	16,1%	2 104	17,0%
obesity II	542	2,4%	551	2,8%	520	3,0%	480	3,2%	443	3,6%
obesity III	145	0,7%	123	0,6%	131	0,8%	118	0,8%	101	0,8%
p<0,001										

Table 2. BMI categories by education

Education	primary		vocational		secondary		higher	
BMI rating	n	%	n	%	n	%	n	%
underweight	113	1,8%	262	1,0%	380	1,2%	389	1,8%
normal	2 478	38,9%	9 464	37,7%	12 886	41,5%	11 155	50,9%
overweight	2 359	37,0%	10 126	40,3%	12 195	39,3%	7 509	34,2%
obesity I	1 063	16,7%	4 181	16,6%	4 461	14,4%	2 323	10,6%
obesity II	290	4,6%	878	3,5%	891	2,9%	440	2,0%
obesity III	70	1,1%	219	0,9%	201	0,6%	117	0,5%
p<0,001								

Table 3. BMI categories by occupation

Occupation	blue-collar worker		white-collar worker		farmer		retired/pensioner		other	
BMI rating	n	%	n	%	n	%	n	%	n	%
underweight	257	1,0%	370	1,6%	158	1,0%	72	1,8%	272	2,0%
normal	10 244	39,1%	11 398	49,6%	6 115	37,1%	1 426	35,9%	6 330	45,5%
overweight	10 806	41,2%	8 045	35,0%	6 594	40,0%	1 586	40,0%	4 888	35,1%
obesity I	3 974	15,2%	2 544	11,1%	2 843	17,2%	666	16,8%	1 916	13,8%
obesity II	779	3,0%	480	2,1%	614	3,7%	174	4,4%	418	3,0%
obesity III	166	0,6%	129	0,6%	158	1,0%	45	1,1%	101	0,7%
p<0,001										

by me (WOBASZ–40.4%; WOBASZ II–43.1%; LIPIDOGRAM2015–45%), while among women higher (respectively: 27.9%; 29.5%; 36%) (Stepaniak, Micek, Waśkiewicz, Bielecki, Drygas, Janion, Kozakiewicz, Niklas, Puch-Walczak, Pająk, 2016; Kolegium Lekarzy Rodzinnych w Polsce, Polskie Towarzystwo Medycyny Rodzinnej, Polskie Towarzystwo Badań Nad Otyłością, 2017). Obesity in men was much more frequent than in the population I studied (23.6-38.5%), and among women the prevalence ranged from 19.7-33% [Stepaniak et al., 2016; Kolegium Lekarzy Rodzinnych w Polsce et al., 2017; Zdrojewski, Rutkowski, Bandosz, Gaciong, Solnica, Drygas, Wojtyniak, Stokwiszewski, Pencina, Wołkiewicz,

Piwonski, Jędrzejczyk, Grodzicki, Wyrzykowski, 2015). Summing up overweight and obese patients gives a higher incidence of excess body weight in the above-mentioned studies compared to my results. In the European Health Surveys (EHIS) in 2014, Polish women had a higher prevalence of excessive body mass (overweight–30%, obesity–16%) and similar for men (44% and 18% respectively) than in the authors' own material (GUS, 2015).

In other studies on the Polish population, a lower prevalence of obesity was reported. A study by Gallus et al. determined the spread of obesity at 12.3% among men and 8.3% among women (Gallus, Lugo, Murisic, Bosetti, Boffetta, La Vecchia, 2015). According to the latest OECD report, the percentage of obese individuals was estimated at 16.7% (OECD, 2017). However, both reports were based on the values of body weight and height declared by the respondents, which may be associated with underestimating body weight and overestimating height.

The authors of the WOBASZ study described the occurrence of excessive body weight and abdominal obesity with a division into provinces. In Lublin region, the percentage of overweight patients was comparable to the own results (M: 46.0%, F: 26.7%), while obesity was a more common phenomenon and more frequently observed among women (26.2%) than men (22, 9%) (Stepaniak et al., 2016).

The WOBASZ II study showed that obesity was present in 27.0% of men and 17% of women aged 35-44.9 years, and overweight in 44.7% and 26.7%, respectively. In the age group 45-54.9 years, obesity was observed in 29.5% of men and 26.2% of women, while overweight in 45.1% and 35.2% of them (Stepaniak et al., 2016). This confirms my observation that the percentage of people with excess body weight increases with age.

Grade III obesity is associated with a significantly higher rate of total mortality compared to normal weight subjects. The main causes of death are cardiovascular diseases, malignant neoplasms and diabetes (Kitahara, Flint, Berrington de Gonzalez, Bernstein, Brotzman, MacInnis, Moore, Robien, Rosenberg, Singh, Weiderpass, Adami, Anton-Culver, Ballard-Barbash, Buring, Freedman, Fraser, Beane Freeman, Gapstur, Gaziano, Hartge, 2014). Considerable accumulation of adipose tissue, expressed as BMI ≥40 kg / m2 is also associated with the presence of advanced osteoarthritis requiring arthroplasty (Wendelboe, Hegmann, Biggs, Cox, Portmann, Gildea, Gren, Lyon, 2003), making it difficult to undertake physical activity and change lifestyle. Grade III obesity was not widespread in the analyzed population and its higher percentage was found among women (M: 0.5%, F: 0.8%). The authors of the WOBASZ and WOBASZ II studies reported the occurrence of this disorder almost twice as often, with the same trend in the distribution among sexes–M: 0.8% and 1.3%, respectively, and F: 1.9% and 1.8% (Stepaniak et al., 2016).

Such a large percentage of patients with excess body weight, which was described in the above study, has another practical implication. Many of these individuals may suffer from obesity-related psychological problems – among them weight stigmatization (Pearl, Walton, Allison, Tronieri, Wadden, 2018). Patients facing social devaluation experience apart from lowered self-esteem, decreased motivation to maintain diet and their everyday dietary habits are substandard (Seacat, Dougal, Roy, 2016). A parallel mechanism associated to weight stigmatisation leads to low physical activity. According to English Longitudinal Study of Aging, social mistreatment, independently of BMI value, was connected with 59% higher odds of lack of any exercises and 30% lower odds of developing moderate or vigorous activity (Jackson, et al., 2017). Excessive body weight generates body dissatisfaction (Weinberger, Kersting, Riedel-Heller, Luck-Sikorski, 2016), and social devaluation results in elevated stress (Simone, Lockhart, 2016), being a risk factor of cardiovascular complications as well. Noteworthy, this may reduce self-regulation properties of individuals (Hunger, Major, Blodorn, Miller, 2015) which has been described as a prognostic of calorie-rich diet (Araiza, Wellman, 2017). Depicted phenomenon makes a positive feedback loop, when obesity itself produces well-known psychological and physiological drivers of obesity. Very high incidence of excessive body weight in study group along with highlighted psychological problems is still relevant

in the context of COVID-19 pandemics and limitations in social live activities. A large meta-analysis provided evidence that even 65% of patients suffering from eating disorders met exacerbation of symptoms during lockdown. Moreover, one half of individuals with excessive body weight reported increased snacking and diminished physical activity. (Sideli, Lo Coco, Bonfanti, Borsarini, Fortunato, Sechi, Micali, 2021). It has long been known that general distress do not affect all individuals to same level and obese patients are more vulnerable population in context of anxiety and depression (Pierce et al., 2020) leading to additional weight gain and increased cardiovascular risk.

Conclusions

The data on the prevalence of obesity in the population are extremely disturbing. Obesity undeniably contributes to the development of many somatic diseases, but also affects the mental sphere of people, contributing to poor health of the population. Continuous analysis of the prevalence of excess body weight helps to identify factors contributing to the development of obesity and allows the implementation of preventive programs and promoting pro-health behavior at an early stage. The Cardiovascular Diseases Prevention Program program at Primary Healthcare Clinics is an excellent moment for this

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Motives for selected crimes against life and health

Motywy wybranych przestępstw przeciwko życiu i zdrowiu[1]

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Abstract: Criminal behavior undermines both social and individual security. Exploring the motivational process in criminal acts focuses on searching for the sources of these acts and determining the factors that sustain criminal activity. Crime is not a homogeneous phenomenon, which makes the motives for crime diverse and complex. Criminological theories explore the causal factors of crime such as biological (including genetic), sociological (social), and psychological. A criminal act can be caused by an unformed drive, frustration, and be learned, including through following others. In the process of determining the motives for criminal behavior, it is not enough to point to direct motives because motivation should be approached as a process, which indicates the possibility of the development of motives over a certain time, and even many years. Thus, it is necessary to take into account socialization, personality traits (the level of aggressiveness, directiveness, and dominance), psychological needs (especially those unmet), and values, which, in a sense of responsibility, often can be considered anti-values. The major crimes against health and life are homicide, fights, and battery. In addition to ordinary murder, the Polish Penal Code lists aggravated murder (e.g., with extraordinary cruelty or as a result of motives deserving special condemnation) and privileged murder (committed under the influence of strong agitation justified by the circumstances), which can also be referred to as murder of passion. Fights and battery can be committed with or without the use of a dangerous object. A review of the literature indicates the following motives for homicide: robbery (economic), sexual, emotional, delusional, revenge, threat, insult, sense of harm, and jealousy. Perpetrators of fights and battery may be characterized by component factors of antisocial personality disorder as specified by DSM-5, such as non-compliance with legal and social norms, impulsivity, irritability, aggression, irresponsibility, and lack of guilt. In the case of crimes against life and health, it seems reasonable to identify several motives for the act. Motives are assessed primarily by a clinical interview. However, it should be taken into account that the perpetrators of these acts, for a variety of reasons, may obstruct justice.
Keywords: motive, crime, murder, fight, battery

Abstrakt: Zachowania przestępcze burzą poczucie bezpieczeństwa społecznego, w tym również indywidualnego. Zgłębianie procesu motywacyjnego w przypadku czynów przestępczych, to poszukiwanie źródeł tych czynów oraz ustalanie czynników podtrzymujących aktywność przestępczą. Przestępczość, nie jest zjawiskiem jednorodnym, co sprawia, że motywy przestępstw są różne i złożone. Teorie kryminologiczne rzucają światło na czynniki sprawcze przestępczości, a są to czynniki o charakterze biologicznym (w tym genetycznym), socjologicznym (społecznym), psychologicznym. Czyn przestępczy może wypływać z nieukształtowanej sfery popędowej, być wynikiem frustracji, ale można się go również nauczyć, m. in. poprzez naśladowanie. W procesie ustalania motywów przestępstw, nie wystarczy wskazać na motywy bezpośrednie, dlatego że motywację należy ujmować procesualnie, co wskazuje na możliwość kształtowania się motywów w określonym odcinku czasowym, nawet długoletnim. Należy więc uwzględnić proces socjalizacji, cechy osobowości (w tym poziom agresywności, dyrektywności, dominacji), potrzeby psychiczne (zwłaszcza te niezaspokojone), wartości, które w poczuciu odpowiedzialności, w wielu przypadkach, można nazywać antywartościami. Podstawowymi przestępstwami przeciwko zdrowiu i życiu są zabójstwa oraz bójki i pobicia. Polski *Kodeks karny*, oprócz zabójstwa zwykłego wymienia też zabójstwo kwalifikowane (np. ze szczególnym okrucieństwem lub w wyniku motywacji zasługującej na szczególne potępienie) oraz zabójstwo uprzywilejowane (dokonane pod wpływem silnego wzburzenia usprawiedliwionego okolicznościami), które można też określać zabójstwem w afekcie o kierunku negatywnym. Bójki i pobicia dokonać można bez użycia lub z użyciem niebezpiecznego przedmiotu. Przegląd literatury wskazuje na następujące motywy zabójstw: rabunkowy (ekonomiczny), seksualny, emocjonalny, urojeniowy, zemsta, zagrożenie-obraza, poczucie krzywdy, zazdrość. Sprawcy bójek i pobić mogą charakteryzować się czynnikami składowymi antyspołecznego zaburzenia osobowości w ujęciu DSM-5, np. nieprzestrzeganiem norm prawno-społecznych, impulsywnością, drażliwością, agresją, nieodpowiedzialnością, brakiem poczucia winy. W przypadku przestępstw przeciwko życiu i zdrowiu, zasadne zdaje się być ustalenie kilku motywów czynu. Motywy określane są przede wszystkim w wywiadzie klinicznym. Należy jednak uwzględnić to, że sprawcy tych czynów, z różnych powodów mogą mataczyć.
Słowa kluczowe: motyw, przestępstwo, zabójstwo, bójka, pobicie

1 Artykuł w języku polskim: https://www.stowarzyszeniefidesetratio.pl/fer/2022-3-Woznia.pdf

Introduction

A crime is an act that is legally prohibited, that is, defined in the criminal legislation of a country, resulting in criminal punishment. Criminal acts reduce social security, cause social and individual losses, and shatter interpersonal relations. Victims of criminal acts often struggle to cope with the trauma for many years (cf. Boińska, 2016).

Criminal behavior can be divided into ego-dystonic and ego-syntonic. Ego-dystonic criminal acts are different from the previous activity and occur in an unexpected situation, suddenly, with the previous functioning of the person not indicating that the person may commit a criminal act. Ego-syntonic criminal acts are committed in accordance with the previous life. In such cases, the acts are only the culmination of maladaptive social functioning and disregard for moral or social norms. Various divisions of crimes have been made, with one of the basic criminal categories being crimes against life and health.

Criminological psychology draws on theories of crime of a biological, sociological (social) nature, extending the broad psychological theory of crime with its research and investigations. The offender's psychological profile should indicate criminogenic factors, possibly including disturbed socialization, developed demoralization, and a disturbed personality. The basic question, however, is about the motives for crimes. For example, why does someone kill, why does someone get into fights, or why does someone commit a battery?

Crimes against life and health violate one of the most important values, which is human life. The development of biophilic tendencies in the perpetrators of these acts also means the formation of an attitude towards life (cf. Woźniak, 2021).

1. Motivational process in crime

H. Petri (1996, as cited in Ciccarelli, White, 2015, p. 344) indicated that motive initiates, directs, and sustains the action taken to satisfy physical or psychological needs. S. Ciccarelli and J. N. White (2015, p. 344) characterized motivation vividly by stressing that "the term itself comes from the Latin *movere*, meaning «to move». Motivation «moves» people to action. When, for example, while watching TV on the couch, a person feels hungry, the physical need for food can compel them to get up, head to the kitchen, and poke around to find something to eat. If the hunger is strong enough, it can even push the person to cook. The physical need for hunger triggers (getting up), directs (going to the kitchen), and sustains the action (seeking or preparing a meal). Hunger, of course, is just one of many examples. Loneliness may prompt a person to call a friend or go to a place where he or she can meet other people. The desire for life achievements motivates many to study. Even leaving bed in the morning is motivated by the need to earn your living and get food by going to work".

In the case of crime, there can be a lot of vivid descriptions of motivation. For example, a thief in need of money initiates action by observing potential victims, then his action is directed by selecting a victim, e.g. a lone elderly woman with a bag into which she put her wallet, and, finally, this criminal's action is sustained by following the woman.

In his book entitled "Forensic Psychology. Basics, research, applications", J. Stanik (2013, p. 111) formulates questions related to the problems of motivation:

- What triggers the person to act, and why, out of the many possible ways to behave, do they choose one and not another? The question concerns the source(s), direction, and the way (including structure) the activity is performed;
- What makes the person continue the action they started despite the need for sometimes a considerable effort? This question concerns the mechanisms that sustain the activity (also described by the terms persistence, willpower, etc.);
- What causes a form of activity to be discontinued before the original result is achieved? This question focuses on the mechanisms that determine the abandonment of behavior; for example, discouragement, loss of interest, exhaustion, anxiety, etc.;

- What makes the person consider their behavior completed? The question concerns the mechanisms for recognizing and evaluating the outcomes of the activity (ibidem).

Such questions should be asked in the case of criminal acts of the given categories contained in the penal code in order to know the reasons for the acts, the factors sustaining the behavior aimed at committing the criminal act, and the factors conditioning such behavior, including factors of internal nature (e.g., personality factors).

The Polish Penal Code (2022) classifies criminal acts into given categories. It presents twenty-two categories in the special part, while others are contained in the military part. The fourth category is crimes against life and health. Other penal code categories of criminal acts can also be mentioned: against sexual freedom and morality, against family and guardianship, and against property.

Each of these 22 categories of criminal acts is characterized by its specifics, which at the same time means that the motivational process for the acts may vary, and the sources of the acts are characteristic of each category.

J. Stanik (2013, p. 111–127) presents the following approaches to explaining motivation: evolutionist, psychoanalytic, behavioral, cognitive, and those based on values and needs. These concepts point to various elements that motivate behavior, including drives, biological states of the body, behavioral reinforcements (expectation of reward), informational (cognitive) processes, axiological processes, and needs.

In many cases, motivation and its triggering cannot be understood if emotions are not taken into account. S. Ciccarelli and J. N. White (2015, p. 362) wrote: "How do people behave under the influence of emotions? The state of their feelings is reflected in their facial expressions, body language, and gestures. Frowning, smiles, and unhappy faces combine with hand gestures, body rotation, and words into a clear picture. People fight, run away, kiss, scream, and perform countless other actions growing directly out of the emotions they feel". Emotions can undoubtedly trigger a lot of positive social behavior, but they can also lead a person to commit criminal acts, including a crime against life and health; this crime should often be treated as aggression, which, after all, is directly linked to emotions.

Forensic psychology draws on other disciplines (subdisciplines), including psychiatry, law, criminology, personality psychology, and psychology of human development. J. K. Gierowski (2014, p. 30) argued that "one of the most important areas of application of psychology for the purposes of legal practice is the reconstruction and evaluation of the offender's mental processes underlying his or her criminal behavior. Knowledge, explanation, and understanding of human criminal behavior is a challenge for both lawyers and psychologists, as it is not only important for the resolution of a specific case, but can also be reflected in prophylactic, educational, or preventive measures. These questions are addressed primarily by motivational psychology, whose main task is to explore the causes of human behavior, including socially unacceptable behavior that violates the established ethical and legal order".

As a social phenomenon, crime is subject to description, has a given size or structure (types of crime), and dynamics in a given area, and can change, gain strength, or be temporarily reduced. The term "dark figure of crime" refers to unreported crime, that is, a crime that was not recorded by law enforcement authorities. With "the figure", the actual crime, that is, the total criminal acts committed in a given area, will always be unrecognized (Kuć, 2015, p. 45–48).

Identification of the motives leading to crimes is important, but at the same time, it should be noted that taking into account, among other things, the "dark figure" phenomenon, it is a laborious task. The perpetrators of crimes do not want to reveal the motives for their actions because they fear severe punishment but also because they lose their sense of security not only from others but also in their own eyes. It can also happen that victims of crime, too, do not want to reveal the perpetrators of the acts and possible motives for these acts for various reasons.

Although crime appears to be a homogeneous phenomenon, it is often a group of acts that have nothing in common. Motivation will also be different for different criminal acts. There is not a single causal mechanism for crime, as indicated by concepts that

explain criminal behavior, namely criminological theories. Biological criminological concepts show genetic or disease factors. The sociological approach takes into account the social and cultural changes taking place in a given country or community, such as the impoverishment of society, and these changes can be combined with life situations of specific people, which is all the more likely to determine criminal behavior. Committing criminal acts can be facilitated by certain personality traits, such as aggressiveness or emotional coldness (Zbroszczyk, 2021, p. 168–171).

Criminological theories indirectly show the motivational undertow of criminal acts, although they are only a generalization, and in judicial practice, it is important to determine the possible motives of the perpetrator of a specific act that violates the applicable law. However, these theories can provide an important hint even for an experienced forensic or penitentiary psychologist.

In the case of the motivation of given behaviors, especially motivation of acts against the law, it would be better not to explore motivation in general, but the motivational process, which may occur at a certain time, take on specific determinants or specific impact, and undergo changes.

2. Selected crimes against life and health

The major crimes against health and life are homicide, fights, and battery. The present paper, in the next section, will attempt to determine the motives for homicide, and motives for fights and battery. The problem of motives for homicide is most often raised in the literature.

Three types of homicide are specified in the Polish *Criminal Code*: ordinary murder, aggravated murder, and privileged murder (Talaga, 2022, p. 190; cf. Penal Code, 2022, Art. 148). Ordinary murder is one that does not have the features of qualification of a criminal act or a privileged act. Aggravated murders include murder with particular cruelty, murder in connection with taking a hostage, murder in connection with robbery, murder as a result of motives deserving special condemnation, and murder using explosives. The other features of aggravated murder are: killing more than one person with a single act; prior final conviction for murder; murder of a civil servant committed during or in connection with the performance of official duties related to the protection of human security or the protection of public safety or order. Murder of the aggravated type is understood to mean a special, "severe" murder, with a high intensity of pathological factors. Murder of the privileged type is murder under the influence of strong agitation justified by the circumstances.

The latter one, committed in a state of intense agitation, is also referred to as murder in the heat of passion (affect). In the *Dictionary of Psychological Terms ...* . (Krzemionka, 2017, p. 10), *affect* is understood as "[...] a momentary, positive or negative reaction of the human body (vegetative, muscular, sensational), arising in response to a change in the environment or the subject itself. It is a barely perceptible liking or disliking, pleasure or displeasure, and an accompanying tendency «to» or «from» something: a picture, a word, an item in a store, or even one's own thought. A person can experience the affect toward a thing or a person they pay attention to, not necessarily the one that originally causes this state. Unlike mood, affect is understood as a short-lived emotional sensation, and the level of arousal accompanying it does not usually exceed the threshold of consciousness. The subject can become aware of the affective state through insight into their feelings and bodily state. However, the subject generally does not perceive a change in arousal state, although this change significantly affects the course of many cognitive processes". It is obvious that in the case of murder, affect is a reaction of the body with a negative direction.

In the case of fights and battery, the Polish *Criminal Code* enumerates two crimes. The first is fight and battery, and the second is the use of a firearm, knife, or other dangerous objects in a fight and battery (Talaga, 2022, p. 192–193; cf. Penal Code, 2022, Art. 158, 159). In the case of homicide, human life is the object of protection by the penal code, while in the case of fights and battery, the object of protection is not only human life but also human health (Talaga, 2022, p. 190, 192–193).

3. Controversies in establishing motives for crimes against life and health with the example of homicide and fight and battery

The literature primarily addresses the issues of motives for homicide, while the problems of motives for fight and battery is not likely to be addressed.

Z. Majchrzyk (2020, p. 295–296) points out that the subject of the research for an expert psychologist's opinion should be the personality of the offender (i.e., asociality), criminal behavior, rehabilitation prognosis, explanation of the motives for committing the crime, the offender's understanding of the act, and the degree of emotional arousal at the time of committing the act. Z Majchrzyk (2018, p. 116–117) also notes that an analysis of Shakespeare's plays, for example, can lead to a conclusion about the multiple motives for murder.

The above observations made by Z. Majchrzyk show, among other things, that the motives for homicides in particular, which are the most tragic and pathological acts a person can commit, should be examined comprehensively. One cannot limit oneself to establishing direct motives, such as, for example, a robbery or sexual motive but must take into account disorders in the socialization process, the perpetrator's life experiences, environmental influences, and personality traits. Many factors, accumulating over a long period of time, can initiate a motivational process leading to or condoning murder.

J.K. Gierowski (1989) included 105 homicide perpetrators in his research, including 16 women and 89 men. This research, conducted primarily with the use of clinical interviews, made it possible to identify six groups of homicide perpetrators by the leading motives for criminal acts. The leading motives in these groups were (1) economic motives (22 people), (2) sexual motives (16 people), (3) delusional motives, indicating disease processes (13 people), (4) revenge, which occurred most often with jealousy, erotic or emotional-affective motive (17 people), (5) sense of harm (13 people), and (6) sense of threat, fear, and jealousy (24 people).

A study by Z. Majchrzyk (2001), which covered 200 men (including 110 adults, 27 juveniles, and 63 adolescents), found the following predominant motives for homicide: robbery motive and emotional motive (juveniles and adolescents predominated for these two motives); revenge, sexual motive, and threat/insult (adults predominated for these three motives).

In a documentary book entitled "Polish Murderesses", K. Bonda (2008) described 14 women convicted of murder based on structured interviews with them and an analysis of documents. The following motives for these acts were identified: revenge, robbery, sense of harm and resentment, jealousy, removal of a witness, and love (removal of an obstacle to happiness).

While conducting research on perpetrators of murder with particular cruelty, W. Woźniak (2015) used, among other things, ten written statements by penitentiary psychologists regarding the characteristic personality traits of perpetrators of such acts. Penitentiary psychologists identified the potential characteristics of these offenders: shifting responsibility for their acts to others; unmet needs for security, love, acceptance, and belonging; low ability to defer gratification; aggression and brutality; anger and explosiveness in frustrating situations; reduced level or lack of empathy; disturbed capacity for higher emotions, emotional coldness, egocentrism; superficiality of interpersonal relations; the dominance of defence mechanisms: rationalization, denial, projection; reduced ability to experience guilt; personality (dissocial, borderline, and narcissistic). It should be noted that these features can undoubtedly disrupt the motivational process.

The author of the present article, based on his own professional experience, gained through, among other things, numerous spontaneous conversations with perpetrators of crimes, noted that the dominant motives in the case of homicide remain the same. However, there is a problem with the identification of these motives. Available psychological tests allow a general diagnosis of personality, including mental needs or value system, but certainly not the motives for such drastic and specific acts as homicide or fights and battery. It is possible to determine the motives for homicide or fights and battery based on a clinical interview, but one should never accept information from perpetrators of battery, especially perpetrators of homicide, uncritically. An act such

as homicide is socially stigmatizing in the highest possible way, and therefore perpetrators tend not to disclose the details of these acts, and there is a great deal of obstructing justice in these cases. Committing a murder, but also committing a battery, often consists of many factors of a social, psychological, and dysfunctional nature, and the emergence of these factors is usually extended over time, from disturbed socialization through to demoralization, etc. (therefore, it would be better to discuss not motivation or motives in general but the motivational process). It is possible to attribute a dominant motive to a given homicide, but it seems to be impossible to pinpoint the psychosocial background.

The motives for fights and battery seem to differ from those for homicide, although a fight or battery can lead not only to serious injury but also to the death of a person (cf. Penal Code, 2022, Art. 158). Determining the motives for fights or battery seems more difficult than determining the motives for homicide but it is possible to identify at least some general characteristics that may be the cause of these acts.

Based on the experience in working with prisoners, the author of the present paper believes that fights and battery are caused by the tendency to aggression and domination. These perpetrators may often be under the influence of alcohol or other substances, and get into a fight without thinking at the time how irreversible the consequences of a fight or battery may be. These perpetrators are often characterized by hooligan lifestyles, want to show their power, superiority, and impose their will on someone, and their aggression is often irrational.

The description of antisocial personality disorder in the DSM-5 (2017), seems to fit the profile of perpetrators of fights and battery and includes the following elements: failure to obey the rules of the applicable law and violate social norms; deception, involving repeated lying, pretending to be someone else, inducing others to perform various actions to obtain benefits or pleasure; impulsiveness; irritability, aggressive behavior leading to fights and assaults; reckless disregard for safety rules concerning oneself or others; irresponsibility; lack of resentfulness, manifested by indifference or rationalization when injured.

The motivational process leading primarily to homicide, but also to fights and battery, should be viewed from the standpoint of life experiences, illnesses, personality disorders, external and internal axiological conflicts, and unmet psychological needs (cf. Woźniak, 2020, p. 16–33; cf. Szymonik, 2022).

Conclusions

Determining motives for homicide and fights and battery is not easy. The perpetrators of these acts are unlikely to show the need for self-reflection. The paper discusses the controversy in determining the motives for these crimes. It reveals only selected crimes from the Polish penal code-based category of crimes against life and health. In the case of homicide, it should be stressed that despite various studies, including determining the motivation leading to these acts, taking someone's life will always remain incomprehensible.

Other crimes against life and health enumerated in the group of crimes defined by the Polish Penal Code are: murder of a newborn, euthanasia murder, persuasion and assisted suicide, abortion with the woman's consent, forced abortion, death of a woman as a consequence of abortion, manslaughter, grievous bodily harm, moderate and slight bodily harm, harm to the health of an unborn child, exposing a person to danger, exposing a person to contagion, and failure to render aid (Talaga, 2022, p. 190–193). Subsequent studies may attempt to determine the motives for other crimes against life and health, but this requires adequate knowledge and responsibility.

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