Fides et Ratio
Exploring Science, Religion, Society, Culture and Art in the Human Journey:
an Interdisciplinary Approach

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Contents

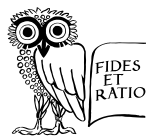# Underage women's experiences of pregnancy and childbirth and the attitudes of health professionals – a qualitative study[1]

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Abstract: *Introduction and Aim:* Adolescent pregnancy carries significant medical, psychological, and social implications. Young maternal age is associated with an increased risk of perinatal complications and may expose underage patients to stigmatization and inappropriate treatment within healthcare settings. The aim of this study was to explore and analyze the experiences of pregnant minors in the context of healthcare professionals' attitudes and behaviors toward them. *Materials and Methods:* A qualitative design was used, based on semi-structured interviews. The study included eight women aged 19–23 who had given birth to their first child before turning 18. Eligibility required that childbirth had occurred within the previous five years. Data were collected between March 2024 and February 2025. All interviews were recorded, transcribed, anonymized, and analyzed using content analysis. *Results:* Participants reported both positive and negative interactions with medical staff. More than half felt stigmatized due to their young age, and several described insufficient information regarding their own health or that of their newborn. Support from close relatives proved crucial for their sense of safety and emotional stability. Early motherhood was perceived as an ambivalent experience that was both challenging and personally transformative. *Conclusions:* The attitudes of healthcare professionals toward underage patients were inconsistent and often failed to meet standards of respectful, empathetic obstetric care. There is a clear need to increase awareness and strengthen the preparedness of healthcare personnel to work with this vulnerable patient group, as well as to improve access to prenatal education for pregnant minors.
Keywords: childbirth, early motherhood, perinatal care, pregnancy, teenage mothers

1. Introduction

Pregnancy and childbirth are undeniably among the most significant events in a woman's life. The experience of motherhood is a major developmental stage marked by profound physiological, psychological, and functional changes. These changes affect both biological functioning and psychological wellbeing. They also directly influence a woman's individual developmental trajectory and her subjective assessment of quality of life (Miotk-Mrozowska, 2013).

Early motherhood before the age of 18 is a particularly demanding experience for the young mother, leaving a lasting impact on her biological, psychological, and social functioning. According to various authors, both biological determinants rooted in the natural rhythm of fertility and current sociocultural factors suggest that the most optimal age for motherhood falls between 25 and 35 years. The literature highlights the concept of a psychological clock, understood as a specific level of emotional maturity and

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psychological readiness required to assume parental responsibilities, including the capacity to provide care and guidance to a child.

The phenomenon of off-time mothering refers to entering the maternal role at a developmentally non-normative moment, either significantly earlier or later than the biological, social, and psychological timeline would suggest. One example of such an off-time developmental event is childbirth during adolescence, which brings numerous challenges that often exceed the current abilities and psychosocial competencies of an underage mother (Bakiera and Szczerbal, 2018).

Various terms are used in the literature to describe women who give birth to their first child before reaching legal adulthood. These include teenage mothers, adolescent mothers, underage mothers, and minor mothers, with the specific term usually chosen based on legal, medical, or sociological context (Bień et al., 2015).

According to the Civil Code, a minor is defined as an individual under the age of 18 who has not entered into marriage. Marriage grants a minor full legal capacity and thus terminates minor status (Kodeks cywilny z dnia 23 kwietnia 1964 r., 2025).

Data from the Central Statistical Office show that in 2024, there were 1,092 births in Poland among mothers under 18 years of age, representing 0.43% of all live births that year, which totaled 251,782. In earlier years, the proportion of births among underage mothers remained similar, amounting to 0.41% in 2023 and 0.43% in 2022. These figures indicate relative stability in the birth rate within this age group in recent years (Central Statistical Office, 2024).

Although the proportion of births to underage mothers may appear small, it represents an important concern in the context of prenatal and perinatal medical care. Pregnancies among minors carry an increased risk of obstetric complications for both the mother and the child. Researchers note heightened risks of preterm birth, hypertension, iron-deficiency anemia, preeclampsia, and eclampsia compared with adult pregnant women. There is also a higher probability of requiring an emergency cesarean section. Moreover, young maternal age is a risk factor

for postpartum depression and challenges with initiating breastfeeding. Infants born to adolescent mothers face increased risks of low birth weight and neonatal respiratory distress syndrome. These risks arise from an interplay of socioeconomic and health-related factors, including limited prenatal care, poorer maternal nutritional status as well as a higher prevalence of smoking among women in this age group (Diabelková et al., 2023; Jeha et al., 2015; Mann et al., 2020).

Respectful relationships between women in labor and medical personnel play a key role in the course of pregnancy and childbirth. Research shows that positive interactions with healthcare providers can significantly increase satisfaction with care. A high level of trust and empathetic communication between the birthing woman and medical staff help reduce stress and create a sense of safety. Clear and accessible communication that aligns with patients' understanding also supports active engagement in perinatal care and strengthens self-care competencies (Leyser-Whalen et al., 2024).

Poor communication and critical comments from medical staff can heighten stress and anxiety and lower a woman's self-esteem. This may lead to avoidance of contact with healthcare providers (Bohren et al., 2015) and contribute to the development of post-traumatic stress disorder (Ertan et al., 2021). Studies show that adolescent mothers often face criticism and stigma from medical staff related to sexual activity before marriage. They also report violations of privacy, which stem directly from age-related prejudice among healthcare workers (Bohren et al., 2015). In a cross-sectional study, the authors found that young age (15 to 19 years) and lack of formal education were the strongest predictors of mistreatment by medical personnel (Bohren et al., 2019).

These findings indicate that many women experience inappropriate treatment during pregnancy and childbirth, with underage mothers being particularly vulnerable (Bohren et al., 2019). Due to biological immaturity, they are also at increased risk of perinatal complications. When combined with mistreatment by healthcare personnel, this can significantly worsen maternal and neonatal health outcomes (Diabelková et al., 2023; Mann et al., 2020).

Existing research focuses mainly on the medical and social consequences of teenage motherhood, yet there is still a lack of qualitative studies exploring interactions between young mothers and healthcare staff and the impact of these interactions on their sense of dignity and psychological wellbeing. Understanding these experiences may help improve the quality of perinatal care and support the creation of a more responsive and respectful healthcare environment for this specific group of patients.

The aim of this qualitative study was to explore and analyze the subjective experiences of underage pregnant women in relation to the attitudes and behaviors of medical personnel toward them. The authors sought to understand how young mothers perceive medical care, with particular attention to the quality of communication, the emotional support they receive, their sense of respect, and any experiences of stigma or discrimination within healthcare settings.

1.1. Methodology

A qualitative research design was used in this study. A qualitative descriptive approach was selected as the most appropriate methodology for capturing the experiences and emotions of adolescent mothers, without relying on existing theoretical frameworks (McIntosh and Morse, 2015). This method was chosen to enable a more complete understanding of the subjective experiences of underage mothers in their interactions with medical personnel during pregnancy, childbirth, and the postpartum period. The qualitative approach made it possible to gather rich, detailed narratives and identify emerging thematic domains, allowing for a deeper exploration of complex psychosocial phenomena from the perspective of young mothers.

In-depth, semi-structured interviews were conducted by the second author (H.M.) between March 2024 and February 2025. Of the eight interviews, four were carried out in person and four online using the Zoom platform. The interviews followed a previously developed interview guide, which ensured consistency in the research process while allowing for flexibility to explore emerging topics relevant to each participant's individual experience.

Key areas of inquiry included experiences related to pregnancy, childbirth, and the postpartum period, the support received, and interactions with healthcare workers such as physicians, nurses, and midwives. When additional clarification was needed, probing questions were used, such as: "Could you tell me more about that?". Each interview lasted between 60 and 90 minutes. To ensure accuracy and completeness of the data, all interviews were audio recorded with the participants' informed consent.

The interviews were then transcribed and anonymized. The transcripts were read multiple times by the first (B.Sz.) and second author (H.M.) to achieve a thorough understanding of the empirical material. Each of the two authors (B.Sz. and H.M.) independently coded the data using content analysis. Before coding began, all authors collaboratively developed and approved a coding tree that captured key statements emerging from the participants' narratives.

1.2. Sample

Participants were recruited through purposive sampling in cooperation with non-governmental organizations supporting young parents, including the *Fundacja Javani – nastoletni rodzice* [Javani Foundation for Teenage Parents] and the *Stowarzyszenie Dwie kreski* [Two Lines Association], as well as through online community groups such as *Nastoletnie mamy, czyli życie bez stereotypów*, *Dziewczyny bez tabu*, and *Baby bez tabu*. Eight women aged 19 to 23 agreed to take part in the study. All of them had experienced pregnancy and childbirth before the age of 18. Each participant received detailed information about the aims and procedures of the study.

Two participants gave birth to their first child just before reaching legal adulthood; the delivery occurred shortly before their eighteenth birthday, which they celebrated while still in the maternity ward. Four respondents gave birth at age 17, two at age 16, and one at age 15. At the time of the interviews, between three and five years had passed since delivery. Six participants were from the Mazowieckie

region, one from the Śląskie region, and one from the Lubelskie region. All respondents were students when they learned they were pregnant. Afterward, six continued their education and two discontinued schooling. The demographic characteristics of the sample are presented in Table 1.

2. Results

Content analysis of the interviews with underage mothers led to the identification of two main thematic categories:

1. Pregnancy and childbirth as a difficult experience, and
2. Relationships with medical personnel.

Each category comprised four thematic groups. In the first category, the themes were: *"I wasn't ready for this"* – reaction to pregnancy, Peer marginalization, *"I hid the pregnancy"* – lack of institutional support, and Maturing through motherhood. In the second category, the themes were: Experiencing a lack of empathy and respect, Information deficits, *"Invisible patients"* – quality of interactions with medical staff, and Woman-centered care.

Table 1. Age structure of participants and age at childbirth

l.p.	Age of respondents at the time of childbirth	Age of respondents at the time of the study	Voivodship	Continuing education during pregnancy
1	18 y.o.	23 y.o.	Mazowieckie Voivodship	Yes
2	18 y.o.	23 y.o.	Mazowieckie Voivodship	No
3	17 y.o.	22 y.o.	Mazowieckie Voivodship	Yes
4	16 y.o.	21 y.o.	Mazowieckie Voivodship	Yes
5	17 y.o.	21 y.o.	Śląskie Voivodship	Yes
6	17 y.o.	20 y.o.	Mazowieckie Voivodship	Yes
7	17 y.o.	20 y.o.	Lubelskie Voivodship	No
8	15 y.o.	19 y.o.	Mazowieckie Voivodship	Yes
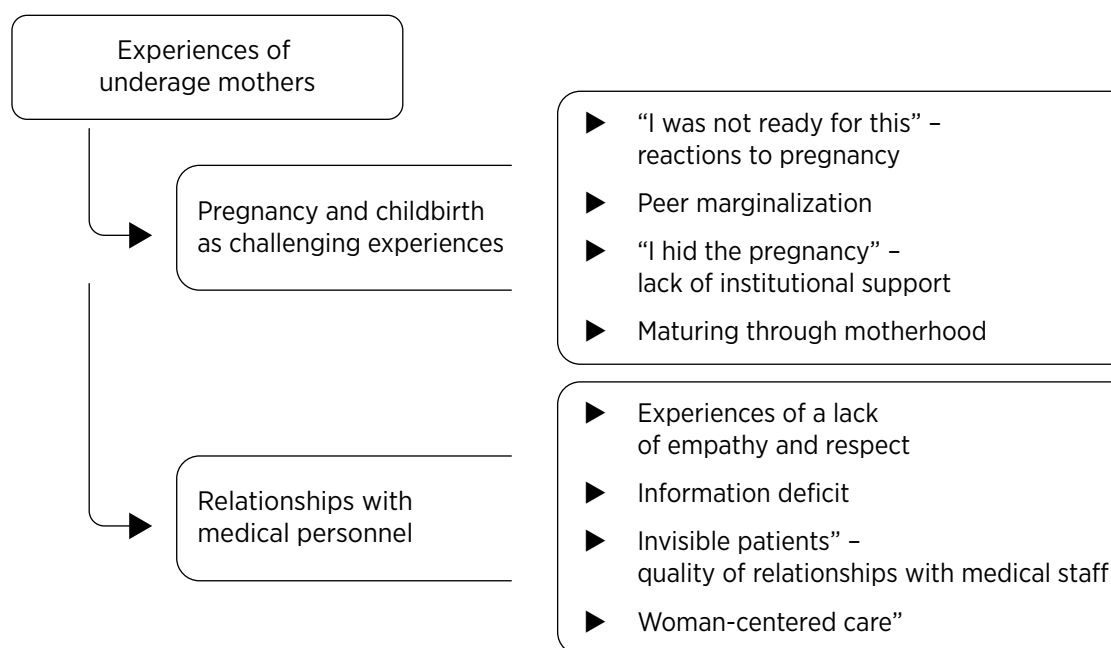
Figure 1 Experiences of underage mothers – thematic categories identified on the basis of content analysis

The structure of thematic groups identified through content analysis is presented in Figure 1.

2.1. Pregnancy and childbirth as a challenging experience

For all respondents, early motherhood involved numerous emotional, social, and practical challenges. Analysis of their accounts shows that pregnancy and childbirth were deeply ambivalent experiences. They brought moments of joy, yet they were also psychologically and physically demanding. Participants strongly emphasized that these experiences were particularly burdensome due to their young age.

Limited emotional resources, lack of life stability, and often insufficient social and family support contributed to feelings of uncertainty and stress. The women described intense emotional strain, shock, fear, loneliness, and a pervasive sense of unpreparedness. These emotions were intensified by concerns about how others would react, including both close relatives and medical staff.

Many narratives also reflected distrust toward institutions, which often resulted in avoiding prenatal care and, in extreme cases, hiding the pregnancy until childbirth.

2.1.1. "I wasn't ready for this" – reaction to pregnancy

Most young women described a strong sense of destabilization and the need to rapidly adjust to the new reality of an unplanned pregnancy. Several accounts highlighted feelings of isolation and a lack of adequate emotional and material resources, reflected in concerns about financial insecurity and uncertainty regarding their relationship with the child's father. The dominant emotions were deep anxiety and fear of an unpredictable future. At the same time, some respondents expressed an emerging willingness to face the challenge ahead:

> It sort of turned everything upside down, definitely. And I was a bit scared of what was going to happen, I was really frightened. (R4)

At first it was a huge shock. A really big one. And at the same time, I felt immediate fear. I was almost alone. I was still in school, I didn't have a job. I didn't know how the father of the baby would react, and I knew it would simply change my whole future. I kept wondering if I would manage. (R7)

Six participants continued their education during pregnancy. Most of them, fearing social exclusion, decided to hide their pregnancy, which led to delayed medical consultation and prolonged lack of proper prenatal care.

Fear of stigma resulted in strategies of silence, adopted to avoid social judgment. One respondent described her experience:

> At school we had a presentation about social problems, and teenage pregnancy was one of them. Hearing the kids laugh and mock it, and seeing no disapproval or broader perspective from the teacher made me certain that I wouldn't get any support, so it felt safer to keep it to myself. (R5)

2.1.2. Peer marginalization

A recurring theme in the narratives of young mothers was the experience of being excluded from their peer environment, which often emerged early in pregnancy. Participants noted that early motherhood is perceived as a major deviation from the "normal" developmental trajectory of adolescence, creating growing distance between them and their peers. The loss of previous friendships was often described as an inevitable consequence of feeling different, lacking shared experiences, and facing misunderstanding or rejection:

> I lost a lot of friends because I was at a different stage in my life. They were going to parties and so on... you know. They had their topics, and I already had topics like cribs, strollers, things like that. (R1)

A big part of my friends, I think, turned away from me. At that age they had different interests, spent their time differently. They didn't have responsibilities or that level of responsibility like I did, so our paths just split. (R7)

I was definitely a bit socially rejected, because all my friends were going out and I couldn't. They didn't understand it, so I stopped having friends. (R6)

2.1.3. "I hid the pregnancy" – lack of institutional support

Pregnancy in adolescence, particularly in societies where parenthood is socially accepted primarily after reaching adulthood, is often accompanied by strong stigma. The women in this study, fearing social judgment and negative labeling, tended to avoid using available perinatal support services. Their accounts revealed a clear fear of disapproval, which led them to withdraw from antenatal classes and limit contact with institutional forms of prenatal care. Avoidance of childbirth education stemmed not only from limited resources but also from anxiety about being judged and stigmatized:

I wasn't under prenatal care and I didn't attend any childbirth classes. I hid the pregnancy until the very end. My first visit with a doctor who deals with pregnancy was actually a few hours before giving birth. (R5)

I didn't go to childbirth classes, I didn't want to reveal myself. (R8)

2.1.4. Maturing through motherhood

Participants often described early motherhood as a catalyst for personal growth. Looking back, they emphasized that becoming a mother at a young age allowed them to gain deeper self-understanding and develop emotional competencies such as empathy, tenderness, and sensitivity. Although early mother-

hood is frequently perceived socially as a misfortune, the women also experienced it as a period of significant psychological development and an opportunity to strengthen their relationship with the child's father:

One positive thing is that you learn, you experience, and you gain so much more than an ordinary teenager. You learn this unconditional love, because not everyone gets it from their parents. You become wiser, simply wiser, if you choose to. More tender, more empathetic. For me, my son really developed my empathy. I think I might even have too much of it now. I became more sensitive, I just appreciated life more, appreciated the gift that life is. (R2)

I gained more trust in my partner, and our relationship is definitely stronger now. And the fact that I already have a child, and that I will raise them sooner and later have more time for myself, for growing and developing... I think that despite everything I went through, I wouldn't trade my child for anything, for any kind of freedom. (R7)

2.2. Relationships with medical personnel

For most underage mothers participating in the study, interactions with medical personnel were difficult and emotionally taxing. Their accounts revealed a recurring theme of being perceived primarily through the lens of their age and life circumstances. Respondents pointed to a lack of empathy, emotional distance, and verbal and nonverbal cues they interpreted as dismissive or degrading. Several narratives also highlighted a clear asymmetry in the relationship: young patients felt insufficiently informed about medical procedures, and their emotional needs and questions were often minimized.

2.2.1. Experiencing a lack of empathy and respect

Most participants recalled situations in which medical staff commented on their age or personal circumstances in a humiliating way, undermining their sense of safety and trust in the care they received:

> The doctor said that since I knew how to stick my butt out to make this baby, why couldn't I do it for the anesthesia? Hearing something like that was really hard. It broke me down mentally. (R7)

> The woman who was taking care of me during childbirth was terrible to me. I was scared to talk to her. (...) She told me to stop screaming and to shut up. (R7)

One respondent emphasized the need for her physical and emotional boundaries to be respected, a need ignored by the medical staff. At age fifteen, she requested to be examined by a female gynecologist — a request that should have been treated with particular care given her age:

> The problem came when, at 15, I didn't want to be examined by a man. The doctors, who didn't know anything about my history — I could have been raped, for example — made a huge problem out of my request to be examined by a woman. [...] They rolled their eyes and spoke to me with clear contempt in their voices. (R5)

Some women described a lack of emotional support after giving birth. They felt excluded and overlooked within the perinatal care system and wanted to be treated the same way as adult mothers:

> I had very clear signs that I had postpartum depression or just depression in general. [...] I wasn't coping mentally or emotionally. And to this day I'm very angry that no one in the hospital sent me to a psychologist, that I didn't get any emotional support. I think it would've been easier for me to get through it if I'd had that help. And hospitals do have the ability to provide it. (R6)

2.2.2. Information deficits

The accounts of underage mothers reveal a clear pattern of inadequate communication from medical personnel: lack of information, unclear procedures, and exclusion from decision making. These narratives show the disorientation and helplessness experienced by young women during hospitalization, childbirth, and postpartum care. Respondents recalled numerous situations in which they were left without any explanation. They did not know where their newborn was, what the next steps in treatment would be, or when they would be discharged. This lack of transparency heightened fear and frustration and deepened their sense of isolation and loss of control. Particularly distressing were situations in which actions were taken regarding the baby without the mother's knowledge or consent, such as removing the newborn for examinations without notice:

> In the hospital I didn't know what was going on. I stayed there for two days and no one explained to me why I was waiting so long. Zero information. (R8)

> I still remember the situation when it was the middle of the night and I heard a baby crying. I woke up because of the crying. And it turned out that the midwife took my baby for some tests, but didn't even tell me she was taking him. I got really angry. (R6)

Women also described receiving contradictory information from medical staff. Uncertainty about the discharge date or upcoming diagnostic steps negatively affected their emotional state and sense of security. The absence of clear, consistent, and empathetic communication at such pivotal moments in their lives created growing tension, anxiety, and anger:

I was getting completely different information. At one point they said I'd leave the next day, then that maybe it would be a week. It wore me down mentally because I didn't know what was happening. (R6)

During the delivery itself, I didn't get any information about how everything would proceed or what would be done at each moment, or what decisions would be made. (R7)

2.2.3. "Invisible patients" – quality of interactions with medical staff

Most respondents highlighted a clear contrast between care received within the public health system (NFZ) and care obtained in private clinics. The standard of public healthcare was often inadequate, lacking respect and even basic humane treatment. This led many young mothers to seek private medical care, where they felt acknowledged and supported without moral judgment. They emphasized that empathetic, non-stigmatizing care allowed them to feel like "normal" mothers:

I went for my first visit... I think the first two visits were under the public system. And I wasn't satisfied. The gynecologist I saw was very rough and unpleasant. He didn't tell me anything, I didn't learn anything at all. I left even more terrified and shaken. [...] But when I went for a private visit, I saw that they treated me differently. Not like I had ruined my life, but just normally, humanely, I would say. But that was because I had private visits. I usually see the difference when I go privately. (R1)

When I was going to the doctors at the hospital, I met a really nice doctor who took care of my pregnancy. [...] He was a great person, always understanding, never judged me, always guided me, and I think he even did more ultrasounds than he had

to, so I could look at the baby. That was nice. I felt calm and treated like a normal mom. (R6)

The narratives also strongly reflected feelings of being ignored or abandoned by medical staff. Young mothers described situations in which they were left without supervision, information, or basic care during their hospital stay. Their physical and emotional needs were overlooked. Instead of feeling cared for, they felt like a burden rather than patients requiring particular sensitivity:

They were unfriendly, hostile, I don't know why. Instead of helping a young person, there was zero help. I was lying in bed for a long time before giving birth, and they hooked me up to the machine that monitors the baby's heartbeat. They told me not to move and left, and no one came for four hours. I was so thirsty. I called out for someone, but no one came. (R8)

I had no cooperation with the staff at all, because no one even came into our room. No one asked how we were feeling or checked whether everything was healing properly, whether the wound was healing... (R6)

2.2.4. Woman-centered medical care

Despite many difficult experiences, some respondents recalled situations in which they encountered attentiveness, kindness, support, and professionalism from medical staff. These interactions helped foster a sense of safety and shaped their overall perception of medical care in a positive way:

There was this wonderful doctor later on who explained everything to me — what to do, how to do it, how to take care of the baby. And even if something didn't seem right, I could call her. (R8)

The midwives and nurses gave me tremendous support, both emotional and physical. [...] They tried to ease my tension by joking with me all the time. They explained the entire process of childbirth. (R5)

Participants also spoke about positive aspects of their perinatal experience related to genuine support from staff, especially in the area of lactation. These moments of care and engagement played an important role in strengthening young mothers' sense of safety, competence, and agency. Respondents emphasized the value of individualized attention and the staff's willingness to help. They described specific midwives who took the initiative to assist with breastfeeding, offering not only technical guidance but also empathy, gentleness, and understanding:

I have very fond memories of the midwife who helped me position the baby for breastfeeding. She gave me many useful tips, but she was also incredibly kind, and I felt safe with her. (R7)

I remember a lactation specialist came to see me and said that we would do it manually. And she just started expressing the milk by hand. They gave me a small cup, and I expressed the milk manually from each breast. And it actually helped me. (R6)

3. Discussion

This study described the experiences of eight underage mothers during pregnancy and childbirth, with particular focus on the attitudes and behaviors of medical personnel toward their early motherhood. Analysis of the interviews shows that the young age of the patient often prompted negative reactions from healthcare providers, reflected in dismissive or derogatory treatment. At the same time, several respondents also reported episodes of genuine support and respect. Beyond the healthcare setting, participants experienced social stigma and exclusion from their peer groups.

Existing research shows that young maternal age (15 to 19 years) is frequently associated with mistreatment by medical staff (Bohren et al., 2019). These findings align with results of the present study, in which respondents reported disrespectful attitudes toward their early motherhood and insufficient access to information regarding their own and their child's health.

Our data show that some participants were not informed about their own medical condition or their newborn's health in a complete and comprehensible manner. Such practices contradict Article 9 of the Act on Patients' Rights and the Patient Ombudsman (Journal of Laws 2024, item 581), which guarantees every patient, including minors, the right to information. Under Article 17(1–2) of the same Act, minors aged 16 and above also have the right to receive information about their treatment and to provide consent jointly with a legal guardian.

The attitudes of medical personnel are crucial for the quality of care offered to underage pregnant patients. Other authors emphasize that a lack of age-sensitive and trauma-informed approaches can significantly disrupt the relationship between young patients and healthcare staff, leaving adolescents feeling unheard, judged, or shamed (Michaud et al., 2020). A systematic review by Chilinda et al. (2014) found that negative attitudes among healthcare workers, including unprofessional behavior and the absence of youth-friendly reproductive health services, constitute major barriers to adolescents' access to healthcare. Such attitudes can discourage young women from seeking perinatal care. Similarly, Jonas et al. (2017) reported that mistreatment and disregard for young women's preferences serve as significant barriers to accessing prenatal and other health services.

Fear of social judgment and stigma can lead to delayed presentation to healthcare providers and prolonged lack of adequate prenatal care. These delays are associated with increased risk of pregnancy complications and adverse health outcomes for both the mother and the child (Gruszyńska, 2023; Lee et al., 2016). Other studies highlight that adolescent mothers are at higher risk of perinatal complications affecting their own health and the health and devel-

opment of their infants, underscoring the importance of early medical monitoring (Diabelková et al., 2023; Mann et al., 2020). Our findings confirm that fear of stigma, family repercussions, and negative reactions from others contributed to concealment of pregnancy and limited or absent medical care.

A positive aspect identified in this study was genuine support from medical personnel, particularly in the area of lactation. Respondents emphasized the importance of individualized care and the willingness of staff to assist. Acts of care, attention, and emotional presence played a significant role in fostering a sense of safety, competence, and agency among young mothers. Prior research shows that breastfeeding difficulties can be especially stressful for adolescent mothers, and positive, empathetic care helps improve psychological comfort and supports parental competence (Decker et al., 2021).

Effective support for underage mothers during the perinatal period requires an integrated approach that takes into account their unique emotional and social needs. Only holistic and empathetic perinatal care can promote the development of mature, responsible parenthood. Failures in this area may worsen young mothers' mental health and undermine trust in the healthcare system (Lesinskienė et al., 2025). The quality of interactions between underage pregnant women and medical personnel plays a central role in building safety and trust. A model of perinatal care based on partnership, respect, and inclusion of minors in the decision-making process can improve their experiences and promote more positive attitudes toward the healthcare system in the future (Pietrusiewicz, 2018). Inadequate care may also stem from dysfunctional relationships between patients and staff. Failure to address basic needs during labor can lead to traumatic memories that persist for years (Afulani et al., 2020).

Our study also found that young women often avoided antenatal classes due to organizational difficulties and fear of negative judgment. A systematic review by Athinaidou et al. (2024) demonstrated that participation in antenatal education effectively reduces fear and anxiety related to childbirth and increases acceptance of vaginal delivery without medical intervention. Other research shows that antenatal classes improve maternal mental health and promote vaginal

delivery (Zaman et al., 2025). For underage mothers, who often have limited access to reliable information and social support, participation in such programs may serve as an important protective factor, supporting emotional stability and facilitating adaptation to their new role. Antenatal education programs provide not only practical skills but also social support, which is especially important for young women at risk of marginalization. Research confirms that adolescent mothers often lose previous social relationships, both due to self-withdrawal and distancing by peers (Gruszyńska, 2023; Wiemann et al., 2005).

Our findings further indicate that respondents who received support from a partner or family described their experiences more positively. Lack of support deepened feelings of isolation and made it more difficult to adjust to motherhood. Participants frequently cited social exclusion as a negative consequence of early motherhood. Clemmens (2001) demonstrated a direct link between social support for adolescent mothers and their interactions with their infants, suggesting that lack of support may negatively affect maternal attitudes toward the child.

The data also show that some respondents encountered supportive and respectful attitudes from particular healthcare providers, indicating that the quality of care varies depending on the institution and the interpersonal competencies of individual staff members. Similar conclusions appear in the *Rodzić po Ludzku* Foundation report (2018), which found that women's experiences of perinatal care depend strongly on the facility in which care is provided.

A report by the European Parliament on the reproductive health needs of adolescents in EU countries noted that nearly half of the member states lack specialized youth health centers that could provide comprehensive, age-appropriate care (Michaud et al., 2020). This often leads to insufficient professional training and inadequate preparation of healthcare personnel, negatively affecting care quality.

Perinatal care for pregnant adolescents in Poland centers primarily on standard medical procedures, without significant differentiation from the care provided to adult women (Drosdzol-Cop et al., 2023). The narratives of young mothers point to a lack of systemic psychological support and insufficient ad-

aptation of staff attitudes to their needs. A key issue appears to be the absence of protocols designed for this patient group and the lack of a dedicated care coordinator who could ensure consistent, interdisciplinary support throughout pregnancy, childbirth, and postpartum.

Best practices from the United Kingdom (National Institute for Health and Care Excellence, 2010) and Australia (The Royal Australian College of General Practitioners, RACGP) (Mann et al., 2020) emphasize the importance of comprehensive, individualized care for pregnant women in socially vulnerable situations. These models include continuous support from a designated midwife or family physician acting as a care coordinator, along with integrated psychological support, health education, and prevention of mental health disorders. Such an approach increases access to medical services for women in particularly vulnerable life circumstances, improves health outcomes, and strengthens their confidence in the healthcare system.

4. Limitations

This study was conducted on a small sample, as only eight women agreed to participate. This limits the representativeness of the findings and prevents generalization to the wider population of underage mothers in Poland. The conclusions should there-fore be viewed as a qualitative exploration of the phenomenon rather than a representative picture. Furthermore, the study was retrospective. Participants described events that had occurred three to five years earlier, which introduces the risk of recall bias, particularly since the events involved intense and often traumatic experiences. Given these limitations, the findings should be treated as a starting point and an indication of the need for further, more comprehensive research involving a larger sample.

Conclusions

The study revealed significant gaps in empathetic communication from medical personnel toward underage mothers, contributing to their feelings of confusion, stigma, and reduced sense of safety. These findings highlight the urgent need for staff training in patient rights, effective communication, reporting inappropriate behaviors, and understanding the specific needs of this patient group.

The variation in the experiences of underage mothers underscores the lack of consistency in the quality of care, stemming from the absence of systemic solutions addressing their needs. Introducing a dedicated care coordinator for this population could help ensure more coherent, individualized, and supportive perinatal care.

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The use of social network analysis (SNA) in educational psychology

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Abstract: The aim of this article is to present the possibilities offered by Social Network Analysis (SNA) in educational psychology research. The first part discusses the general principles of the network approach, with a particular focus on social networks. This is followed by a presentation of selected features of network data and a review of the most important analytical techniques, both descriptive and inferential, offered by network analysis. The final section gives examples of the use of SNA in educational psychology research published in the last few years. The discussion in the article concludes with the thesis that the contribution of SNA to the analysis of variables in the field of educational psychology seems particularly interesting. This alternative way of understanding and analysing data from the field of educational psychology, opens up new possibilities for exploring issues, as it allows a slightly different way of modelling and analysing relationships between variables, designing new strategies for psycho-educational interventions or better explaining the aetiology of certain phenomena. SNA can therefore respond to the needs of both psychologists academically involved in education as well as psychologists-practitioners.
Keywords: educational psychology, research, SNA, social network analysis, social relations

1. General characteristics of the network approach and Social Network Analysis (SNA)

The origins of network theory date back almost a century (see e.g. McGloin, Kirk, 2010), but it entered the social sciences, including psychology, much later. A particularly dynamic development took place in the early 1990s, when, on the one hand, important theoretical considerations for this approach were published and resonated in the scientific community (see e.g. Coleman, 1990, after: Gilman, Carboni, 2022), and, on the other hand, user-friendly analysis software was developed (Brass, 2022). Researchers point out that network theory can be extremely useful and widely used in the social sciences, such as sociology or criminology, to describe and explain various types of social phenomena, e.g. the basis of crime, analysis of social groups, the development of crime suppression interventions and tactics, social control, group efficacy, or social disintegration (see e.g. McG-

loin, Kirk, 2010). In recent years, network research has also been gaining popularity in psychology (see e.g. Kornienko, Rivas-Drake, 2021). However, it is important to note that this is mainly happening in two fields – social psychology, as well as clinical psychology and psychopathology. In social psychology network analyses are used to examine, for example, how prosocial and antisocial behaviour spreads in the network through connections between network participants (van den Bos et al., 2018), how neighbours influence non-violent but socially rule-breaking behaviour of adolescents (Burt et al., 2019), or how the process of "contagion" of suicide attempts among adolescents takes place in a network of interpersonal relationships (Zimmerman et al., 2016), etc. In clinical psychology and psychopathology, on the other hand, the network paradigm analyses, for example, the different symptoms of disorders, examining what the key symptoms are and how they affect each other (see, e.g. Fried, Cramer, 2017; Isvoranu et al., 2017). However, in general, modelling psychological phenom-

ena based on network theories is not yet very popular. A significant shortage of this type of research can be seen, for example, in Polish educational psychology. Meanwhile, the potential contribution of the network model to the analysis of psychological variables seems particularly interesting. According to network science researchers, this alternative way of understanding and analysing phenomena, which is relatively new in the social sciences, offers great opportunities, as it allows to model and analyse relationships between variables (e.g. symptoms, psychological processes, personality traits, environmental factors, etc.) in a slightly different way than traditionally, to design new forms of prevention and intervention strategies or to improve the search for aetiological mechanisms (see e.g. Borsboom, 2017; Fonseca-Pedrero, 2018).

What is the network approach? A network is an abstract model that contains nodes and edges (Hevey, 2018). Nodes represent objects or variables in the research, while edges represent connections between nodes (Fonseca-Pedrero, 2018). In psychological research, nodes can be individuals or any kind of variable, such as, for example, psychopathological symptoms, personality traits, attitudes, environmental influences, risk factors, etc. (Fonseca-Pedrero, 2018; Isvoranu et al., 2017). Edges, on the other hand, are different types of connections, i.e. relationships between nodes (e.g. correlations, friendship relationships, etc.), which can be modeled from the collected data (Hevey, 2018). It is these connections that are central to network theory, and some researchers argue that scientific theories cannot ignore the network effects caused by the interconnectedness of variables (see e.g. Barabási, 2012).

One type of networks are social networks, to which this article is devoted. A social network is generally defined as a specific relationship or bond between a group or groups of nodes (Sweet, 2016). According to network theory, the relationships or bonds mentioned are the so-called edges. In social networks, nodes are most often individuals, but this is not necessarily always the case – as in some network contexts, nodes can be, for example, school classes, departments at a university, etc. (see e.g. Sweet, 2016). Social networks are encountered in a variety of situations – these can be, for example, friendships between children, collab-

oration and information exchange between teachers, participation in the same training courses, etc. Social Network Analysis (SNA), on the other hand, is a set of theories and methods that take into account direct and indirect relationships, in a clearly defined context (Gilman, Carboni, 2022). As McGloin and Kirk (2010) observe, the basic premise of SNA is that individuals are interdependent and that these dependencies influence their behaviour. On the one hand, SNA allows us to look at the functioning of a given person from the perspective of his or her relationships with others, and on the other hand, they enable us to take a comprehensive view of social networks – all interactions and connections in a given community or social group. Social networks can therefore be analysed both at the level of the individual and the group as a whole.

The main difference between traditional surveys and SNA is the type of data being operated on. Traditional research usually analyses the *individual attributes* of individuals that affect their functioning, in interpersonal relationships, in the school environment, etc. In contrast, in SNA, the basis of analysis is the relationship between nodes, i.e. the links between some objects (e.g. individuals or groups). Thus, it can be said that traditional research operates on *attributional data*, while SNA operates on *relational data*. McGloin and Kirk (2010) give the following example to explain the difference between the data mentioned: the extent of the deviant norms a person reports is an attribute of that person, whereas the intensity or frequency of his/her communication with friends about these norms is an exchange relationship. As already mentioned, it is implicit in SNA that the quantity and quality of links between individuals (or other network objects) can be an important factor influencing different behaviours (McGloin, Kirk, 2010).

Since, as mentioned earlier, SNAs operates on relational data, in order to carry it out we need data on the links between objects (i.e. links between nodes; McGloin, Kirk, 2010). The repertoire of such links is very wide, making the potential for exploiting SNA enormous. A link can be, for example, friendship, co-membership, communication, similar behaviour, etc. It should be added that,

depending on the nature of the links or the hypotheses posed, relational links can be undirected or directed (this thread will be developed a little further). Links between nodes may have a specific value. For example, researchers may code relationships according to a certain level of attachment or commitment (e.g. the number of days per week that two people communicate). In addition, these values may reflect separate relationships (e.g. friends versus siblings) or combinations of these, which is called a *multirelational network* (McGloin, Kirk, 2010).

SNA is based on three mathematical foundations: (1) graph theory, (2) algebraic models, and (3) probability theory (Wasserman, Faust 1994, after: McGloin, Kirk, 2010).

Historically, network science initially developed using graphical approaches to represent relationships between nodes. Graph theory refers to well-known sociograms in which individuals (or any other nodes on which the study focuses) are represented by points, and social relationships are represented by lines between the points (Moreno, 1934, after: McGloin, Kirk, 2010). In classical sociograms, the graphical representation of the alignment and distance between nodes is of little importance. The edges of the network may be weighted or unweighted. In unweighted networks, nodes are connected without specifying the strength of this connection, whereas in weighted networks there is a coefficient that indicates the size or magnitude of this connection. This value oscillates between 0 and -/+1, representing the type of relationship and relative effect of a node on another node. In addition, the edges of the network can be undirected or directed. Undirected networks are those in which the direction of the relationship between nodes is not indicated, whereas in directed networks the direction of the relationship between nodes is specified, as shown by the arrows (Fonseca-Pedrero, 2018). These two types of graphs can help represent different types of networks, with the prior visualizing e.g. Facebook friends well, while the latter more accurately shows e.g. a work hierarchy.

Of course graphs are a great help to researchers, as they allow them to quickly visualise the network of interconnections and relationships between nodes. However, it is a fairly simple technique and insuffi-

cient for more advanced research. SNA allows for much deeper analyses as it includes a wide range of measures of social network properties. As mentioned earlier, some of these measures look at the characteristics of the network as a whole, while others allow us to look at a single entity, or node, in the context of the network as a whole. There are many different ways to describe how individuals relate or interact in the network. For example, measures of distance and shortest path length, centrality of connectivity and clustering can be used to analyse network structure (Fonseca-Pedrero, 2018). Only a few commonly used characteristics will be presented here. The interested reader will find a more complete list in the work by Costantini and colleagues (Costantini et al., 2015) or Wasserman and Faust (1994; after Sweet, 2016).

One obvious description of a network is the number of links between nodes in the network. The proportion of links occurring in a network to all possible links is called density. It is a measure of how well connected the network is, which in an analysis of network performance can indicate, for example, how quickly information flows, how much information is shared and even how well individuals are served (Sweet, 2016). Density, on the one hand, provides a common measure by which researchers can compare groups of different types and sizes (e.g. to test for cohesion across ethnic groups of different sizes), but also provides an opportunity to test theoretical models and hypotheses about the role of network density on group behaviour (e.g. whether more cohesive classes are more engaged in learning). Another frequently calculated network parameter is reciprocity, i.e. the reciprocity index, which is calculated as the proportion of found links that are reciprocal to the total number of links (Sweet, 2016) and being used for e.g. comparing ties in friendship nominations.

In addition to measures relating to the network as a whole, SNA also includes measures relating to individuals (or any other objects that are nodes) in the network. In the network structure, not all nodes are equally important. Centrality measures allow the importance of a node to be determined in the context of other nodes in the network (Borgatti et al., 2009). For example, a node is degree-central if it

has many connections, and peripheral (i.e. outside the network) if it has few connections (Fonseca-Pedrero, 2018). Identifying such nodes can be very useful. For example, knowledge of the most popular and least popular students in a class would be useful for designating seating, managing group dynamics or disseminating important information (see e.g. Sweet, 2016). There are several centrality measures, and each of these measures reflects a slightly different aspect of what it means to be a central node in a network. The most common factors considered in the research are: degree centrality (i.e. the number of incidental connections to a node), node strength (i.e. how strongly a node is directly connected to other nodes; the indicator is based on a weighted sum of the number and strength of all connections of a given node in relation to all other nodes), closeness (i.e. how close a node is from other nodes in the network in terms of shortest path length), betweenness (i.e. how important a node is in the shortest paths between other pairs of nodes, i.e. how often it connects two other nodes lying on the shortest path between them), clustering (i.e. to what extent a node is part of a cluster of nodes; provides insight into a node's local redundancy – whether its removal affects the ability of neighbouring nodes to continue to influence each other; Hevey, 2018; Sweet, 2016). Although the application of these measures may at first sight seem purely theoretical, nothing could be further from the truth. As already mentioned, network measurement makes it possible not only to determine which people are the most "popular" members of a network (i.e., in-degree), but also to answer a number of other questions. For example, to what extent does communication within the network need to "go through" specific individuals (i.e. betweenness centrality; McGloin, Kirk, 2010), to whom students turn for help (whether most turn to one or a few selected individuals in the school or to many different ones), who in the group is most important to maintain group cohesion or how information spreads in the community (Sweet, 2016).

In addition to graphs and descriptive measures, network analysis allows for more advanced calculations such as network autocorrelation models. Many empirical studies rely on statistical methods that assume that individuals are independent of each other, which may not always be true. If there is an interdependence between the behaviour of individuals in a social network, researchers need an inference strategy that takes this into account. These needs are met, among others, by the aforementioned autocorrelation models of networks, which explicitly take into account the fact that there is interdependence between individuals, i.e. nodes, and allow certain social processes to be captured, such as, for example, the diffusion of ideas and innovations (McGloin, Kirk, 2010). Of course, networks differ in the extent of interdependence between entities/nodes. In some, this interdependence may be minimal; nevertheless, as McGloin and Kirk observe (2010, p. 176): "if the nodes cannot be assumed to be independent, then analytic methods that do assume independence may not be able to capture the true importance of group structure on behaviour".

2. Examples of the use of SNA in educational psychology research

Educational institutions, such as schools are environments in which students' knowledge, competences, attitudes, mental processes and, finally, behaviour are shaped and modified through relationships. Social interactions with teachers, peers and other members of the school community are an integral component of how students function and how they perceive themselves, their world and their future (see e.g. Gilman, Carboni, 2022; Grbić, Maksić, 2022). For this reason, there is an increasing demand in source literature for educational research to consider a broader pattern of social relations than has been the case to date, using a set of theories and methods that both complement and extend the most commonly used approaches (Neal, 2020; Sweet, 2016)

Although, as mentioned in the introduction, research within the SNA paradigm has seen an increase in popularity in the social sciences in recent years, educational psychology does not seem to have kept pace. Gilman and Carboni (2022) conducted an analysis of articles relating to "social networks",

"social network analysis" and "networks", which showed that fewer than 20 articles on this topic had been published in English-language school psychology journals in the last two decades (up to 2022)! In addition, as the researchers point out, many of these texts date from more than a decade ago. Even less attention is paid to SNA in Polish educational research. The author of this article has not been able to find a single Polish study from the field of educational psychology conducted in the paradigm of network theory. This is surprising, given that many of the issues of interest in this field both influence – and are influenced by – the social context. This could include, for example, the cooperation between family and school, the functioning of school classrooms, or even the process of distributing information in the school social network. In addition, analyses to date have shown that even – as was previously believed- individual attributes and choices (such as cheating in learning, or literacy achievement, etc.), are partly determined by the social context. It would therefore be all the more expedient to broaden the research on them and to take into account the contribution of direct and indirect social relations (Gilman, Carboni, 2022).

To date relatively few works in educational psychology, conducted within the framework of network theory, have shown, that SNA provides a new perspective on how social interactions can affect, for example, aggression at school, friendships between students, the development of language skills, relationships within the same and diverse ethnic groups, the sense of belonging to the school community, and many other important issues related to education (Gilman, Carboni, 2022). At this point, it seems justified to give some examples of how SNA methods have been used to investigate, describe and explain selected problems in the field of educational psychology.

In social groups, such as school peer networks, children and young people often compete for power and dominance over others. In doing so, they may use, with varying degrees of success, diverse strategies to gain power, such as coercive or cooperative-oriented strategies. To understand patterns of power in peer groups, Andrews, McDowell, Spadafora and Dane

(2022) applied social network methods to a study of several hundred grade 5 to grade 8 students attending a Canadian primary school (N = 466). The researchers examined whether and how social network centrality and social network prestige were linked to social strategies, social power and peer reputation. Peer nominations were used to assess the centrality and prestige of the social network (through friendship nominations), social power strategies (coercive and collaborative strategies), social power and peer reputation (popularity and likability). The results indicated that coercive and cooperative strategies were used by youth with both high centrality and prestige, but only high prestige was associated with power, popularity and likability. At the same time, the research carried out has shown that the SNA approach can broaden knowledge of the structure of social relations and power structures in the school environment, and has practical implications for teachers and educational psychologists.

Davila and Kornienko (2022), on the other hand, were interested in adolescents establishing and maintaining friendship relationships. Building on a developmental psychopathology perspective and previous research showing gender differences in social tasks and friendship structures, the researchers used longitudinal SNA methods to examine how fears of negative evaluations (FNE) and gender interact to jointly shape friendship dynamics, and to characterise their distinct roles in how adolescents make new friends, maintain existing friendships and become more like each other over time. The participants in the survey were 1,034 secondary school students, from grades 6 to 8. Peer networks were assessed at two time points, 1 year apart. The results showed that girls were more likely to make new friends and maintain existing friendships when they had lower levels of FNE. In contrast, boys were more likely to make new friends and maintain existing friendships when they had higher levels of FNE. In addition, girls with low FNE levels were more likely to maintain friendships with others who also had low FNE levels, while boys with high FNE levels were more likely to maintain friendships with friends who had low FNE levels. The results also showed a significant effect of peers on FNE, which

resulted in friends becoming similar to each other in terms of FNE levels over time, while there were no significant gender differences in these processes. In light of the results, it can be concluded that FNE reinforces gender differences in adolescents' tendency to form and maintain friendship networks, while at the same time the influence of peers on FNE levels is the same for boys and girls.

In today's increasingly ethnically and culturally diverse world, the educational environment is also increasingly multicultural. Rambaran and colleagues (2022a) pointed out that ethnically and racially diverse schools provide students with opportunities for social interaction with peers of the same or different ethnicity, which can shape their sense of belonging at school. In their work, the researchers examined the extent to which friends of the same or different nationality influence the sense of belonging at school. The participants in the survey were 4,461 students from grades 9 to 12 attending two large US secondary schools. Data were collected from participants in three waves, at 6-month intervals. Using a longitudinal social network analytical approach, it was not found that students specifically selected friends of the same ethnicity. At the same time, however, it was discovered that students remain, or over time become, more and more similar to their friends of the same nationality, but not to their friends of another nationality. It can therefore be concluded that friendships of the same ethnic group shaped students' sense of belonging more than inter-ethnic friendships, although it should be noted that the strength of these effects varied according to the location of the school. Expanding on the knowledge that friends – especially those who are members of the same ethnic group – are a significant factor influencing feelings of belonging (or lack thereof) in the school environment has important implications for educational psychology.

At this point, it is also worth mentioning another study by Rambaran and colleagues (2022b) conducted in the SNA paradigm. Their aim was to answer the question to what extent the defence of bullying victims depends on the sympathy or antipathy towards them, and the relationship of the mentioned variables to the bullying norms operating in the school classroom. A total of 1,272 fifth-grade primary school students were surveyed. The SNA showed that children are more willing to defend those victims whom they themselves like, who like them, and towards whom they share sympathy with their classmates, while they are reluctant to defend victims whom they themselves dislike, who dislike them, and towards whom they share antipathy with their classmates. Furthermore, the analysis showed that norms of bullying had an ambiguous effect on the relationship between defence and sympathy or antipathy towards victims of bullying.

Tannoia and Lease (2022) used the SNA approach to explore in more depth the social relationships of young children who display symptoms of attention deficit hyperactivity disorder (ADHD). Drawing on the source literature, the researchers focused on the attention deficits (IA) and hyperactivity-impulsivity (HI) characteristic of ADHD, which are often associated with problems in interacting with peers. The main research problem was to answer the question: is the reluctance to play with a peer perceived as HI and/or IA, mediated by the perception of that peer as reactively aggressive, instrumentally aggressive and/or anxiously withdrawn? In other words, the aim was to investigate whether IA and HI are directly related to peer difficulties or indirectly through their association with problem behaviours, e.g. aggression. The participants were 387 fourth and fifth grade students nested in 21 class peer networks. Participants nominated their class peers as IA, HI, aggressive, anxiously withdrawn and least liked. Analyses were conducted separately for each class peer network, and meta-analytical procedures were used to compile the results and calculate effect sizes across networks. We found that reactive and instrumental aggression did not mediate the relationship between IA/HI and peer resentment. In addition, perceiving a peer as anxious and withdrawn was not associated with nominating them as IA, HI or disliked. As the researchers conclude, for children, the peer's IA and HI alone are sufficient to contribute to their aversion to peers who exhibit such behaviours, regardless of the co-occurrence of aggressive behaviours.

Based on the research cited, it can be concluded that thinking about empirical data in terms of networks and applying network analysis methods to research problem solving can provide unique insights into the psychological processes present in education.

3. Restrictions on the use of SNA

Like all statistical models, the network model is not a tool without certain limitations. One of the more frequently mentioned problems by SNA experts is access and data collection. McGloin and Kirk (2010), for example, highlight two problems. In their view, firstly, researchers should be very considerate about the sampling procedure. Ideally, the social network is complete and reflects the entire population of interest to the researcher. In some cases, it is possible to include the entire network in a survey, e.g. when surveying a specific class in a school or an entire department in a company. In such cases, the population has clearly defined boundaries. However, often sampling is much more complicated, both conceptually and practically, because the population boundary is unclear. The researchers give the example of a peer network or street gang study, where you start sampling people at school or on the street. In this case, in order to capture the network, the researcher should keep track of each identified friend and then "friend of a friend", etc., which can be an endless exercise. At some point he/she will therefore be faced with the need to decide when the network boundary has been "reached" and justify this accordingly Ideally, this boundary should have a conceptual value and not be based solely on ease of access to network members or previous research work. A similar sampling problem will be encountered by researchers interested in ego-centric networks. Ego-centric networks typically contain individuals with whom a given individual is connected (via any connections of interest), as well as any connections between the alters (i.e. nodes in a network other than the ego network). This means that researchers who record respondents' ego-centric peer networks, but limit them to identifying only a handful of friends, may have problems with the accuracy of the model (McGloin, Kirk, 2010).

The second problem highlighted by McGloin and Kirk (2010) is missing data and the different techniques for dealing with this. In network research, missing data can cause a domino effect. McGloin and Kirk cite the following example: we have a project that collects network data of young people at a summer camp. The researcher is asking about the friendship bonds between the campers and is interested in the alcohol consumption in their personal networks (i.e. "ego-centric" networks). If one participant was absent on the day of the survey, there will of course be no data on their friendship network. However, unlike typical data, his absence may also affect the extent to which other participants have missing data. While it could be argued that this would not affect the structure of the other participants' primary networks, as they were able to identify him as a friend even though he was not present, it could affect the extent to which their peer group appears to engage in alcohol consumption. If drinking behaviour among friends is based on friends' self-reports, then if that absent student was identified as a friend in 20 networks, those 20 people now have missing data on any variable measuring the degree of peer drinking. This is an example of how in the SNA, under certain circumstances, the impact of missing data can quickly grow and create a domino effect in network studies (McGloin and Kirk, 2010).

When selecting variables for modelling, it is therefore necessary to decide which variables will be included and which omitted, as well as how they are to be measured. Each of these two processes introduces some error into the modelling process. Thus, like other methods of analysis (e.g. regression, SEM), network analysis is sensitive to the variables in the model and to the specific estimation methods used (Hevey, 2018). Frequent objections to the networks relate to their replicability (see e.g. Forbes, Wright, Markon and Krueger, 2017; Hevey, 2018). Moreover, researchers emphasise that there is a lack of more conceptual and methodological studies to estimate both the accuracy and stability of the network (Fried, Cramer, 2017). Identifying useful thresholds of acceptability for these parameters would be very useful in interpreting network models (Hevey, 2018).

Of course, the outlined problems associated with the use of SNA cannot be ignored. However, it should be emphasised that most of the challenges, e.g. regarding replication of surveys and generalisation of results, do not only apply to network modelling, but also to other, more traditional, methods of data analysis. Furthermore, several assumptions can be checked based on the expected properties of the network, as given a certain size, networks oftentimes obey several patterns, which can then be used to verify the correctness of the modelling. Moreover, substantial efforts are currently being made to develop new techniques of ensuring network validity.

Conclusions

On the basis of the considerations presented in this article, it can be concluded that knowledge of social network analysis methods can be useful for both researchers and practitioners involved in education in its broadest sense. Complex social systems exist in the educational environment, and to understand them, we need to understand the networks that define the interactions between the different elements that interact with each other. Considering psychological processes from this perspective offers alternative ways of conceptualising and answering important questions posed by educational psychologists.

What SNA offers – network exploration, calculation of network centrality measures, estimation of network features and even simply visualising networks using graphs – can be very useful for research. Among other things, these methods allow researchers to identify potentially important people in the network, compare their place and importance in the networks, determine how information travels through the network, and how this affects behaviour. Thus, social network methods have the potential to greatly assist research in educational psychology. As McGloin and Kirk (2010) observe, analysis of social networks is more than a set of methods – it is an orientation to understanding human behaviour that focuses on the importance of social relationships, and a set of tools that enable the study of social relationships and their consequences.

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Early maladaptive schemas and value-goals. Analysis in a group of young adults representing Generation Z[1]

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Abstract: *Introduction:* The aim of the study was to identify the relationships between early maladaptive schemas and preferred life values in a group of young adults from Generation Z. It was hypothesized that schemas, which according to theory are shaped in early childhood, may significantly relate to the value system of young individuals. *Method:* The study involved 191 individuals aged 18–35 years (M = 22.9; SD = 3.62). *The Young Schema Questionnaire (YSQ–S3)* and *the Schwartz Value Survey (PVQ-21)* were used. The correlational analysis was exploratory in nature and aimed to identify relationships between types of schemas and values. *Results:* Moderate relationships were found between schemas and values. Self-enhancement was associated with dominance, severity, and the need for acceptance. Conservation correlated with emotional inhibition and seeking approval. Openness to change was positively related to dominance and negatively to feelings of defectiveness. Self-transcendence was linked to self-sacrifice and the need for acceptance. *Conclusions:* The obtained results suggest that the value system may be partially rooted in unconscious emotional schemas. This opens new perspectives for the integration of clinical and motivational psychology and practical applications in psychotherapy and education.

Keywords: Generation Z, Young's schemas, Schwartz's values-goals

Introduction

Contemporary research points to growing mental health problems among young people, who are increasingly experiencing symptoms of anxiety, depression, chronic stress, and feelings of social isolation (Borg, Heffer, & Willoughby, 2025; Cheng et al., 2024). At the same time, psychological literature draws attention to the increasing difficulties in shaping identity, building a coherent value system, and formulating long-term life goals, which are essential components of personal and social development (Luyckx et al., 2023; Yanitskiy, Seryy, & Braun, 2020). These phenomena point to the need for an in-depth analysis of the psychological mechanisms underlying these problems, including, in particular, persistent patterns of cognitive-emotional functioning and axiological preferences, which significantly determine the way we perceive ourselves, other people, and the surrounding reality.

In clinical psychology, one of the models describing permanent patterns of mental functioning is Young's schema theory (2010). It assumes that as a result of unfavorable environmental conditions in childhood, in particular the failure to satisfy basic emotional needs, the individual internalizes permanent and dysfunctional beliefs about themselves and the world. These beliefs, referred to as early maladaptive schemas, become dominant cognitive-emotional

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1   Article in Polish language: https://stowarzyszeniefidesetratio.pl/fer/64P_grab.pdf

patterns that persist into adulthood and influence interpersonal functioning, self-esteem, and decision-making (Roediger, Stevens, & Brockman, 2018).

Young, with collaborators Klosko and Weishaar (2003) identified 18 schemas, which were grouped into five overarching domains: (1) Disconnection and rejection, (2) Impaired autonomy and performance, (3) Impaired limits, (4) Other-directedness, and (5) Over-vigilance and inhibition. These schemas function as internal motives, determining how reality is interpreted and patterns of behavior. The areas and their corresponding schemas are presented in Table 1.

Concurrently, Concurrently, in social and motivational psychology, a prominent position is held by Schwartz's Theory of Values (2017). In his conceptualization, values are a cognitive representation of motivational, desirable goals that are trans-situational, meaning they are applicable across multiple life contexts. Schwartz emphasizes that values comprise both a cognitive component (they are consciously recognized and verbally articulated) and a motivational component (they reflect the individual's needs and aspirations). The structure of values is universal and takes the form of a circular continuum, in which adjacent values are motivationally congruent, while values situated in opposition are antagonistic.

The classic model delineates 10 basic values, which are clustered into 4 higher-order categories (Bilsky, Janik & Schwartz, 2010):

1. Self-Transcendence: Universalism, Benevolence,
2. Openness to Change: Self-Direction, Stimulation (and partially Hedonism),
3. Self-Enhancement: Achievement, Power (and partially Hedonism),
4. Conservation: Security, Conformity, Tradition.

These values set the directions for action and are tightly linked to the individual's goals. Goals – conceptualized as intentions, aspirations, and strivings – constitute the motivational mechanism that gives direction to behavior. Schwartz emphasizes that values and goals remain in a close relationship – values indicate which goals are preferred, while the realization of goals serves the actualization of values (Sagiv & Roccas, 2021).

Although both Young's schemas (2010) and Schwartz's values (2017) relate to stable aspects of personality, empirical research analyzing the direct dependencies between these constructs is lacking. It is not known to what extent specific early schemas

Table 1. Model of early maladaptive schemas in the concept of Young et al. (2003)

Schema area	Schemas
I. Disconnection and rejection	1. Abandonment – Sooner or later I will be left alone again. 2. Mistrust – Getting too close is dangerous, I need to keep my distance. 3. Emotional deprivation – I am not getting support, love and understanding. 4. Defectiveness/Shame – I am worthless, therefore unworthy of love. 5. Social isolation – I am different from everyone around me.
II. Impaired autonomy and performance	6. Dependence/Incompetence – I cannot survive without the help of others. 7. Vulnerability to Harm or Illness – I'm so weak, I have to be on my guard. 8. Enmeshment/Undeveloped Self – I can't live without my parent/partner and they without *me.* 9. Failure – I am *a loser, others are better than me.*
III. Impaired limits	10. Entitlement/Grandiosity – I am allowed more than others. 11. Insufficient Self-Control/Self-Discipline – I can't stand it, it should be done by someone else.
IV. Other-directedness	12. Subjugation – My opinion means nothing, let others decide. 13. Self-Sacrifice – I have to forget about myself, I have to help others. 14. Approval-Seeking – I am valuable as long as others accept me.
V. Over-vigilance and inhibition	15. Pessimism – I feel some kind of misfortune approaching. 16. Emotional Inhibition – I can't show my feelings because I will be ridiculous. 17. Unrelenting Standards – I am only worthy when I achieve high results. 18. Punitiveness – Whoever makes a mistake must be punished.

Annotation: Translation of names describing schemas according to: Oettingen, Chodkiewicz, Mącik & Gruszczyńska, 2018. Definitions of schemas based on: Young et al. (2003).

can predict particular value patterns or, conversely, in what way the value system can modulate the activation or content of schemas.

It can be hypothesized, however, that schemas – e.g., those related to abandonment, mistrust/abuse, dependence, or uncompromising standards – shape the way values are selected and realized (Vreeswijk, Broersen, & Nadort, 2015). A young person may prefer certain values not as a result of mature and autonomous choices, but rather as a response to anxiety, shame, or feelings of insecurity – which are secondary motivations rooted in schemas. For example, the mistrust schema may favor the preference for values such as security or conformity, as a defense mechanism against a real or imagined threat. (Cieciuch & Schwartz, 2018).

The integration of schema theory and value theory may provide a more coherent framework for understanding identity formation and motivational processes in the younger generation. Within the context of schema therapy, examining a patient's self-reported values may facilitate the identification of those that arise from maladaptive patterns rather than from authentic needs or aspirations. In this way, interventions aimed at modifying maladaptive schemas can be further supported by fostering values that promote psychological well-being and overall individual functioning (Arntz & van Genderen, 2020).

In the area of education and psychological support for young people, understanding the relationship between schemas and values may contribute to more effective design of psychoeducational programs, developing mental resilience, self-awareness, and the ability to make mature life choices. For Generation Z – operating in a world of information overload and instability – the ability to organize their value system and understand the mechanisms of their own functioning can be an important element of mental health prevention (Jia & Li, 2024).

In light of the foregoing considerations, it is appropriate to formulate the following research question: *Which of Young's schemas are associated with specific Schwartz values among young adults belonging to Generation Z?*

To address this research question, an empirical study was designed and conducted with the aim of identifying the relationships between entrenched cognitive–emotional patterns and the value systems of young adults.

1. Method

1.1. Participants and Procedure

The study was targeted at representatives of Generation Z and was conducted online using standardized questionnaire instruments. Prior to participation, participants were informed about the voluntary nature, purpose, and procedure of the study, and were assured of complete anonymity and the use of the collected data solely for scientific purposes. The snowball sampling method was applied for the recruitment of respondents. Participating individuals received a link to the form with a request to further disseminate it among persons meeting the age criterion, which enabled the researchers to reach a wider audience.

Based on the empirical material collected, the study group comprised 191 young adults aged 18 to 35 years ($M = 22,9$; $SD = 3,62$). T he majority of participants were students, of whom 62.3% were women and 36.1% were men. Regarding place of residence, individuals living in large cities dominated (47.6% came from agglomerations with over 500,000 inhabitants), while 28.8% of respondents lived in rural areas. The remaining participants originated from small and medium-sized towns. The vast majority of participants had no children (96.3%). Over half of the respondents were in romantic relationships, including 27.7% in cohabiting relationships and 18.3% in relationships without cohabitation. The most frequently declared level of education was general secondary or technical education (56.5% combined). Approximately 32% of respondents already held a higher education degree (bachelor's or master's) at the time of the study. Participants also differed in terms of declared parental plans – over 60% expressed a strong desire to have children in the future. In terms of economic situation assessment,

the majority of participants deemed it moderately stable. Over half (56.5%) declared that they were partially self-supporting, with financial assistance from their family, while 31.4% fully relied on the help of close relatives.

1.2. Research tools

1.2.1. Young Schema Questionnaire (YSQ–S3)

In the present study, the Young Schema Questionnaire (YSQ–S3) was employed, which is used to measure the severity of eighteen Early Maladaptive Schemas according to the concept by Younga et al. (2003). The Polish adaptation of the instrument was developed by Oettingen, Chodkiewicz, Mącik and Gruszczyńska (2018), based on the original version by Young (2005). The questionnaire contains 90 statements referring to beliefs and emotional attitudes concerning the self, the world, and interpersonal relationships. The respondent assesses the degree of agreement with each statement on a six-point scale, where 1 means "completely untrue" and 6 means "perfectly describes me". The theoretical range of scores for each schema is between 5 and 30 points – the higher the score, the greater the severity of the schema and its cognitive rigidity. In the presented study, Cronbach's α reliability coefficients for the majority of the scales ranged from 0.81 to 0.92, which indicates high internal consistency. An exception was the *Entitlement/Grandiosity* (ET) scale, for which a value of α = 0.69 was obtained. In the context of exploratory research, this result should be considered acceptable, especially given the preserved theoretical consistency and the equal number of items in each scale.

1.2.2. Portrait Value Questionnaire (PVQ-21)

The PVQ-21 is an abbreviated version of the questionnaire used to measure the ten types of values according to the classic Schwartz model (1992). The questionnaire contains 21 items – two for each value, with the exception of Universalism, which is measured by three items. Newer analyses have demonstrated that this instrument can measure the four main value groups (Davidov, Schmidt, & Schwartz, 2008) or be used to analyze single values (Zercher, Schmidt, & Cieciuch, 2015). Cronbach's α reliability coefficients for the individual scales ranged from 0.69 to 0.85.

2. Results

The analyses conducted in this study were exploratory in nature and aimed to identify relationships and patterns emerging between early maladaptive cognitive-emotional schemas and the value preferences endorsed by Generation Z respondents.
This section of the article presents descriptive statistics (Table 2) and the results of the most statistically significant relationships and detailed correlations (Table 3).

In the initial stage of the analysis, the distributions of the examined variables were assessed, which enabled the selection of appropriate statistical procedures. Depending on the characteristics of the data, the nonparametric *Spearman's rho* correlation test was applied, while parametric tests were used for the remaining scales included in the analysis.

As a result of the conducted analyses, several statistically significant correlations of moderate or weak magnitude were identified. To ensure clarity in the presentation of the findings, the results were organized according to the relationships between early maladaptive cognitive-emotional schemas and values as well as meta-values, with the latter encompassing both the higher-order value dimensions and their more specific subordinate categories. These results are presented in Table 3.

The analysis of the associations between the higher-order value dimensions (PVQ) and early maladaptive schemas (YSQ) revealed marked heterogeneity in the observed correlation patterns. *Self-Enhancement* showed the broadest and relatively strongest positive associations (r ≈ 0,14–0,45). he highest coefficients appeared for *Entitlement/Grandiosity* (r = 0,45) and *Approval-Seeking* (r = 0,44), with substantial correlations also identified for *Unrelenting Standards* (r = 0,38). *Conservation* demonstrated weaker positive associations (r ≈ 0,15–0,22), primarily with

Table 2. Descriptive Statistics (N = 191)

		M	SD	Skewness	Kurtosis
PVQ	Self-Transcendence	4.43	1.08	-0.60	0.01
	Openness to Change	3.72	1.16	0.04	-0.69
	Self-Enhancement	3.39	1.20	0.37	-0.44
	Conservation	3.72	1.12	-0.06	-0.67
	Universalism	4.25	1.30	-0.50	-0.31
	Benevolence	4.62	1.12	-0.71	0.01
	Self-Direction	4.12	1.30	-0.27	-0.76
	Stimulation	3.66	1.40	0.07	-0.82
	Hedonism	3.37	1.39	0.21	-0.80
	Power	2.81	1.36	0.73	-0.20
	Achievement	3.97	1.34	-0.15	-0.89
	Tradition	3.52	1.56	-0.01	-1.19
	Conformity	3.96	1.33	-0.43	-0.57
	Security	3.69	1.22	0.08	-0.51
YSQ	Emotional deprivation (ED)	2.38	1.34	0.97	0.15
	Abandonment (AB)	3.13	1.34	0.35	-0.75
	Mistrust (MA)	2.79	1.33	0.57	-0.65
	Social isolation (SI)	2.94	1.37	0.47	-0.77
	Defectiveness/ Shame (DS)	2.29	1.33	1.05	0.37
	Failure (FA)	2.80	1.39	0.70	-0.32
	Dependence/ Incompetence (DI)	2.47	1.16	0.80	0.13
	Vulnerability to Harm or Illness (VU/VH)	2.64	1.27	0.89	0.11
	Enmeshment/ Undeveloped Self (EM/EU)	2.22	1.11	1.17	1.18
	Subjugation (SB)	2.59	1.21	0.89	0.20
	Self-Sacrifice (SS)	3.12	1.17	0.34	-0.27
	Emotional Inhibition (EI)	2.79	1.24	0.50	-0.42
	Unrelenting Standards (US)	3.37	1.22	0.14	-0.65
	Entitlement/ Grandiosity (ET)	2.78	1.00	0.77	0.98
	Insufficient Self-Control/Self-Discipline (IS)	3.20	1.26	0.30	-0.50
	Approval-Seeking (AS)	3.41	1.23	0.09	-0.64
	Pessimism (NP)	3.10	1.38	0.43	-0.66
	Punitiveness (PU)	2.71	1.23	0.75	-0.05

Unrelenting Standards, *Emotional Inhibition* and *Approval-Seeking*. For *Openness to Change*, only one significant positive correlation was observed with *Entitlement/Grandiosity* (r = 0,30) – and two low negative correlations with *Emotional Inhibition* and *Defectiveness/Shame. Self-Transcendence* was positively associated mainly with *Self-Sacrifice* and *Unrelenting Standards* (r ≈ 0,25), and to a lesser extent with *Approval-Seeking*, whereas weak negative correlations emerged with *Defectiveness/Shame.*

Regarding the basic value dimensions, the relationships were more differentiated yet internally consistent. *Universalism* showed weak but significant positive associations with *Self-Sacrifice* and *Unrelenting Standards* (r ≈ 0,17–0,20). *Benevolence* correlated moderately with *Self-Sacrifice* (r ≈ 0,28) and more weakly with *Unrelenting Standards* and *Approval-Seeking* (r ≈ 0,19–0,24). *Self-Direction* revealed a significant positive correlation only with *Entitlement/Grandiosity*, while negative correlations were noted with *Defectiveness/Shame* and *Dependence/Incompetence. Stimulation* and *Hedonism* were primarily associated with *Entitlement/Grandiosity* (*Stimulation:* r = 0,30; *Hedonism* – the only significant association was with *Entitlement/Grandiosity*). *Power* exhibited positive correlations with strengths ranging from r ≈ 0,17–0,38, most strongly with *Entitlement/Grandiosity* (r = 0,38) and *Approval Seeking* (r = 0,30). *Achievement* was characterized by the broadest spectrum of positive correlations (r ≈ 0,16–0,48), with particularly strong associations with *Unrelenting Standards, Entitlement/Grandiosity*, and *Approval Seeking* (r ≈ 0,42–0,48). *Tradition*, however, showed a significant negative relationship with *Vulnerability to Harm or Illness* (r = -0,23), and the remaining negative correlations were weak in strength (r ≈ -0,15 do -0,17). *Conformity* presented weak to moderate correlations (r ≈ 0,15–0,26) with *Enmeshment/Undeveloped Self, Unrelenting Standards*, and *Approval Seeking*, whereas *Security* correlated positively in the range of r ≈ 0,16–0,29, primarily with *Unrelenting Standards, Emotional Inhibition*, and *Entitlement/Grandiosity*.

In summary, the significant correlations suggest that Early Maladaptive Cognitive-Emotional Schemas may be associated with lower importance attributed

Table 3. Relationships between Early Maladaptive Cognitive-Emotional Schemas and Goals-Values (N = 191)

PVQ / YSQ	Security	Conformity	Tradition	Achievement	Power	Hedonism	Stimulation	Self-direction	Benevolence	Universalism	Conservation	Self-Enhancement	Openness to Change	Self-Transcendence
Emotional deprivation (ED)	0.065	0.017	-0.093	0.161*	0.200**	-0.031	-0.018	-0.139	-0.113	-0.092	-0.011	0.203**	-0.071	-0.114
Abandonment (AB)	0.050	0.137	-0.129	0.262**	0.033	-0.052	-0.082	-0.085	0.122	0.127	0.010	0.165*	-0.085	0.139
Mistrust (MA)	0.133	0.037	-0.119	0.254**	0.169*	-0.032	-0.034	-0.031	0.103	-0.001	0.011	0.238**	-0.038	0.052
Social isolation (SI)	0.031	-0.001	-0.098	0.062	0.026	-0.113	-0.040	0.018	0.025	-0.012	-0.037	0.049	-0.055	0.005
Defectiveness/Shame (DS)	-0.085	-0.053	-0.138	0.050	-0.019	-0.080	-0.098	-0.207**	-0.131	-0.151*	-0.132	0.027	-0.151*	-0.174*
Failure (FA)	-0.071	-0.063	-0.131	-0.030	-0.104	-0.058	-0.106	-0.132	0.066	-0.007	-0.113	-0.076	-0.115	0.030
Dependence/Incompetence (DI)	-0.049	-0.009	-0.138	0.028	-0.053	-0.010	-0.126	-0.145*	0.022	0.070	-0.072	-0.014	-0.108	0.054
Vulnerability to Harm or Illness (VU/VH)	0.066	0.043	-0.235**	0.174*	0.083	-0.028	-0.074	-0.082	0.096	0.069	-0.053	0.144*	-0.071	0.091
Enmeshment/Undeveloped Self (EM/EU)	*0.011*	*0.146**	*0.021*	*0.075*	*0.037*	*0.094*	*-0.072*	*-0.074*	*-0.012*	*0.024*	*0.061*	*0.065*	*-0.014*	*0.006*
Subjugation (SB)	0.005	0.066	-0.157*	0.107	0.044	0.011	-0.059	-0.133	0.043	0.033	-0.036	0.085	-0.069	0.042
Self-Sacrifice (SS)	0.157*	0.179*	0.000	0.295**	0.128	0.016	0.075	0.020	0.280**	0.177*	0.134	0.238**	0.044	0.251**
Emotional Inhibition (EI)	0.212**	0.213**	0.091	0.165*	0.050	-0.161*	-0.134	-0.127	-0.051	-0.013	0.212**	0.121	-0.165*	-0.035
Unrelenting Standards (US)	0.290**	0.262**	0.025	0.476**	0.196**	-0.033	0.009	0.091	0.238**	0.201**	0.224**	0.378**	0.024	0.244**
Entitlement/Grandiosity (ET)	0.219**	0.084	-0.145*	0.423**	0.381**	0.302**	0.304**	0.168*	0.049	0.116	0.066	0.453**	0.305**	0.096
Insufficient Self-Control/Self-Discipline (IS)	-0.005	0.062	-0.141	0.139	0.093	0.109	0.073	0.049	0.130	0.119	-0.042	0.131	0.091	0.139
Approval-Seeking (AS)	0.171*	0.262**	-0.032	0.485**	0.297**	0.050	0.061	0.071	0.193**	0.098	0.150*	0.440**	0.071	0.159*
Pessimism (NP)	0.049	0.095	-0.174*	0.256**	0.083	-0.082	-0.072	-0.035	0.110	0.100	-0.018	0.191**	-0.075	0.117
Punitiveness (PU)	0.100	0.162*	0.085	0.179*	0.082	-0.052	-0.040	-0.041	0.083	0.053	0.140	0.147*	-0.052	0.075

Annotation: **Correlation significant at the 0.01 level (two-tailed), * Correlation significant at the 0.05 level (two-tailed). Values in italics indicate Spearman's rho correlation coefficients.

to values related to *Self-Transcendence*, *Openness to Change*, *Universalism*, *Self-Direction*, *Tradition*, and *Security*. The interpretation of these dependencies enables a better understanding of the mechanisms through which early emotional experiences co-determine the hierarchy of values and the life goals of the individual.

3. Discussion

In light of the presented theoretical assumptions and the results of the conducted study, it becomes possible to gain a deeper insight into the relationships between enduring cognitive-emotional schemas and the value system among young adults belonging to Generation Z. The analysis of the obtained empirical data represents a significant step towards integrating Young's (2010) and Schwartz's (2017), theories in the context of identity and motivation development.

According to schema theory, maladaptive patterns formed in early childhood play a significant role in adulthood, serving as a motive for decision-making and overall psychosocial functioning. In this context, it is pertinent to ask to what extent the value system declared by young people reflects autonomous and conscious choices, and to what extent it remains connected to unconscious, entrenched cognitive-emotional structures that regulate emotional experiences, the way relationships are formed, and the direction of life goals (Baxendell et al., 2025; Selph, 2016).

The aim of this research was to explore this area and identify potential connections between schemas and preferred life values. The study sought to determine whether there are relationships, and if so, what kind, between cognitive-emotional schemas and declared values among young adults from Generation Z.

Higher-order values showed moderate relationships with selected cognitive-emotional schemas. For better readability, they are presented below, grouped according to Schwartz's (2017) four meta-values, with the most significant correlations highlighted:

I. *Self-enhancement (achievement, power)*

Characterized by the pursuit of control, success, and recognition. Positively correlated with:
· *entitlement/grandiosity,*
· *approval-seeking,*
· *unrelenting standards.*

II. *Conservation (security, conformity, tradition)*
Related to the need for order, stability, and predictability. Positively correlated with:
· *unrelenting standards,*
· *emotional inhibition,*
· *approval-seeking.*

III. *Openness to change (self-direction, stimulation, hedonism)*
Reflects the need for autonomy, variety, and pleasure. Showed:
· *positive correlation with entitlement/grandiosity,*
· *negative correlations with defectiveness/shame and emotional inhibition.*

IV. *Self-transcendence (universalism, benevolence)*
Associated with concern for others, acceptance of diversity, and cooperation. Positively correlated with:
· *self-sacrifice,*
· *unrelenting standards,*
· *approval-seeking.*

The analysis of the obtained results allows us to formulate the hypothesis that individual meta-values may be associated with a specific set of early childhood cognitive-emotional schemas. For example, the meta-value of Self-Transcendence seems to constitute a constellation of schemas such as Self-Sacrifice, Unrelenting Standards, and Approval-Seeking. This may suggest that specific configurations of childhood experiences – shaping schemas belonging to different domains – create psychological structures conducive to internalizing certain values as life goals (cf. Loose, Graaf, & Zarbock, 2023).

Schemas – according to Young's (2010) theory – include both emotional and cognitive components, whereas values fulfil cognitive-motivational functions, reflecting one's needs, aspirations, and personal strivings (Karaosmanoğlu et al., 2024). t is therefore

plausible that schematic structures emerging from early childhood experiences constitute a psychological foundation for the cognitive representations of life goals. Within this framework, values are not solely outcomes of autonomous developmental choices; they may also reflect compensatory or adaptive mechanisms rooted in earlier emotional schemas (Jia & Li, 2024; Selph, 2016).

In the context of young adulthood – a pivotal stage in identity formation – the observed associations make it possible to capture the moment in which specific values, regarded by participants as especially significant, co-occur with defined sets of maladaptive schemas. This may serve as a starting point for further analyses of how internalized schemas shape the development of individuals' axiological systems (Luyckx et al., 2023).

The results indicate that the higher-order value of *Self-Enhancement* and the basic value of *Achievement* are positively associated with the schemas of *Entitlement/Grandiosity* and *Unrelenting Standards*. Such a configuration may suggest that an orientation toward success and power is linked to an internalized belief that one's worth is contingent upon continuous high performance. In this context, a focus on self-enhancement may correspond with the activation of schemas belonging to the *Impaired Limits domain* (e.g., *Entitlement/Grandiosity*) and the *Overvigilance and Inhibition domain* (e.g., *Unrelenting Standards*), both of which reflect tendencies toward control, perfectionism, and dominance (Cieciuch & Schwartz, 2018; Young, 2010).

mportantly, both the need for *Achievement* and values related to *Self-Enhancement* were also positively correlated with the *Approval-Seeking* schema, which belongs to the *Other-Directed* domain. This may indicate a latent emotional dimension underlying these strivings: from the perspective of Emotion-Focused Therapy (EFT), primary emotions – such as a deep need for acceptance – may underlie tendencies toward dominance and perfectionism. These primary emotions are often masked by secondary, learned response patterns, such as self-criticism or competitiveness (Elliott & Greenberg, 2025). Although secondary emotions may have been adaptive in the

context of early experiences, they can paradoxically hinder the fulfillment of authentic emotional needs in adulthood.

A similar mechanism may be observed for values within the *Conservation* group (*Security*, *Conformity*, *Tradition*). Their positive correlations with the schemas of *Unrelenting Standards*, *Emotional Inhibition*, and *Approval-Seeking* suggest that, for some individuals, a focus on *Conservation* may not stem solely from a mature reflection on the importance of stability. Rather, it may also serve as a form of emotional regulation, providing predictability and social acceptance in the face of internal tension (Mącik, 2021).

From a life-span development perspective, early adulthood represents a critical stage for the formation of relatively stable values, life goals, and personal identity. The moderate correlations observed between schemas and higher-order values suggest that these two structures – although functionally distinct – may share common origins in early childhood experiences. Within this framework, both early maladaptive schemas and value preferences can be understood as forming a psychological "scaffold" for the developing personality of the adult individual (Baxendell et al., 2025; Luyckx et al., 2023).

It is important to emphasize that personality development is a complex and multifactorial process. Cognitive-emotional schemas and values are only part of a larger whole, and their interactions can be modulated by environmental, relational, and cultural factors (Yanitskiy et al., 2020). Nevertheless, the observed relationships indicate the need for further research exploring the pathways through which early emotional experiences translate into the motivational structures of adult functioning.

These findings gain additional significance in the context of the increasing prevalence of anxiety disorders, depression, and identity-related difficulties among young adults (Borg et al., 2025). Research suggests that emotional schemas formed during childhood may play a substantial role in the development of mental health disorders (Thimm & Chang, 2022). However, there is still a lack of in-depth analyses capturing not only the relationships between sche-

mas and clinical symptoms but also the processes through which these schemas may contribute to an individual's value system.

If – as the results suggest – early schemas influence the formation of values as life goals, it is possible that one of the key pathways of human motivational development has been identified. This would imply that adult motivations may have their roots in cognitive-emotional structures shaped by deficits, injuries, or unmet needs during childhood. Understanding these relationships may carry important theoretical and practical implications, not only for psychotherapy but also for preventive and educational interventions aimed at supporting young adults in the development of a mature, integrated sense of identity.

Conclusions

The results of the conducted analyses confirm the existence of significant, albeit moderate, relationships between cognitive-emotional schemas and preferred values among young adults from Generation Z. The obtained correlations suggest that certain meta-values – such as *Self-Enhancement*, *Conservation*, or *Self-Transcendence* – may be associated with specific configurations of schemas formed in early childhood.

This may indicate that an individual's value system, although perceived as autonomous, partly grows out of deep cognitive-emotional structures rooted in early relational experiences. The empirical data obtained in the study represent an important step towards integrating two significant psychological approaches – schema theory and values theory – opening new possibilities for understanding the mechanisms underlying the development of identity, motivation, and psychosocial functioning of young adults. These results can be applied both in clinical practice (e.g., in recognizing patients' unconscious motivations) and in educational and preventive activities supporting youth in building a mature value system and mental resilience.

It is also important to emphasize that the formation of personality and value systems is a complex and multifactorial process. The obtained results indicate a significant, but not exclusive, role of schemas in this process, making further research in this area both justified and promising. It is worth noting that existing studies on the relationship between early maladaptive schemas and value systems are few, and in the European context – virtually absent. The lack of previous comparative studies thus constitutes a significant interpretative limitation but also highlights the innovative nature of this project.

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From the light triad to the dark tetrad: Two sides of human nature in the context of life and health, considering cognitive reflection and generosity[1]

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Abstract: This article reviews research on two contrasting groups of personality traits – from the so-called light triad (including faith in humanity, humanism, and Kantianism) to the so-called dark tetrad (including Machiavellianism, narcissism, psychopathy, and sadistic tendencies). The light triad encompasses empathy, trust, and prosocial attitudes, whereas the dark tetrad describes individuals who are manipulative, antagonistic, and lacking in empathy. The article also examines the role of cognitive reflection and generosity in shaping prosocial decisions and moral judgments. The review includes both empirical (quantitative and qualitative) studies and key theoretical works. It cites and discusses findings from correlational and experimental psychological research, including behavioral economic games (considering the role of cognitive reflection) and population-level analyses (e.g., profiling voluntary blood donors and examining altruism in the context of volunteering). The relationships between light triad and dark tetrad traits and prosocial behaviors (generosity, altruism) are analyzed, along with aspects of individuals' health (e.g., health-promoting habits). The article describes definitions of these constructs and research findings indicating, among other things, that individuals with light triad traits exhibit greater empathy, altruism, and life satisfaction, whereas those with dark tetrad traits are characterized by a lack of empathy and a tendency toward aggressive or manipulative behaviors. The findings also demonstrate a bidirectional influence of cognitive reflection: when helping others entails personal cost, reflective thinkers behave more selfishly than impulsive ones; however, when altruism carries no personal loss, reflective individuals are more generous and helpful. A study of voluntary blood donors further shows that generosity is strongly correlated with both cognitive and emotional empathy, as well as with a health-promoting lifestyle. The review indicates that the light triad and its associated values (empathy, trust, altruism) promote mental health, better social relationships, and greater life satisfaction. In turn, the dominance of dark tetrad traits is associated with antisocial behaviors, social isolation, and reduced psychosocial well-being. Promoting empathy and generosity can benefit individuals and society, whereas strong "dark" traits are linked to negative psychosocial consequences. The article discusses key conclusions and practical implications (e.g., for parenting and public health) and offers suggested directions for future research on the bright and dark aspects of human personality.
Keywords: altruism, dark tetrad, generosity, light triad, cognitive reflection

Introduction

It is commonly held that by nature humans exhibit both a tendency to be good and a potential to do evil. In recent years, personality psychology has been actively examining this moral dualism, identifying both "dark" and "bright" aspects of personality. On one hand, the so-called dark triad (Paulhus & Williams, 2002) is well-documented, encompassing Machiavellianism, narcissism, and psychopathy – traits associated with antagonism, manipulation, and lack of empathy (Kau-

fman et al., 2019). Gómez-Leal et al. (2024) described extending this concept into a dark tetrad by adding a sadistic tendency to take pleasure from others' suffering. On the other hand, in response to the predominance of research on "dark" traits, the concept of a light triad emerged – a set of positive personality traits that recognize the dignity and worth of others: faith in the fundamental goodness of people, humanism, and Kantianism. The idea of the light triad is an attempt

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to capture the good side of human nature in contrast to dark traits – it represents a gentle and benevolent orientation toward others, metaphorically described as the stance of an "everyday saint" (Kaufman et al., 2019).

The aim of the article is to review the literature on both ends of this personality spectrum – the light triad and the dark tetrad – with particular attention to their relationship with prosocial attitudes and social functioning, in the context of life and health. Of particular interest is the significance of these traits for the propensity to engage in prosocial behaviors such as empathy, altruism, and generosity.

The analysis also incorporates a cognitive factor, namely cognitive reflection – the tendency toward analytical, controlled, and conscious thinking – and examines how it affects the willingness to act on behalf of others. This issue seems important, because rational reflection can both promote ethical decisions, but also inhibit spontaneous impulses of selfless help. The article presents experimental findings that illustrate this complex relationship.

In addition to discussing general trends in adult populations, the paper also highlights specific groups that have been studied – such as voluntary blood donors, as an example of individuals with exceptionally high prosocial potential – to better illustrate how personality and cognitive factors translate into real prosocial actions. Do a positive disposition and altruism promote "life-givingness" – understood both metaphorically as creative fullness of life and literally in the context of parenthood? Or, conversely, do "dark" traits impair the ability to form healthy, lasting bonds, which may affect starting a family and the partners' mental health? The article considers what implications a bright or dark personality profile may have for family life, relationships, and health.

1. The bright triad – the positive side of human personality

The light triad of personality comprises three positive traits – faith in humanity, humanism, and Kantianism – that reflect a benevolent orientation toward others (Kaufman et al., 2019). Faith in humanity is the belief that people are fundamentally good by

nature; humanism is expressed as respect for the dignity and worth of each person; and Kantianism entails treating others as ends in themselves rather than merely as means to an end (Kaufman et al., 2019). The concept of the light triad was developed in contrast to the theory of the dark triad (Machiavellianism, narcissism, psychopathy), which centers on traits such as antagonism and manipulation. The light triad thus represents the "brighter side" of personality – a tendency toward empathy, kindness, and moral treatment of others (Kaufman et al., 2019; Lukić & Živanović, 2021). Importantly, research indicates that the light triad is not simply the opposite of the dark triad. The overall light triad score correlates only moderately negative with the dark triad score (r = –0.48, *p* < .01), suggesting that the two constructs are not opposite poles of a single dimension but rather relatively distinct clusters of traits (Kaufman et al., 2019). In other words, an individual can exhibit both "dark" and "bright" tendencies simultaneously – for example, a person might display narcissistic traits while also holding a genuine faith in the goodness of others (Castagna & Hart, 2024; Ramos-Vera et al., 2023).

The components of the light triad were operationalized by Kaufman et al. (2019) in the light triad Scale (LTS). This scale has demonstrated validity and reliability in numerous studies, including across various cultures and languages – such as in Poland, Serbia, Turkey, and Brazil (Gerymski & Krok, 2019; Lukić & Živanović, 2021; Ramos-Vera et al., 2023). Moreover, Lukić and Živanović (2021) found that light triad traits cannot be reduced solely to known dimensions of the Big Five or the six-factor HEXACO model – instead, they form a unique combination of altruistic orientations. In particular, the light triad shows a strong association with the Honesty–Humility dimension of HEXACO and with Agreeableness of the Big Five, yet it also contributes a distinct explanatory power for prosocial behaviors (Lukić & Živanović, 2021; Malik et al., 2020). This can be interpreted to mean that individuals with high light triad scores are naturally more sincere, humble, and cooperative, although the predictive power of these traits for certain social behaviors is moderate (Lukić & Živanović, 2021).

The correlations of the light triad with well-being and psychological functioning are mostly favorable. In Kaufman et al.'s (2019) original study, individuals scoring high on the light triad more often reported greater life satisfaction, self-esteem, authenticity, and lower egocentrism. Interpersonal relationships also appear to function better – light triad scores are positively associated with a secure attachment style, trust in people, and tolerance of different perspectives (Kaufman et al., 2019). Newer empirical studies confirm the link between the light triad and well-being. Jankiewicz and Michałek-Kwiecień (2024) found that components of the light triad correlate positively with life satisfaction and emotional intelligence, with the strongest associations for faith in humanity and humanism. An interesting exception was Kantianism, which in that study did not show a significant correlation with life satisfaction (Jankiewicz & Michałek-Kwiecień, 2024) – perhaps because treating others as ends in themselves is more of a moral principle that may not directly influence one's evaluation of their own life. However, the overall light triad score did explain a significant portion of the variance in well-being – about 23% of the variance in life satisfaction when combined with emotional intelligence (Jankiewicz & Michałek-Kwiecień, 2024). Similar results have been obtained in other populations. For example, Landa-Blanco et al. (2025), in a study of adults in Honduras, found that faith in humanity, humanism, and Kantianism significantly and positively predict the level of "flourishing," i.e. thriving – a high level of psychological well-being. A correlate of the light triad also turned out to be a sense of inner harmony and coherence: teachers scoring higher on the light triad exhibited greater inner peace of mind (Krok & Tkaczyk, 2024). Importantly, inner harmony serves as a mediator here – individuals with a "brighter" personality experience more positive emotions and inner harmony, which in turn fosters their greater compassion and empathy toward others (Krok & Tkaczyk, 2024). Numerous lines of evidence thus indicate that the light triad contributes to better psychological functioning, manifesting in greater happiness, optimism, and prosociality, as well as lower levels of psychopathological symptoms (e.g., reduced tendencies toward aggression or hostility) (Kaufman et al., 2019).

Prosocial and moral behaviors are also associated with the light triad. Individuals scoring high on the light triad achieve higher scores on measures of empathy, compassion, and altruism (Kaufman et al., 2019; Krok & Tkaczyk, 2024). This translates into concrete attitudes – for example, among teachers, the light triad was positively correlated with their self-reported compassion toward students and willingness to adopt a patient, supportive approach (Krok & Tkaczyk, 2024). Similarly, in the workplace, the light triad may foster ethical behavior and positive relationships. Malik et al. (2020) observed that employees with high light triad scores were less likely to respond to an abusive supervisory style with retaliatory behaviors. In that study, the light triad moderated the effect of an abusive boss on subordinates' "malevolent creativity" – among individuals low in light triad traits, harsh verbal aggression from a supervisor provoked creatively harmful behavior (e.g., sabotage), whereas in individuals high in light triad traits, this effect was much weaker (Malik et al., 2020). These results suggest that positive personality traits can act as a protective factor against the emergence of retaliatory and destructive intentions in adverse social environments. Similar effects have been noted in the context of criminal and antisocial behaviors: Kantianism (the light triad component related to respecting others' dignity) significantly weakens the association between psychopathy and criminal tendencies (Pechorro et al., 2025). In other words, among individuals exhibiting some psychopathic traits but simultaneously high Kantianism, the risk of antisocial behavior is lower than in psychopathic individuals lacking such "bright" moral restraints (Pechorro et al., 2025). Similarly, Castagna and Hart (2024) showed in a survey study that a high level of the light triad "neutralizes" the relationship between dark traits and the tendency toward morally evil acts. These recent findings suggest that the light triad may play an important role in counterbalancing dark tendencies, serving as a psychological buffer that protects against acting on antisocial impulses when dark traits are present.

It is worth noting that "bright" traits are not unequivocally beneficial in every context. Kaufman et al. (2019) point out that individuals focused on

others' well-being and who avoid treating people instrumentally do not show a greater inclination toward dominance, boldness, or assertiveness. They are characterized more by modesty and cooperativeness than by aggressiveness or competitiveness. In certain situations, this may translate into a reduced ability to assert themselves or defend their own interests (Kaufman et al., 2019). Nevertheless, a lack of aggressive assertiveness is often offset by other advantages of the light triad – as shown, individuals with these traits are no less effective or competent; on the contrary, they can achieve success by inspiring trust, demonstrating intellectual curiosity, and excelling in collaboration (Kaufman et al., 2019). Furthermore, light triad levels may increase with age and experience – Jankiewicz and Michałek-Kwiecień (2024) noted a positive relationship between participants' age and the intensity of light triad traits, suggesting that maturity fosters the development of humanistic attitudes. The light triad emerges as a promising concept that broadens our understanding of personality – demonstrating that alongside the dark sides, there are also bright traits that promote good, altruism, and an individual's mental health.

2. The dark tetrad – the dark traits of human personality

The dark tetrad encompasses four personality traits considered socially aversive: Machiavellianism, narcissism, psychopathy, and sadism (Gómez-Leal et al., 2024). This concept originates from the dark triad model (Paulhus & Williams, 2002), to which the latest literature has added sadism due to this trait's similarity to the other three (Gómez-Leal et al., 2024). All four components of the dark tetrad are regarded as subclinical traits – they fall within the range of normal personality variation and need not indicate a clinical disorder. Research confirms, however, that these traits clearly co-occur and share a so-called "dark core" of common antagonistic tendencies (Yusuf & Tahir, 2024). In other words, individuals who score high in these traits are marked by a lack of empathy, a tendency to manipulate, and an aggressive, self-centered social style (Gómez-Leal

et al., 2024). Within this common denominator, each trait still retains its own specificity. For instance, Machiavellianism manifests as a cynical approach toward people, a propensity for deceit, and the instrumental exploitation of others for one's own benefit (Gómez-Leal et al., 2024). Narcissism denotes an inflated sense of one's own importance, self-centeredness, a craving for admiration, and a conviction of one's superiority (Nenadić et al., 2021). Psychopathy, in turn, is characterized by emotional coldness, lack of remorse, and impulsivity, and often also by superficial charm and a tendency toward antisocial behavior (Ju et al., 2022). The sadistic tendency, for its part, involves deriving satisfaction from humiliating others and inflicting pain (Gómez-Leal et al., 2024). It is emphasized that all these "dark" traits are statistically interrelated – they are positively correlated and share a common cruelty (callousness) factor as their core (Yusuf & Tahir, 2024). In response to the development of this line of research, measurement tools covering the entire dark tetrad (such as the Short dark tetrad, SD4) have been developed (Yusuf & Tahir, 2024), reflecting the consensus that sadism should be considered alongside Machiavellianism, narcissism, and psychopathy as an additional "dark" personality trait.

The dark tetrad traits are united by interpersonal antagonism and extreme egocentrism – meaning that in Big Five terms they correspond to extremely low Agreeableness and in HEXACO terms to low Honesty–Humility (Stefanek et al., 2025). This profile translates into a selfish social strategy in which personal gain is placed above the welfare of others. Importantly, although all tetrad traits share a common "dark" element, they differ in the mechanisms by which antisocial behaviors are manifested. For example, Machiavellians pursue goals in a methodical and planned way, using persuasion or deceit, whereas psychopathic individuals tend to act more impulsively and disregard consequences – for instance, they more readily resort to threats and violence, ignoring the potential costs of their actions (Stefanek et al., 2025). Meanwhile, narcissists are driven by the need to gain admiration and affirm their own greatness, whereas sadists derive a specific gratification simply from causing others to suffer (Yusuf & Tahir, 2024). All four

"dark" tendencies thus exhibit a clear dimension of antagonism, dominance and emotional coldness. Research even suggests the existence of a general D-factor (Dark Factor) of personality underlying various dark traits (Stefanek et al., 2025). This hypothetical factor would represent a general disposition toward Machiavellian, unethical behaviors and attitudes – in other words, a readiness to prioritize one's own interest over others' welfare, with a lack of scruples and empathy (Stefanek et al., 2025).

Individuals with high levels of dark tetrad traits routinely exhibit socially harmful and antisocial behaviors. They are characterized by elevated aggression, hostility, impulsivity, as well as a propensity for lying and manipulation, as demonstrated, for instance, in a study on a sample of Serbian prisoners (Međedović, 2024). Such individuals have low empathy – especially emotional empathy – and treat others instrumentally (Gómez-Leal et al., 2024). They are also marked by a strong motivation to attain personal benefits (power, wealth, pleasure) at others' expense, coupled with a cynical disregard for moral norms (Međedović, 2024). Consequently, individuals with a dark tetrad profile more often engage in behaviors that violate social and legal norms – ranging from minor dishonest acts to serious aggressive offenses (Međedović, 2024). It has been shown that a high score in dark triad/Tetrad traits correlates with a greater tendency toward criminal acts and offenses (in both population studies and prison groups) (Međedović, 2024). Moreover, the presence of dark traits is associated with involvement in various forms of immoral behavior – studies show, for example, a positive link between the dark triad and the tendency to indulge in the so-called seven deadly sins (pride, greed, lust, envy, gluttony, wrath, and sloth) in everyday life (Brud et al., 2020). The dark tetrad profile should thus be seen as a threat to the cohesion and well-being of a community, as individuals with such traits act destructively and violate social norms.

3. Cognitive reflection and prosocial behavior

Cognitive reflection is defined as the tendency toward analytical, controlled, and conscious thought in the decision-making process (Banerjee & John, 2024). In contrast to the so-called System 1 (impulsive) – associated with fast, automatic thinking – System 2 (reflective) is characterized by engaging more conscious, "slower" deliberation (Banerjee & John, 2024). This raises the question of how cognitive reflection affects prosocial decision-making (for example, whether and to what extent someone is inclined to share resources or act altruistically in specific situations). Intuitively, one might think that thoroughly pondering a moral dilemma promotes ethical choices, yet research paints a less clear-cut picture (Fromell et al., 2020). On one hand, spontaneous emotions – such as empathy – can automatically drive one to help others, whereas excessive deliberation over costs and benefits may lead to selfish calculations (Fromell et al., 2020). On the other hand, lack of reflection can mean yielding to impulsive, primal emotions (e.g., fear or anger), which do not always result in moral action (Banerjee & John, 2024).

Experimental studies in behavioral economics provide interesting data on this issue. Ponti and Rodriguez-Lara (2015) conducted a series of dictator games in which participants decided how to split a sum of money between themselves (the dictator) and another participant (the recipient). At the same time, their cognitive reflection was measured using Frederick's (2005) Cognitive Reflection Test (CRT). The results were surprising: individuals with high cognitive reflection were not always more generous. Under standard conditions – when increasing one's own payout meant a loss for the other person – "reflective" dictators behaved more selfishly than impulsive ones (Ponti & Rodriguez-Lara, 2015). In other words, analytically minded players more coolly calculated and kept a larger share of the sum for themselves, whereas more impulsive individuals, guided by their first instinct, showed a stronger aversion to inequality and avoided taking too great an advantage over the recipient (Ponti & Rodriguez-Lara, 2015). Corgnet et al. (2015) observed

similar patterns: individuals with higher CRT scores were willing to behave altruistically only in situations where it involved little to no personal cost, whereas with significant personal cost they more often refrained from being generous to others.

On the other hand, when an experimental scenario was set up such that the dictator's generosity incurred no personal cost (e.g., additional money went to the recipient, but the dictator lost nothing), it was the reflective individuals who turned out more altruistic than the impulsive ones (Ponti & Rodriguez-Lara, 2015). Since their own payoff remained unchanged, high-reflection participants readily made choices that maximized the other party's benefit. In other words, when the dilemma of "help others or oneself" disappeared, reflective thinkers displayed generosity, whereas impulsive individuals' altruism was no longer as strong (Ponti & Rodriguez-Lara, 2015). Corgnet et al. (2015) similarly noted that reflection facilitated "mild" altruism (i.e., increasing others' gains at negligible personal cost), but was negatively correlated with altruism requiring greater sacrifice.

The above results indicate that cognitive reflection influences prosocial behaviors in a complex, context-dependent way. Whether deliberate thinking increases or decreases altruism depends on the experimental circumstances. When another person's welfare competes with one's own interest, intense analysis of the situation can paradoxically promote selfishness – a cool calculation of personal costs can stifle the spontaneous impulse of System 1 (Banerjee & John, 2024). However, when the conflict of interest disappears, reflective individuals can recognize and seize the opportunity to do good without personal losses (Banerjee & John, 2024). Thus, impulsive decision-makers may be guided by a stronger innate sense of fairness and aversion to causing harm, whereas reflective decision-makers are more task-oriented toward optimizing their own gains, insofar as the situation forces a choice between themselves and others (Ponti & Rodriguez-Lara, 2015). Indeed, a meta-analysis of 22 papers encompassing a total of 60 experiments (over 12,000 participants) found that encouraging intuitive, unchecked-by-reflection action sometimes increased altruism and other times increased selfishness – intuition promoted generosity in about 43% of studies but led to more selfish decisions in the remaining 57% (Fromell et al., 2020). The average effect was not statistically significant, underscoring that the role of intuition versus reflection depends on situational and individual factors (Fromell et al., 2020).

So, is prosociality a spontaneous, impulsive reflex, or does it require conscious control? Two opposing hypotheses exist in the literature attempting to explain this. The traditional "intuition as egoism" concept posits that humans are naturally selfish and only through reflective control can they act prosocially (Pancotto & Righi, 2021). In contrast, Rand et al. (2012) postulate that the first, impulsive reaction is often altruism learned through repeated cooperative experiences, and only cold reflective reasoning leads to "calculated greed". In other words, spontaneous generosity is possible as a default, socially shaped reflex, whereas deliberation can introduce more selfish considerations.

A growing body of research suggests that whether we act altruistically on an intuitive cognitive *nudge* (Banerjee & John, 2024) depends on our internal motivations. Grehl and Tutić (2022) observed in a field experiment that among individuals with strong prosocial values, an intuitive decision was more often helpful (reporting an error rather than ignoring it or selfishly exploiting it), whereas in individuals with a weaker prosocial orientation, impulsivity did not increase the likelihood of helping. Moreover, the overall tendency toward intuitive thinking (as measured by CRT score) correlated with a lower inclination to act altruistically in that study (Grehl & Tutić, 2022). This suggests that spontaneous generosity manifests primarily in individuals who are guided in daily life by prosocial norms and empathy, whereas in less socially attuned individuals, the first impulse tends to be selfishness. Pancotto and Righi (2021) presented similar findings, noting that only among so-called "strategic" participants – those inclined to anticipate others' behavior – did intuition promote prosociality, whereas "naive" individuals (who did not analyze others' perspectives) were impulsively selfish. In strategically minded individuals, only

reflective control restrained their default generosity (leading to calculations for personal gain), whereas in less strategic individuals, deliberation could introduce moral norms that curbed their innate selfishness (Pancotto & Righi, 2021). The authors suggest that empathy may be a key factor enabling strategic individuals to intuitively take others' welfare into account.

It is worth emphasizing that cognitive reflection is not identical to general intelligence, although it is moderately related to it. For example, it was found that students with higher math SAT scores were more generous in economic games, yet at the same time, those with higher grade point averages tended to be less generous (Ponti & Rodriguez-Lara, 2015). Other studies have noted both positive and negative correlations between cognitive test scores and giving in the dictator game (Ponti & Rodriguez-Lara, 2015). What seems crucial, then, is whether an individual spontaneously activates norms of cooperation or instead leans toward competition – this highlights the importance of integrating research on cognitive processes with the analysis of moral values and the personality characteristics of the decision-maker.

Cognitive reflection combined with high empathy and prosocial values (a light triad profile) will thus result in mature, deliberate altruism. With reflection, an individual will find the most effective ways to support others, acting in accordance with their principles (Gloster et al., 2020). By contrast, cognitive reflection in a person devoid of empathy (a dark tetrad profile) may only make them a more cunning egoist or manipulator – the lack of emotional moral restraints means that analytical abilities then serve to pursue antisocial goals (Lehmann et al., 2022).

4. Generosity, altruism, and "life-givingness" – the significance of prosocial attitudes for health and life

Generosity, defined as the tendency to share one's resources with other people, is one of the most readily observable manifestations of prosocial attitudes. One social group characterized by exceptional in-

terpersonal generosity and a high level of empathy are, for instance, voluntary blood donors. Research indicates that people who donate blood regularly have highly developed empathy, both emotional and cognitive (Omyan et al., 2023). For example, volunteers who donate blood for altruistic reasons score significantly higher on a scale of empathic concern than those who are motivated primarily by their own health considerations (Omyan et al., 2023). Altruistic donors also show greater sensitivity to others' pain and suffering – these individuals focus more keenly on cues indicating pain in other people (Omyan et al., 2023). The ability to empathize and understand others' perspectives (affective and cognitive empathy) thus turned out to be among the key predictors of altruistic generosity and the propensity to help through blood donation.

Moreover, analysis of blood donors' personality traits suggests that certain "bright" traits (such as honesty, modesty, or prosociality) encourage engagement in this kind of activity. In a study using the HEXACO personality model, it was found that a high level of Honesty–Humility was most strongly associated with the intention to donate blood in the future (Balaskas et al., 2024). This trait reflects a tendency toward honesty, a non-selfish orientation, and altruism – its significant relationship with willingness to give confirms that individuals with high personal ethics and compassion are more likely to engage in voluntary blood donation (Balaskas et al., 2024). Other "positive" personality traits, such as high Agreeableness or Emotionality, can also promote donating, though their influence is often indirect and context-dependent (for example, depending on how the message encouraging donation is framed) (Balaskas et al., 2024).

It is worth noting that dark personality traits do not categorically exclude someone from participating in prosocial forms of help. A study of Polish blood donors found a positive relationship between the level of narcissism (one component of the dark triad/ Tetrad) and the empathy score in these individuals (Kosowski, 2021). This suggests that some donors with narcissistic tendencies may engage in giving blood for self-presentational motives or social rec-

ognition – implying that narcissists can undertake prosocial actions if doing so yields benefits such as others' approval (Kosowski, 2024).

The motivations that lead people to donate blood are largely prosocial. Numerous studies indicate that the most reported reasons include an altruistic desire to help, a sense of civic duty, and social influences (Balaskas et al., 2024). Altruism here is defined as the selfless desire to save the health and lives of others. Social responsibility refers to a sense of duty toward the community and a need to contribute to the common good, while influence of one's surroundings refers to inspiration drawn from one's environment (e.g., family or peer example, group initiatives, social campaigns) that encourages blood donation (Balaskas et al., 2024).

All these factors affect the continuation of blood donation activity by influencing the individual's internal motivation system. Studies show that it is altruism and a sense of social responsibility that become the key reasons for continued blood donation (Balaskas et al., 2024). In other words, for an occasional donor to become a regular one, they must perceive a deeper meaning in their charitable activity. A study on medical students examined the impact of altruism and a sense of meaning in life on the willingness to donate blood. It turned out that altruism alone, as self-reported, did not directly translate into a greater willingness to donate unless accompanied by a strong sense of life meaning (Gheorghe et al., 2024). Only when altruistic motivations were coupled with the belief that donating blood gives life a deeper meaning did the propensity to be a donor significantly increase in the study group (Gheorghe et al., 2024). This suggests that campaigns promoting blood donation among youth and students should appeal not only to pure altruism but also highlight the personal significance and satisfaction derived from this form of social engagement.

Donating blood yields tangible benefits not only for recipients but also for the donors themselves, in psychological and emotional domains. Engaging in such altruistic activity can function as a psychological buffer against negative states – people who help others feel a greater sense of agency and meaning, which reduces their feeling of helplessness in the face of life crises (Gasparovic Babic et al., 2024).

In the context of disasters or threatening situations, the ability to donate blood provides an individual with a concrete way to support those in need, thereby lowering the level of anxiety and depression stemming from helplessness (Gasparovic Babic et al., 2024). Contemporary studies thus portray the typical voluntary blood donor primarily as a person with a "bright" set of traits: empathetic, altruistic, and prosocially motivated.

The empathy, altruism, and prosocial attitudes also translate into better quality family relationships – as confirmed by both research and clinical observations. In a context other than blood donation, Ryś (2006) emphasizes that a truly engaged, loving marital relationship is creative and "life-giving" in nature – it fosters altruistic attitudes, prosociality and, both literally and metaphorically, fertility. A close bond founded on love and kindness yields an atmosphere filled with joy, creativity, and a willingness to sacrifice for the other person (Ryś, 2006). Such a positive relationship not only has a greater chance of resulting in offspring in the biological sense but also creates optimal conditions for raising children together in a spirit of empathy and goodness, which in turn translates into the functioning of the individual. In other words, altruism in the family creates a climate conducive to the mental health of its members and to harmonious development, which can be metaphorically described as "fertility" – understood more broadly than just biologically, as the fruitfulness of life together. This "life-givingness" of prosocial attitudes is evident, for example, in the way good deeds and emotions radiate to others in the vicinity, producing a cascade effect: Fowler and Christakis (2010) found that being the recipient of an act of kindness increases the likelihood that we ourselves will become altruistic toward other people in turn. In this way, one kind person can improve the well-being of many others – like a cascade effect in prosocial behavior.

5. Discussion

The light triad is associated with a positive orientation toward others, empathy, and a propensity for prosocial actions, as well as greater well-being and life satisfaction (Kaufman et al., 2019). By contrast, the dark tetrad (Machiavellianism, narcissism, psychopathy, sadism) is characterized by egocentrism, manipulation, and hostility, resulting in aggressive, antisocial behaviors and difficulties in forming healthy relationships (Gómez-Leal et al., 2024). These are thus two opposing poles of personality traits that influence an individual's social functioning. The literature review confirms that "bright" traits foster altruism and generosity, whereas "dark" traits are marked by a lack of empathy and an instrumental treatment of other people.

Cognitive reflection proved to be an important moderator of prosocial behaviors. Contrary to intuitive expectations, reflective thinking does not always amplify altruism – it can both diminish it in situations of conflict of interest (when analytical deliberation directs attention to one's own gains) and enhance it when helping others does not incur personal costs (Ponti & Rodriguez-Lara, 2015). This means that the most ethical decisions are made by those who combine prosocial values with reflection – heart and mind must work together to choose good in a lasting and effective way.

Prosocial behaviors, like generosity, are influenced by personality traits as well as cognitive factors and social context. Generosity is strongly linked to empathy and a communal orientation, as confirmed in studies of voluntary blood donors (Kosowski, 2024). An altruistic lifestyle also helps maintain health and well-being – people who help others tend to be happier and healthier, deriving satisfaction from being "good." On the other hand, dark tetrad traits may indirectly contribute to health problems by causing stress, conflict, and social isolation. In the context of family life, prosociality serves as a "glue" for relationships, facilitating the building of lasting bonds based on trust and mutual support, which translates into better child-rearing and the overall well-being of the family. In contrast, egotism and lack of empathy can disrupt family functioning, diminishing its "life-givingness" – both emotionally and literally.

6. Practical implications

The findings of the discussed research have important practical significance for many areas of social life. In upbringing and education, they highlight the need to cultivate humanistic and empathetic attitudes in young people – preventive programs in schools could develop in children a belief in the goodness of others, respect for the dignity of every person, and the habit of treating others as ends in themselves (practicing Kantianism in daily life). At the same time, it is worthwhile to teach reflective thinking about the consequences of one's actions – so that impulses (e.g., aggression or greed) are filtered through reason and values. Training cognitive skills, such as solving moral dilemmas or analytical thinking about social problems, could help young people make more ethical decisions daily.

In the realm of public health, findings from altruism research suggest that it is worthwhile to promote prosocial activities. For example, programs promoting volunteerism, neighborly help, or donations (of blood, bone marrow, etc.) can not only bring obvious benefits to the recipients of that help but also improve the mental health of the volunteers themselves. The slogan "Helping others, you also help yourself" has solid scientific foundations. Healthcare services, non-governmental organizations and social policy institutions can encourage altruistic activity as a form of preventing isolation – for example, among the elderly or those experiencing crises. At the individual level, therapists and counselors can suggest engaging in helping others as one tool for improving mood and one's sense of life meaning.

In organizational and work contexts, the implication is to appreciate the role of character traits in selecting staff and managerial personnel. Individuals with strong dark tetrad tendencies can create a toxic atmosphere in the workplace (e.g., bullying, manipulation, lack of cooperation); therefore, recruitment and employee evaluation processes might

incorporate tools to identify such traits – especially for positions requiring trust and teamwork, or in professions of public trust. Conversely, promoting humanistic values in organizational culture (for example, through codes of ethics, empathy training for medical, caregiving, or educational staff) can translate into better service quality and lower staff turnover (because work aligned with prosocial values provides greater satisfaction). Research findings on reflection further suggest that in decision-making teams it is beneficial to combine different thinking styles – individuals who make quick, intuitive decisions can be balanced by those who contribute analysis and deliberation. Cognitive diversity within a team may facilitate decision-making that is both socially just (intuitive morality) and effective (reflective calculation).

In family life and counseling, the discussed results underscore the importance of a culture of dialogue, empathy and altruism at home. Parents should be aware that their own attitude models prosocial behavior for their children. A family's joint engagement in, for instance, charitable activities, intergenerational volunteering, helping the elderly, or simply showing one another, daily kindness builds the family's emotional capital, which translates into the mental health of its members. Family counseling centers could work on developing skills in perspective-taking, respect-based communication, and the capacity to forgive – which, as noted by Ryś (2006), are signs of social maturity and sources of altruism in relationships. Such interventions may reduce the risk of domestic violence and improve the quality of relationships, which in turn impacts physical health (e.g., less stress, better sleep, lower risk of stress-related illnesses).

Investing in the bright side of personality – through parenting, education and organizational culture – thus has the potential to yield multidimensional social and health benefits. Understanding the role of reflection, for its part, teaches us that we should nurture not only a "good heart," but also wisdom in action, so that altruism is effective, enduring and full of zeal to help.

7. Directions for future research

The field of research on the light triad and dark tetrad is relatively new and is developing rapidly. Adding the context of cognitive reflection and generosity brings up many questions that require further exploration. It is worth conducting longitudinal studies to examine the stability of bright and dark traits over the lifespan and their long-term consequences. Do young adults with high light triad scores maintain these attitudes into middle age and old age? How does this translate into their life achievements, quality of relationships or health? Similarly, do dark tetrad traits mellow with age (e.g., under the influence of emotional maturity), or do they persist and even deepen as antisocial successes are repeated? These questions require detailed answers.

An intriguing direction is also to understand the neurobiological mechanisms underlying these traits. In this context, neuroimaging studies have emerged suggesting that individuals with psychopathic traits show differences in amygdala and prefrontal cortex activity (which is associated with weaker processing of signals of fear and empathy). Meanwhile, altruism has been linked to the functioning of the reward system (dopamine release when helping) and the hormone oxytocin. Future studies could further explore how and whether, for example, psychological trainings (compassion meditation, cognitive training) can modify these neural patterns.

Equally interesting is the direction of studying the cultural and environmental context and its influence on the development of light triad and dark tetrad traits. How do trauma, being raised in adverse conditions or conversely – being raised with certain values – influence the formation of these traits? Do collectivist societies (which emphasize group harmony) have a statistically higher population level of the light triad than individualistic societies? At the same time, following the findings of Weiss-Sidi and Riemer (2023) it becomes apparent that cultural context should be considered when analyzing altruism, reflection, or generosity. Understanding these determinants can help in creating better preventive programs.

In the context of cognitive reflection, future research could experimentally test whether training in reflection (through metacognition or philosophical analysis of moral dilemmas) affects increases in prosociality. Or perhaps it is more effective to strengthen intuitive empathy (e.g., through role-playing or contact with those in need) and only then add a reflective component? In other words, what training sequence best builds stable altruism: heart before mind, or mind before heart?

Another interesting area is examining the impact of biological and evolutionary factors. An evolutionary psychology perspective suggests that certain "dark" traits may have been adaptive in a fast life-history strategy context needed for survival (shorter expected lifespan, uncertainty – hence promoting aggression and reproduction in the here-and-now). Conversely, "bright" traits would favor a slower and safer strategy (longer-term investment in relationships and offspring). Future research could test these hypotheses, for example by examining the relationship between indicators of environmental uncertainty (poverty, threat) and the development of light triad and dark tetrad traits in populations.

Finally, attention should also be given to intervention studies: once someone with high dark tetrad tendencies is identified, it would be useful to examine whether effective methods exist to modify such traits (e.g., through therapy, empathy training, or biofeedback). Similarly, can the light triad be deliberately strengthened – for instance, through public campaigns or "humanism training" programs for leaders in organizations – to counteract the dark triad in management? Such applied research would be extremely valuable from a practical standpoint.

Conclusions

Human beings carry within them both the capacity for great goodness and, unfortunately, the potential to cause harm – light and darkness interweave in human nature. Psychology, through the concepts of the light triad and dark tetrad, allows us to name and measure these opposing tendencies. Identifying the "bright" traits (faith in humanity, humanism,

Kantianism) and the "dark" traits (Machiavellianism, narcissism, psychopathy, sadism) provides a framework for understanding why some people spontaneously do good, while others pursue their goals "over dead bodies" without remorse.

However, description alone is not enough – the key question is: what can be done for light to triumph over darkness? The review of research points to several important elements. First, cultivating prosocial attitudes from the earliest years – in family and school – can instill an empathic approach, trust and an ethic of care, which serve as a counterweight to any potential dark tendencies. Second, cognitive reflection, properly guided (in combination with moral values), becomes a tool for making prudent and good decisions. Therefore, education and learning should promote both sensitivity of the heart and inquisitiveness of the mind – so that people can feel others' pain and identify with it (taking another person's perspective), while also pondering the consequences of their actions. Third, building a culture of kindness and volunteerism in society brings tangible benefits not only to the beneficiaries of help, but also to the helpers themselves and to public health at large. Altruism is contagious and has the potential to improve quality of life on many levels.

It is altruism, empathy, and generosity that give life a special "fruitfulness" – making it richer in meaning, relationships, and positive influence. A personality full of humanism and faith in people yields a kind of chain of good: it builds happier families, healthier communities and a more benevolent world. In contrast, dark traits, though sometimes spectacular in individual "successes," in the long run render relationships barren and destroy trust, leading to enormous social and personal costs.

The conclusion, therefore, is that investing in the bright side of human nature is crucial for the well-being of both individuals and entire societies. Scientific understanding of these issues gives us the tools to wisely support the good – through educational, therapeutic, and social policy interventions. The light triad reminds us that within every person lies the potential for everyday saintliness, while the dark tetrad warns us of the price we pay for succumb-

ing to our darkest impulses. As we go through life, we can choose which of these voices to feed – and may both knowledge and heart guide us toward those choices that multiply goodness, health, and "life-givingness" within us and around us.

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Experiencing mobbing as a moderator of the relationship between self-esteem and achievement motivation[1]

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Abstract: *Introduction:* This empirical study aimed to examine the relationship between self-esteem and achievement motivation, to determine whether differences exist in self-esteem and achievement motivation levels between individuals who have experienced mobbing and those who have not, and to analyse whether experiencing mobbing moderates the relationship between achievement motivation and self-esteem. The findings of this study may be useful for designing employee support programmes, particularly for individuals experiencing reduced self-esteem and exposure to mobbing. The results of the analysis also highlight the need to implement preventive and intervention measures aimed at reducing the incidence of mobbing. *Methods:* The study involved 529 participants, of whom 107 were classified as individuals experiencing mobbing, based on their scores on the MDM Questionnaire. Self-esteem was measured using the Rosenberg Self-Esteem Scale (SES), while achievement motivation was assessed using the Achievement Goals Questionnaire (Wojdyło & Retowski, Polish adaptation). *Results:* The results of the correlational analyses indicated that higher self-esteem was associated with a higher intensity of mastery-approach motivation, whereas avoidance motivation was negatively correlated with self-esteem. The analyses of group differences revealed that individuals who experienced mobbing demonstrated significantly lower self-esteem and higher levels of avoidance motivation compared to those not exposed to mobbing. However, the moderation analyses did not confirm the hypothesis regarding the moderating role of mobbing. Experiencing mobbing did not significantly affect the strength or direction of the relationship between achievement motivation and self-esteem. Although the observed correlations were statistically significant, their effect sizes were relatively small, which may suggest the complexity of the psychological mechanisms linking self-esteem and achievement motivation. *Conclusions:* The results suggest that self-esteem may serve as a stable regulatory mechanism, operating independently of negative environmental influences. Nevertheless, mobbing itself exerts a detrimental impact on both self-esteem and motivation. The findings of this study emphasise the need for further, in-depth research on mediating and protective factors within the context of mobbing. Moreover, the results have important implications for human resource management practice, underscoring the role of managers in identifying manifestations of mobbing and implementing systemic measures aimed at safeguarding employees and fostering a supportive organisational climate.
Keywords: achievement motivation, mobbing, self-esteem,

1. Introduction

1.1. Mobbing

"According to the Labour Code, mobbing is defined as actions or behaviours concerning an employee or directed against an employee that involve persistent and prolonged harassment or intimidation. Such conduct results in a lowered assessment of the employee's professional competence and is intended to cause, or results in, humiliation, ridicule, isolation, or exclusion from the team of co-workers" (Państwowa Inspekcja Pracy, 2025).

Mobbing constitutes a violation of both labour and civil rights, adversely affecting mental health, professional relationships, and the overall psychological stability of the victim. The low rate of reporting such

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1   Article in Polish language: https://stowarzyszeniefidesetratio.pl/fer/64P_szcz.pdf

incidents makes it difficult to accurately estimate the prevalence of this phenomenon. Nevertheless, numerous studies highlight its destructive consequences, which may lead to long-term or even permanent incapacity for work (Grotto-de-Souza et al., 2023).

Mobbing is defined as a continuous form of psychological violence within the work environment, characterized by prolonged and repeated harassment of an employee by supervisors or co-workers. It violates human dignity and represents a destructive organisational phenomenon, typically arising from inappropriate human resource management practices. According to Leymann, mobbing involves aggressive behaviours occurring at least once a week and persisting for a minimum of six months.Leymann identified five categories of mobbing. The first category includes behaviours that restrict communication between the targeted employee and other individuals in the workplace. These behaviours may involve verbal threats, silencing, insulting, mocking, or demeaning remarks. The second category comprises actions intended to socially isolate the victim, such as prohibiting communication with others, preventing contact with colleagues, or relocating the employee in a manner that results in enforced isolation.The third category includes behaviours that undermine the victim's reputation, such as gossiping, ridiculing, slandering, or otherwise damaging their good name. The fourth category comprises behaviours that diminish the victim's professional standing-for example, worsening working conditions, assigning tasks below the employee's qualifications, providing too few tasks, or applying exceptional procedures exclusively to the targeted individual. The final category consists of behaviours that expose the victim to risks to their physical well-being, such as assigning duties that are hazardous to their health or safety (Najda, 2015). Witnesses of mobbing may also experience a variety of adverse outcomes, including reduced psychological well-being, lower job satisfaction, and elevated levels of perceived stress. The impact of mobbing extends across the entire organisation; witnesses often feel powerless in the face of such behaviour, which may erode their sense of loyalty and impair their overall functioning within the workplace (Nielsen et al., 2024). Mobbing results in serious psychological,

social, and physical consequences, including stress, lowered self-esteem, depression, social and occupational exclusion, and even long-term deterioration of health (Kamińska, 2014; Ribeiro & Sani, 2024). Empirical findings also indicate that mobbing reduces job satisfaction and contributes to the emergence of negative emotional states (Skuzińska, 2025). In Skuzińska's study, perceived organisational support (POS) was found to moderate the negative effects of mobbing. The findings indicated that perceived support provided only limited protection: in situations involving high-intensity mobbing, it did not function as a protective factor, whereas under low-intensity mobbing it operated as a buffering mechanism that reduced the adverse impact of the mobbing experience (Skuzińska, 2025).Researchers also note that victims of mobbing often resort to silence as a coping strategy. However, active help-seeking and the reporting of mobbing incidents may be facilitated by membership in trade unions and by accessing support provided by assistance and advocacy organisations (Ho et al., 2024). One of the key domains most profoundly affected by mobbing is an individual's self-esteem. A person's sense of self-worth shapes how they respond to challenging experiences in the work environment and plays a central role in fostering psychological resilience and adaptive functioning. Research indicates that experiencing mobbing lowers self-esteem and perceived competence and contributes to reduced psychological well-being and diminished job satisfaction (Bernstein, 2016). Thus, mobbing affects not only employees' overall well-being but also directly undermines their sense of self-worth. To gain a deeper understanding of this phenomenon, it is necessary to examine the construct of self-esteem and its role in individual functioning.

1.2. Self-esteem

Self-esteem is regarded as a key concept and a foundational construct in psychology (Leary & MacDonald, 2003, as cited in Szpitalak & Polczyk, 2019). It encompasses issues not only related to emotions and gender differences but also features prominently in research within personality psychology and social psychology (Bushman et al., 2011). The term self-es-

teem is commonly understood as self-worth, a sense of personal value, or global self-evaluation (Szpitalak & Polczyk, 2019). Self-esteem is conceptualised as arising from the discrepancy between one's actual self and ideal self (Pope et al., 1988, as cited in Szpitalak & Polczyk, 2019). Within this framework, the magnitude of self-esteem reflects the degree of alignment between these two self-representations: greater congruence corresponds to higher self-esteem, whereas greater divergence is associated with lower self-esteem and an increased likelihood of negative affect (Higgins, 1987). Rosenberg (1965) further shaped the contemporary understanding of self-esteem by defining it as an individual's overall evaluative attitude toward the self. In his view, high self-esteem reflects the conviction that one is inherently worthy and of value. Crucially, Rosenberg emphasized that high self-esteem does not entail feelings of superiority over others. Individuals with high self-esteem tend to experience a higher quality of life, report greater life satisfaction, and are less likely to develop psychosomatic disorders. Consequently, the level of self-esteem affects not only psychological but also physical well-being (Czerwonka, 2014). Importantly, self-esteem does not operate as an isolated construct; rather, it is closely interconnected with other key psychological dimensions. One of the principal areas strongly associated with self-esteem is achievement motivation, which constitutes a core determinant of professional behaviour. Individuals with low self-esteem are more inclined to interpret achievement-related situations as threatening, as such contexts may highlight discrepancies between the real self and the ideal self. As a result, their actions may be oriented toward avoiding failure or criticism rather than pursuing success. Mobbing further lowers self-esteem, fosters defensive and avoidance-oriented patterns of behaviour, intensifies perceived threat, and reinforces avoidance mechanisms.

1.3. Achievement motivation

Both mobbing and self-esteem are directly related to another important psychological dimension-achievement motivation. This construct plays a critical role in shaping individuals' attitudes toward professional

challenges and in determining their characteristic ways of responding to failure and success. Achievement motivation has long been a central topic in research within motivational psychology, personality psychology, and career development.

It is defined as the need to perform tasks at the highest possible level, leading to the attainment or even surpassing of established standards (Bańka, 2016). In the literature, achievement motivation is conceptualised as a readiness to engage in activities that involve risk, sustained effort, and the possibility of both success and failure (Timoszyk-Tomczak, 2003; Boski, 1980). Achievement motivation is commonly described within the framework of the four-factor achievement goal model, which distinguishes the following types of achievement goals: 1) mastery-approach goals, 2) mastery-avoidance goals, 3) performance-approach goals, and 4) performance-avoidance goals. Mastery-oriented motivation is associated with the pursuit of personal growth and self-development, whereas its avoidance-oriented form reflects a fear of stagnation or of failing to realise one's potential. In contrast, performance-oriented motivation is grounded in social comparison-manifesting either as the desire to outperform others (approach orientation) or as the tendency to avoid performing worse than others (avoidance orientation) (Elliot & McGregor, 2001, as cited in Springer & Oleksa, 2017).

Achievement motivation reflects an individual's drive to attain high levels of performance, and its intensity influences both self-esteem and the tendency to engage in success-oriented behaviours. Achievement motivation is shaped by sociocultural values as well as by internal psychological needs, and it stems from a combination of intrinsic and extrinsic motivational sources, attributional style, and one's interpretations of and reactions to success and failure (Bańka, 2016). A 2017 study by Springer and Oleksa demonstrated a strong association between mastery-approach motivation and self-perceived competence, indicating that individuals characterized by a high level of development-oriented motivation tend to evaluate their abilities more positively. The findings further showed that achievement motivation is

a significant predictor of employees' sense of agency and their readiness to act autonomously (Springer, Oleksa, 2017).

A 2024 study examined the relationships between self-esteem, achievement motivation, and individuals' functioning in their professional and family roles among those experiencing mobbing. The findings showed that high self-esteem and achievement motivation-particularly mastery-approach motivation-serve as important psychological resources that facilitate coping with the consequences of mobbing. Individuals with higher self-esteem and strong intrinsic motivation were found to be more resilient to the effects of psychological violence in the workplace and more effective in fulfilling both their family and professional roles (Szczepanik-Paśnik, 2024).

The results of this study also suggest that mobbing may condition the strength of the relationship between achievement motivation and self-esteem, although it was not examined directly as a statistical moderator. Among individuals experiencing mobbing, positive achievement motivation was associated with higher self-esteem and better functioning in both family and occupational roles. This pattern may be interpreted as preliminary evidence of an interactional relationship between these variables under stress-inducing conditions (Szczepanik-Paśnik, 2024).

Although the moderating effect was not formally tested, these findings served as a starting point for further analyses and theoretical reflection. In the context of the present study, they provided the foundation for a more in-depth exploration and an empirical examination of whether mobbing may function as a moderator in the relationship between self-esteem and achievement motivation.

Such an analysis not only enables a deeper understanding of the psychological mechanisms underlying the functioning of individuals who experience workplace violence but also offers a meaningful contribution to the development of effective psychopreventive strategies. Gaining a more comprehensive understanding of this relationship may, in turn, support the creation of more effective interventions for employees-both by strengthening their psychological resources and by fostering work environments that promote mental health and intrinsic motivation.

2. Method

The present study aimed to address the following research question: Does experiencing mobbing moderate the relationship between self-esteem and achievement motivation?Based on this research question and the relevant literature, the following hypotheses were formulated:

· Hypothesis 1: There is a relationship between self-esteem and achievement motivation.
· Hypothesis 2: The levels of achievement motivation and self-esteem differ between individuals who experience mobbing and those who do not.
· Hypothesis 3: Experiencing mobbing moderates the relationship between self-esteem and achievement motivation.

2.1. Participants

The study included 529 participants, comprising 326 women and 203 men, aged 21 to 74 years (M = 40). The majority held higher education degrees (54.51%), followed by participants with secondary education (19.39%), vocational education (14.97%), incomplete higher education (9.98%), and primary education (1.15%). Regarding place of residence, most participants lived in cities with more than 51,000 inhabitants (36.05%), followed by rural areas (33.78%), towns with 21,000-50,000 inhabitants (16.51%), and towns with 6,000-20,000 inhabitants (13.66%). The MDM Questionnaire was used as a diagnostic instrument to identify individuals experiencing mobbing. A cut-off score of ≥ 2 was applied, which resulted in 107 participants being classified as having experienced mobbing. Among them, 60.75% reported experiencing mobbing for more than one year, 10.28% for 6-12 months, 4.67% for 3-6 months, and 24.30% for up to 3 months.

2.2. Reasearch tools

Three instruments and a demographic questionnaire were used in the study. The MDM Questionnaire (Mobbing, Bullying, Harassment) developed by

Mościcka, Drabek, and Merecz at the Department of Work Psychology of the Nofer Institute of Occupational Medicine (Mościcka & Drabek, 2010; Mościcka-Teske, Drabek, & Pyżalski, 2014) was used to identify individuals experiencing workplace mobbing.

The Achievement Goal Questionnaire (KCO) by K. Wojdyło and S. Retowski (2012) was employed to assess achievement motivation at work.

The Rosenberg Self-Esteem Scale (SES), in the Polish adaptation by M. Łaguna, K. Lachowicz-Tabaczek, and I. Dzwonkowska (2007), was used to measure self-esteem. Participants also completed a demographic sheet that included questions about sociodemographic variables.

MDM Questionnaire

The MDM Questionnaire (Mościcka, Drabek, 2010; Mościcka-Teske, Drabek, Pyżalski, 2014) consists of 32 diagnostic items and 24 supplementary items, divided into two subscales assessing behaviours directed at the respondent by supervisors (MDM-Supervisor) and by co-workers (MDM-Colleagues). Responses are rated on a six-point frequency scale (0–never, 1–less than once every six months, 2–once every six months, 3–once every three months, 4–once a month, 5–at least once a week). Respondents then indicate the duration of the behaviours using a four-point scale (1–up to 3 months, 2–3-6 months, 3–6-12 months, 4–more than one year).

Based on the present study, Cronbach's alpha coefficients were calculated for the MDM-Supervisor subscale was 0.973, with item-subscale correlations ranging from 0.71 to 0.92 and factor loadings between 0.67 and 0.91. For the MDM-Colleagues subscale, Cronbach's alpha was 0.920, item-subscale correlations ranged from 0.64 to 0.77, and factor loadings ranged from 0.60 to 0.82. For the full scale, the total Cronbach's alpha reached 0.965. Item-total correlations (reflecting item discrimination) ranged from 0.48 to 0.86. The MDM Questionnaire served as the diagnostic measure used to classify individuals as experiencing mobbing, based on a quantitative threshold of a minimum score of 2 points.

Achievement Goals Questionnaire (KCO)

The Achievement Goals Questionnaire (Kwestionariusz Celów związanych z Osiągnięciami; KCO) by K. Wojdyło & S. Retowski (2012) comprises 20 items and assesses the intensity of four types of achievement-related goals: 1) Mastery-approach goals, 2) Mastery-avoidance goals, 3) Performance-approach goals, 4) Performance-avoidance goals. In the present sample, the Cronbach's alpha coefficient was 0.890, indicating high internal consistency.

Self-Esteem Scale (SES)

Self-Esteem Scale (SES) by M. Rosenberg in Polish adaptation (Skala Samooceny SES) by M. Łaguna, K. Lachowicz-Tabaczek, & I. Dzwonkowska (2007) consists of 10 statements, each rated on a four-point Likert scale: 1-strongly agree, 2-agree, 3-disagree, 4-strongly disagree. Total scores range from 10 to 40, with the following interpretative thresholds:10-27-low self-esteem, 28-32-moderate self-esteem, 33-40-high self-esteem. For the current sample, the Cronbach's alpha coefficient was 0.826, indicating good reliability.

3. Results

The distribution of the scores was examined using the Kolmogorov–Smirnov test, which revealed no significant deviations from normality. Descriptive statistics are presented in Table 1. Subsequently, Student's t-tests were conducted to assess the significance of group differences, and effect sizes were calculated using Cohen's d. Correlational analyses were performed using Pearson's r, and moderation effects were tested through hierarchical regression analyses.

To verify Hypothesis 1 (i.e., that self-esteem is associated with achievement motivation), a Pearson's r correlation analysis was conducted. As shown in Table 2, statistically significant associations were observed between self-esteem and several dimensions of achievement motivation. Avoidance-oriented goals-both mastery-avoidance and performance-avoid-

A. Szczepanik-Paśnik, A. Linowska

Table 1. Descriptive Statistics for the Variables Under Study

	M	Me	Sk	Kurt	Min	Maks	KS	p
Self-Esteem	30.96	31.00	-0.381	0.654	11.0	40.0	0.09	<0.001
Mastery-approach goal	31.66	33.00	-0.998	1.221	2.0	42.0	0.05	0.002
Mastery-avoidance goal	19.40	19.00	-0.108	-0.237	2.0	35.0	0.05	0.005
Performance-approach goal	20.71	21.00	-0.178	-0.405	5.0	35.0	0.06	<0.001
Performance-avoidance goal	16.46	17.00	-0.162	-0.477	3.0	28.0	0.06	<0.001

Legend: M-Mean, SD-Standard Deviation, Me-Median, Sk-Skewness, Kurt-Kurtosis, Min-Minimum value, Maks-Maximum value, KS-Kolmogorov-Smirnov test statistic, p-significance level for normality test

Table 2. Association Between Self-Esteem and Achievement Motivation

Variable	1	2	3	4	5
1. Mastery-approach goal	-				
2. Mastery-avoidance goal	0.260***	-			
3. Performance-approach goal	0.410***	0.409***	-		
4. Performance-avoidance goal	0.242***	0.635***	0.566***	-	
5. Self-Esteem	0.294***	-0.184***	0.075	-0.180***	-

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

Table 3. Differences in Achievement Motivation and Self-Esteem Between Mobbing Victims and Non-Victims

Dependent Variable	No mobbing (n=422)		Mobbing (n=107)		t	p	95% CI		d
	M	SD	M	SD			LL	UL	
Self-Esteem	31.3	4.7	29.5	4.8	3.58	<0.001	0.8	2.8	0.39
Mastery-approach goal	31.9	7.1	30.9	8.3	1.16*	0.249	-0.7	2.8	0.14
Mastery-avoidance goal	19.1	6.3	20.6	6.3	-2.19	0.029	-2.8	-0.2	0.24
Performance-approach goal	20.5	6.4	21.3	7.4	-1.11	0.270	-2.2	0.6	0.12
Performance-avoidance goal	16.3	5.1	17.1	5.7	-1.51	0.132	-2.0	0.3	0.16

Legend: t- Student's t-test statistic; * -Welch's test statistic; p- significance level; d- Cohen's d effect size; M- mean; SD- standard deviation

ance-were negatively associated with self-esteem, whereas mastery-approach goals were positively associated with higher self-esteem. Thus, Hypothesis 1 was supported only for mastery-approach, mastery-avoidance, and performance-avoidance goals. No significant association was identified between self-esteem and performance-approach goals.

To verify Hypothesis 2 (i.e., that there are differences in the levels of achievement motivation and self-esteem between individuals experiencing and not experiencing mobbing), an independent-samples t-test was conducted. The analysis revealed statistically significant differences between the groups in self-esteem and in one dimension of achievement motivation. Individuals who had not experienced mobbing obtained significantly higher self-esteem scores compared to those who had experienced it. The effect size, expressed as Cohen's d = 0.39, indicated a small to moderate effect. For mastery-avoidance motivation, individuals who had not experienced mobbing scored significantly lower than those who had. Cohen's d was 0.24, indicating a small effect size. Thus, Hypothesis 2 was supported only with respect

Table 4. Regression model parameters for the moderation analysis of the relationship between self-esteem and achievement motivation, considering the experience of mobbing

		Mastery-approach goal			Mastery-avoidance goal		
		B	SE	t	B	SE	t
Model 1	Intercept	17.49	2.12	8.25***	26.82	1.85	14.53***
	Mobbing	-0.1	0.39	-0.26	0.55	0.34	1.6
	Self-esteem	0.46	0.07	6.67***	-0.23	0.06	-3.86***
Model 2	Intercept	16.03	2.49	6.44***	26.9	2.17	12.39***
	Mobbing	-0.01	0.4	-0.03	0.54	0.35	1.55
	Self-Esteem	0.51	0.08	6.17***	-0.23	0.07	-3.25**
	Mobbing x Self-esteem	0.43	0.39	1.12	-0.03	0.34	-0.07
	R2	0.08	-	-	0.04	-	-
	Δ R2	0.08	-	-	0.03	-	-

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

Table 5. Regression model parameters for the moderation analysis of the relationship between self-esteem and achievement motivation, considering the experience of mobbing

		Performance-approach goal			Performance-avoidance goal		
		B	SE	t	B	SE	t
Model 1	Intercept	17.32	1.97	8.79***	22.57	1.54	14.61***
	Mobbing	0.5	0.36	1.38	0.26	0.29	0.91
	Self-Esteem	0.12	0.06	1.87	-0.19	0.05	-3.86***
Model 2	Intercept	17.03	2.32	7.34***	21.75	1.82	11.98***
	Mobbing	0.52	0.37	1.4	0.31	0.29	1.07
	Self-Esteem	0.13	0.08	1.69	-0.16	0.06	-2.74**
	Mobbing x Self-esteem	0.09	0.36	0.24	0.24	0.28	0.86
	R2	0.01	-	-	0.03	-	-
	Δ R2	0.00	-	-	0.03	-	-

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

to differences in self-esteem and mastery-avoidance motivation between individuals who experienced mobbing and those who did not.

To verify Hypothesis 3 (i.e., that experiencing mobbing moderates the relationship between self-esteem and the various dimensions of achievement motivation), four separate hierarchical regression analyses were conducted. Each analysis included the moderating variable (experience of mobbing), the independent variable (self-esteem), and the interaction term between these variables in predicting one of the four dimensions of achievement motivation: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. Hypothesis 3

was not supported. Experiencing mobbing did not significantly moderate the relationship between self-esteem and any of the examined dimensions of achievement motivation. In all models in which self-esteem emerged as a statistically significant predictor, the addition of the interaction term did not result in an increase in the explained variance of the dependent variable.

4. Interpretation of results

The findings provide insights into several important relationships between self-esteem, achievement motivation, and the experience of mobbing, while also highlighting limitations of the model assuming a moderating role of mobbing. Two of the three hypotheses received partial support-specifically those concerning the relationships between self-esteem and mastery-approach, mastery-avoidance, and performance-avoidance motivation. However, no significant association was observed between self-esteem and performance-approach motivation, nor were significant differences found between individuals experiencing and not experiencing mobbing with regard to mastery-avoidance motivation. The effects observed were weaker than anticipated, suggesting that the psychological mechanisms linking these variables may be more complex than initially assumed.

The correlations between self-esteem and the various dimensions of achievement motivation were statistically significant but weak in magnitude. The results indicate that higher self-esteem is linked to mastery-approach motivation, whereas lower self-esteem is associated with avoidance-oriented motivations (mastery-avoidance and performance-avoidance). Individuals with low self-esteem are not necessarily unmotivated to achieve; however, their motivation is more likely to take a defensive, less adaptive form-driven by the avoidance of failure or negative evaluation rather than the pursuit of success. This implies that low–self-esteem individuals may engage in task-related behaviour not out of intrinsic motivation or a genuine desire for self-development, but rather to reduce perceived psychological threat. Such a motivational profile is less adaptive in the long term, as it is accompanied by greater emotional costs.

Individuals who experienced mobbing demonstrated lower levels of self-esteem and higher levels of avoidance motivation compared to those who had not been exposed to mobbing. Although these differences were statistically significant, the effect sizes ranged from small to moderate. These findings align with previous research showing that mobbing can lower self-esteem and activate defensive motivational strategies. This suggests that bullied employees may operate in a "survival mode," in which their task engagement is directed more toward minimizing losses than achieving goals. Such a pattern may negatively affect work performance, job satisfaction, and overall psychological well-being, underscoring the critical importance of preventive and intervention strategies within organizational settings.

The moderation analyses did not confirm the hypothesized role of mobbing as a moderator of the relationship between self-esteem and achievement motivation. None of the tested models produced significant interaction effects. This indicates that the relationship between self-esteem and achievement motivation remains stable regardless of whether individuals have experienced mobbing. At the same time, the absence of a moderating effect does not imply that mobbing is psychologically neutral; as noted earlier, it directly contributes to reduced self-esteem and heightened avoidance motivation. It is possible that under conditions of chronic stress, defensive mechanisms (e.g., rationalization or repression) are activated, which may weaken or obscure potential interaction effects.

5. Discussion

The results of the study confirmed the hypotheses concerning the relationship between self-esteem and achievement motivation related to striving for mastery, avoiding mastery, and avoiding showing off. However, the relationship between self-esteem and striving for display and differences in self-esteem and avoidance of mastery between those who experience and those who do not experience mobbing was not confirmed. Most importantly, the key hypothesis regarding the moderating role of mobbing in the relationship between self-esteem and achievement motivation was not supported. Despite the high reliability of the applied measures, clear group differences, and a large sample size, the interaction effect was not statistically significant. This may indicate that self-esteem influences motivational processes independently of environmental stressors such as

mobbing. At the same time, the findings confirm that mobbing functions as a risk factor for reduced self-esteem and disruptions in motivational profiles.

The absence of evidence for the moderation hypothesis may be attributable to several factors. It is possible that the relationship between self-esteem and motivation is not altered by mobbing but rather unfolds in parallel-meaning that mobbing exerts independent effects on self-esteem and on motivational tendencies, without an interaction between these pathways. Although a highly reliable diagnostic tool (the MDM Questionnaire) was used, the adopted cut-off (≥ 2 points) may have resulted in the classification of a group heterogeneous in terms of the intensity and duration of mobbing experiences. Another possibility is that individuals who experienced severe mobbing may have left their workplace and were therefore not captured in the study sample. Additionally, a substantial proportion of participants held higher education degrees, which may correspond to greater psychological resources (e.g., self-efficacy, emotional intelligence) that buffer the negative effects of mobbing and potentially attenuate or mask the expected interaction effects.

6. Limitations

Despite its valuable findings, this study has several important limitations that should be taken into account. First, its cross-sectional design precludes any causal inferences. Second, the dichotomous operationalisation of mobbing (mobbing vs. no mobbing) does not reflect the full continuum of its intensity. The omission of factors such as frequency, duration, and specific forms of psychological aggression limits the precision and nuance of the analyses.Moreover, several contextual variables-such as leadership style, organisational culture, and social support-were not included, although they may moderate the effects of mobbing or act as protective buffers. All variables were assessed using self-report measures, which introduces the risk of cognitive biases, social desirability effects, and recall inaccuracies.

7. Theoretical and practical implications

The findings of this study have important implications for occupational psychology and human resource management. They demonstrate that mobbing significantly distorts an individual's motivational system, shifting it toward avoidance-oriented patterns, which can result in reduced performance, increased absenteeism, and a heightened risk of burnout.Another key conclusion is that individuals with low self-esteem are particularly vulnerable to organisational stressors. This underscores the need for preventive and developmental interventions-such as coaching, resilience training, and psychological competence enhancement programmes.Organisations should implement anti-mobbing policies not only on ethical grounds but also due to their direct impact on employee motivation and overall work quality. These conclusions are consistent with previous research (Ronha & Rodrigues, 2025), which highlights the importance of strengthening well-being and engagement at work, as these factors serve a protective function against the negative outcomes of mobbing. Managers should be actively responsible for monitoring interpersonal dynamics within teams and responding decisively to any manifestations of mobbing.

8. Practical implications for HR and managers

The findings of this study provide valuable practical guidance for human resource management and the development of preventive strategies within organisations. In particular, the following actions are recommended: Implement systemic anti-mobbing procedures. Organisations should introduce clear legal and organisational frameworks, such as formal anti-mobbing policies, anonymous reporting channels, external mediation options, and transparent investigation procedures (Jeong et al., 2024). Monitor organisational climate-Regular employee surveys and diagnostic assessments can help identify early warning signs of deteriorating well-being, increased interpersonal tension, and reduced self-esteem (Mehmood

et al., 2024). Early detection substantially increases the effectiveness of intervention. Provide leadership and managerial training-Managers should be trained to recognize early indicators of mobbing, respond appropriately to interpersonal conflicts, and provide support to employees with lower self-esteem, who may be more vulnerable to organisational stressors (Chang et al., 2025). Research shows that higher self-esteem is associated with better motivation, productivity, job satisfaction, and prosocial behaviour (Gómez-Jorge & Díaz-Garrido, 2024). Develop programmes that strengthen psychological resources-Workshops on resilience, self-esteem, self-efficacy, and stress management, as well as coaching and mentoring interventions, can enhance employee well-being and reduce vulnerability to workplace stress (Amoadu et al., 2024). Nevertheless, research emphasises that prevention and early intervention remain the most effective mechanisms for protecting employee mental health (Tsuno, 2022).Foster a supportive organisational culture-Promoting open communication, preventing social isolation, and rewarding prosocial behaviours help build a psychologically safe work environment (Kong et al., 2025). A lack of active response from management creates conditions that allow mobbing behaviours to escalate. This underscores the need for training programmes that enhance assertiveness, strengthen resilience, and promote adaptive coping strategies (João & Portelada, 2023). Address incivility as an early warning sign-Incivility often precedes more severe forms of workplace aggression. Ignoring minor but repeated acts of disrespect may lead to the escalation of mobbing (Holm et al., 2022). Even low-intensity negative behaviours can gradually undermine employees' psychological well-being. Adjust motivational systems to support development rather than avoidance-Performance management systems should recognise not only results but also effort, engagement, and developmental progress. Rewarding learning-oriented behaviours contributes to a work environment that promotes growth and reduces avoidance tendencies among employees exposed to stressors. Recognition and appreciation mechanisms increase engagement, sense of belonging, and organisational loyalty (Imran et al., 2025).

Future research directions

To deepen the understanding of the mechanisms through which mobbing affects self-esteem and achievement motivation, longitudinal studies are recommended to track changes over time and to assess the impact of mobbing as a chronic factor. It is also worthwhile to use qualitative methods or a mixed-method approach to capture employees' subjective experiences and adaptive strategies. Future research should consider various forms and intensities of mobbing, as well as protective and risk factors such as the level of self-efficacy, social support, and coping strategies. It is also essential to take into account the organisational context, especially organisational culture and leadership styles.

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Sleep disorders in women during the menopausal transition – a narrative literature review[1]

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Abstract: Sleep, defined as a reversible neurobehavioral state regulated by circadian rhythms, is essential for health. Sleep disorders, especially during the perimenopausal period (age 45–55), are a significant health problem, affecting up to 60% of women during this period. These women often report a deterioration in sleep quality, frequent awakenings, and chronic feelings of sleep deprivation. This narrative literature review synthesizes current scientific reports on the biological, physical, and psychosocial mechanisms underlying these complaints. The etiopathogenesis of sleep disorders is multifactorial, with hormonal changes considered to be the main cause. Fluctuations and decreases in estrogen and progesterone (and its metabolite allopregnanolone) are directly associated with a deterioration in sleep structure, a decrease in sleep efficiency, and disruption of the circadian rhythm, including the action of melatonin. Estrogen deficiency may also increase the risk of sleep-disordered breathing. The clinical picture is dominated by insomnia, the main symptoms of which are difficulty staying asleep and prolonged wakefulness after falling asleep. The review lists vasomotor symptoms, mood disorders (anxiety and depression), and nocturia resulting from hormonal dysregulation affecting bladder capacity and urine production at night as secondary factors of insomnia. In addition, an increase in the frequency of primary disorders, including obstructive sleep apnea and restless legs syndrome, is observed during the perimenopausal period. Sleep disorders are often underestimated and undiagnosed, which contributes to the deterioration of mental health and professional functioning and increases the risk of chronic diseases and injuries (e.g., falls). The level of knowledge about proper sleep hygiene among women is generally low. The conclusions of the review point to the multidimensional nature of the problem and the need for a holistic, interprofessional, team-based approach to improve the quality of life for women during the menopausal transition.

Keywords: climacteric syndrome, menopausal transition, menopause, perimenopause, sleep disorders, sleep quality

1. Introduction

Sleep is defined as a reversible, repetitive neurobehavioral state regulated by circadian rhythms and homeostatic mechanisms (Carskadon and Dement, 2005). The quality of sleep is determined based on five measurable components:

- quantity (length of sleep per day);
- continuity (ease of falling asleep and staying asleep);
- circadian rhythm (synchronization with the 24-hour cycle);

- daytime alertness (no excessive sleepiness during the day);
- perception of sleep quality (subjective satisfaction with sleep) (Buysse, 2014; Haufe & Leeners, 2023).

Scientific literature increasingly emphasizes the link between the etiopathogenesis of many diseases and sleep deficit (Hale, Troxel & Buysse, 2020). Sleep disorders are a broad category of conditions that vary in their causes, symptoms, and pathophysiological mechanisms. They can be primary or secondary, being a symptom of other somatic, neurological, or mental illnesses. According to the International Classification of Sleep Disorders (ICSD-3), they include any difficulties related to the initiation and maintenance of sleep, its abnormal length or quality, as well as the occurrence of abnormal behaviors during sleep (Epstein, 2018; Hereford, 2013; Sateia, 2014).

Sleep disorders, both in terms of sleep deprivation and reduced sleep quality, can lead to serious health consequences, such as cardiovascular dysfunction, mental weakness, cognitive impairment, and decreased immunity. Sleep deprivation disrupts the natural nighttime decrease in blood pressure. The lack of this natural nighttime pause, combined with increased production of cortisol (the stress hormone) as a result of HPA axis dysregulation increases the burden on the cardiovascular system. As a result, insomnia becomes a risk factor for hypertension and heart disease. It is worth noting that the risk of developing these conditions naturally increases after menopause (Lightman, Birnie & Conway-Campbell, 2020).

Sleep fragmentation negatively affects glucose and lipid metabolism. Disrupted production of appetite-regulating hormones (leptin and ghrelin) and impaired insulin sensitivity can lead to insulin resistance and abdominal obesity. This metabolic feedback loop increases the risk of type 2 diabetes and puts additional strain on the cardiovascular system (Tandon et al., 2022).

Sleep is fundamental to psychophysical well-being. Despite this obvious fact, many people do not meet their body's daily needs for this regenerative rest (Baranwal, 2022). Women are more likely than men to report a deterioration in sleep quality, difficulty

maintaining sleep continuity, including frequent awakenings and feelings of sleep deprivation (Perger et al., 2024). Sleep disorders are also among the most common and troublesome complaints during the perimenopausal period, which is a natural stage of the aging process, usually occurring between the ages of 45 and 55 (Lialy et al., 2023; Matthews et al., 2020; Santoro et al., 2021). Population studies indicate that the prevalence of sleep problems increases from 16-42% in the premenopausal period to 39-47% in the perimenopausal period, and after menopause, it can affect more than half (about 60%) of women (Baker et al., 2018; Tandon et al., 2022).

Epidemiological data indicate that insomnia not only increases the risk of many diseases, such as obesity, hypertension, diabetes, and heart disease, but also points to the possibility of a biological link between sleep disorders and the occurrence of osteoporosis, resulting from common risk factors (e.g., age, weight changes) and mechanisms affecting bone metabolism. In postmenopausal women, sleep disorders increase the risk of falls, which are the main cause of fractures (Cauley et al., 2023; Miner et al., 2021). Another interesting aspect is that insomnia

may affect ovarian function, while improving sleep quality may potentially delay the onset of natural menopause (Ghan et al., 2024). In light of these findings and due to the increase in the prevalence of sleep disorders in recent years, it is necessary to pay more attention to sleep problems in perimenopausal women (Arteaga et al., 2025; Lee et al., 2020).

The aim of this narrative review of the available literature is to critically analyze and synthesize current scientific reports on the biological and psychosocial mechanisms underlying sleep disorders in perimenopausal women. The study aims to draw attention to the complexity of the problem and the importance of a holistic and interprofessional approach to the diagnosis and treatment of these conditions. To this end, publications were searched for in the PubMed, Scopus, and Cochrane Library databases. The search was based on the following set of keywords: *perimenopause, menopause, climacteric syndrome, sleep disorders, insomnia*, and *sleep quality*. The analysis focused on sources published in English and Polish over the last five years (2020-2025), with a preference for system-

atic reviews, meta-analyses, and large cohort studies to ensure the highest quality of content. In justified cases, older publications were also included if they provided important historical information for a full understanding of the clinical context.

The final selection of articles was carried out as part of a narrative review with a systematic literature search. Articles were initially selected based on their abstracts, and then the full text of the publications was evaluated in terms of direct thematic relevance and clinical significance for women experiencing the menopausal transition. This process aimed to focus on the most current and reliable evidence regarding the etiology and consequences of sleep disorders in this group of women.

2. Etiopathogenesis of sleep disorders in the perimenopausal period

Reports in the literature indicate that sleep disorders in perimenopausal women are multifactorial in nature. They result from interactions between hormonal and organic disorders, as well as genetic, ethnic, personal, and environmental factors. This multifaceted approach is important for the clinical assessment of patients (Aksan and Dilbaz, 2024; Santos et al., 2021). Correct diagnosis, therefore, requires not only an assessment of physical symptoms such as hot flashes, but also a detailed psychological and socioeconomic history.

2.1. Endocrine changes during perimenopause and sleep architecture

Female sex hormones, estrogens and progesterone, have a direct impact on sleep structure. Sleep problems intensify during periods of significant hormonal fluctuations (Dorsey et al., 2020). Estrogens have a beneficial effect on sleep, improving its efficiency and stabilizing circadian rhythms. Therefore, a decrease in estradiol levels, and especially its fluctuations, is associated with reduced sleep efficiency, more frequent awakenings, and sleep-disordered breathing (Haufe, 2023).

A decrease in estradiol levels during perimenopause may affect cortisol levels, but the results of studies in this area are inconclusive. It has been found that elevated cortisol levels in women correlate with age. However, it remains unclear whether this increase is a direct consequence of aging or whether it is secondary to a decrease in sex hormone levels. Animal studies confirm the influence of estradiol on the regulation of stress hormones, but estrogen therapy in humans has ambiguous effects, so the role of estradiol in the functioning of the hypothalamic-pituitary-adrenal (HPA) axis during menopause remains unclear (Lightman et al., 2020).

Sleep fragmentation, which is typical for menopause, can disrupt the rhythm of cortisol secretion, regardless of the shortening of individual sleep phases. Cortisol levels before bedtime may be affected by both sleep deprivation and sleep fragmentation, as well as their mutual interaction (Cohn et al., 2023). Equally important is the decrease in progesterone levels resulting from the absence of ovulation, which correlates with sleep disturbances and more frequent awakenings. This effect is attributed, among other things, to low levels of allopregnanolone, a neuroactive metabolite of progesterone responsible for its calming and soporific effects. Allopregnanolone acts as a positive allosteric modulator of the GABA-A receptor, enhancing the inhibitory effect of gamma-aminobutyric acid in the brain. The loss of this endogenous sedative effect contributes directly to sleep fragmentation and a reduction in slow-wave sleep, resulting in a feeling of insufficient regeneration (Słopień et al., 2018).

Hormones of the hypothalamic-pituitary-ovarian axis can modulate sleep regulation by influencing the adenosine system, which promotes sleep, and the arousal systems in the hypothalamus. In addition, estradiol may influence sleep indirectly through thermoregulatory systems in the hypothalamus (Ballot et al., 2022; Dorsey et al., 2020).

2.2. Modifications of the circadian rhythm

Circadian rhythm disorders and age-related dysregulation of melatonin secretion contribute to the severity of insomnia in women. Since sex hormones

participate in the sensitization of neurons to melatonin, low estrogen levels are directly associated with reduced melatonin production and the occurrence of sleep disorders in perimenopausal women. Estrogen receptors are located in regions of the brain involved in the regulation of sleep and circadian rhythm, including the suprachiasmatic nucleus. The loss of estrogen in these centers may directly impair

circadian rhythm synchronization and reduce the nighttime peak of melatonin secretion. As a result, women experience a shift in their sleep phase and it is difficult for them to achieve the desired duration of sleep (Troia et al., 2025).

2.3. Symptoms of menopausal syndrome and sleep disorders

The available literature on the subject has well documented the relationship between sleep disturbances and vasomotor symptoms in perimenopausal women (Proserpio et al., 2020; Zolfaghari et al., 2020). Studies by Maki et al. (2024) provided evidence of a significant correlation between night sweats and sleep disturbances. More than half of the study participants (60%) indicated night sweats as the main cause of nighttime awakenings. Reducing their number led to improved sleep quality, shorter wakefulness after falling asleep, and improved sleep efficiency.

Similarly, a study by Tomida et al. (2021) conducted among Japanese women showed a clear link between hot flashes and sleep problems, even after taking the role of potential confounding factors into account. An international cross-sectional study conducted in Latin America also observed an increase in the frequency of sleep disorders with the coexistence of vasomotor symptoms in perimenopausal women (Arteaga et al., 2025).

These observations confirm the widespread nature of the correlation between hormonal fluctuations and sleep dysregulation, extending beyond Euro-American populations. These studies also indicate that the severity of night sweats and hot flashes is a direct predictor of sleep fragmentation, which is important for the clinical assessment of patients. This correlation confirms the belief that the treatment of vasomotor symptoms is an integral part of effective insomnia

therapy in this group of women. In addition, hot flashes and night sweats show statistically significant associations with symptoms of depression and anxiety, which in turn contribute to the development of insomnia (Palacios et al., 2022). Since women in the perimenopausal period experience significant changes in their professional lives and show greater emotional sensitivity, their anxiety rates are significantly higher than those of women of childbearing age. In addition to physiological factors, the increased psychological burden in this age group results from the complex interaction of cognitive factors, personality traits, professional pressure, economic status, and access to social support groups (Zeng et al., 2025).

The relationship between menopause, sleep disorders, and mood disorder symptoms in middle-aged women has been well documented in the literature. These associations may be particularly pronounced in perimenopausal women who have previously experienced premenstrual dysphoric disorder, as the hormonal changes associated with perimenopause may exacerbate pre-existing menstrual-related mood disorders. Women experiencing low mood are more likely to experience vasomotor symptoms. This may indicate a complex, reciprocal relationship between the three main problems women experience, during menopausal transition: mood (depression, anxiety), sleep, and hot flashes. The common cause of these problems is a decrease in estrogen levels, which leads to overactivity of KNDy neurons in the brain. This overactivity both triggers hot flashes and affects the pathways that regulate sleep and mood (Maki et al., 2024). However, simply noting the co-occurrence of these symptoms is not enough—it is crucial to recognize their chronology. An important research question remains whether low mood leads to poorer sleep quality and perception of vasomotor symptoms, or whether sleep disturbances (e.g., caused by hot flashes) primarily worsen mood. Unraveling this sequence is crucial for developing the most effective treatment strategy for sleep disorders (Bowman et al., 2021). Another significant problem in women during perimenopause is the development of nocturia, i.e., the need to urinate at night. This process is multifactorial and is caused by postmenopausal estrogen deficiency, which affects the urinary and

renal systems and sleep mechanisms. Dysfunction of estrogen receptor stimulation in the urogenital system leads to a reduction in bladder capacity and an increase in the symptoms of overactive bladder. At the same time, estrogen deficiency disrupts the circadian rhythm of vasopressin secretion, which induces sodium-water diuresis and increased urine production at night (nocturnal polyuria). In addition, nocturia and sleep disturbances exacerbate each other: frequent awakenings caused by vasomotor symptoms increase awareness of bladder fullness and the need to urinate. Importantly, nocturia itself is a sleep-fragmenting factor, as each need for nighttime urination interrupts sleep continuity and can lead to secondary insomnia and difficulty falling back asleep (Pauwaert et al., 2024).

With regard to other symptoms typical of the menopausal transition, available studies have not shown that urogynecological symptoms, with the exception of nocturia, as well as various types of musculoskeletal pain, significantly affect sleep quality (Santos et al., 2020). Muscle and joint pain is often reported by women in the perimenopausal period, but its relationship with sleep quality is more complex. According to Santos et al. (2020), it is not a major predictor of sleep disorders. However, it should be noted that chronic pain is a recognized factor in exacerbating insomnia. If musculoskeletal pain is so intense that it prevents the patient from assuming a comfortable position or causes them to wake up, it becomes a direct cause of sleep fragmentation. Hormonal and inflammatory changes associated with the onset of menopause increase susceptibility to pain, which in turn can be a secondary cause of insomnia (Tandon et al., 2022). In clinical practice, controlling chronic pain through physical therapy or other methods is a necessary prerequisite for the effective treatment of accompanying insomnia (Lialy et al., 2023).

2.4. Coexisting primary sleep disorders

Sleep disorders in perimenopausal women may also be the result of primary sleep disorders. Among sleep-related breathing disorders, particular attention is paid to obstructive and central sleep apnea (Troia

et al., 2025). Sleep-related breathing disorders are associated with menopausal status, which is linked to increased visceral fat accumulation. This in turn, affects, the development of these disorders regardless of a woman's overall body weight. During the post-menopausal period, there is a shift in fat accumulation from the hips to the abdominal and visceral areas, which results in an increased volume of adipose tissue around the upper airways and their susceptibility to collapse. Studies indicate that visceral fat may be an independent risk factor for obstructive sleep apnea in women, beyond body mass index alone. The incidence of this condition increases with the passage of time since the onset of menopause (Wang et al., 2025). In addition, studies conducted on a group of women in menopausal transition with sleep disorders found that they had higher body mass index values (Arteaga et al., 2025). The authors pointed to a statistically significant relationship between sleep disorders and obesity, which appears to be bidirectional, as obesity often leads to obstructive sleep apnea, which disrupts sleep. Meanwhile, reduced sleep time is associated with an increased risk of obesity in adults.

Another primary sleep disorder that is more common in perimenopausal women is restless legs syndrome. This is a sensorimotor disorder characterized by a strong urge to move the legs, which appears or intensifies during rest, especially in the evening or at night. Women with postmenopausal insomnia may have difficulty falling asleep due to cognitive arousal or hot flashes, while women with restless legs syndrome experience physical discomfort and an internal compulsion to move. Four basic diagnostic criteria are characteristic of this syndrome, the most typical of which is the appearance of symptoms during rest (sitting or lying down) and achieving temporary, complete, or partial relief by moving the limbs (Manconi et al., 2021).

It should be emphasized that sleep disorders associated with menopause may be the result of factors specific to the unique physiological changes that occur during the menopausal transition in women (Maki et al., 2024). The etiology is directly related to endocrine and vasomotor changes characteristic of menopause (Proserpio et al., 2020).

3. Clinical picture

Among the many different sleep disorders in perimenopausal women, insomnia is the most commonly diagnosed (Cohn et al., 2023). According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, insomnia is defined as quantitative or qualitative dissatisfaction with sleep (First, 2013).

It may be characterized by several of the following symptoms: difficulty falling asleep, difficulty staying asleep, or waking up too early in the morning without being able to fall back asleep. Nocturnal sleep interruptions are often associated with vasomotor symptoms that interrupt sleep and make it difficult to fall back asleep (English et al., 2021).

As mentioned earlier, the main problem for women during menopause is an increased number of awakenings and longer periods of wakefulness after falling asleep, while difficulties with falling asleep itself are less common. Although prolonged sleep latency is less common in women, it can occur in women with high levels of anxiety and cognitive arousal, which often accompany hormonal changes and stress associated with menopause (Ballot et al., 2022).

In a systematic review, Kingsberg et al. (2023) analyzed eight studies (described in ten publications) focusing on the prevalence of sleep disorders in middle-aged women. The most commonly diagnosed symptoms of sleep disorders in these women were difficulty falling asleep and frequent awakenings. However, it should be emphasized that the studies analyzed used different definitions of "frequent nighttime awakening," which led to inconsistencies in the results. The differences also concerned the research tools used, such as the Menopause Rating Scale (MRS), Insomnia Severity Index (ISI), as well as the objectives and assumptions of the researchers. Although the data clearly confirm the prevalence of sleep problems in the postmenopausal period, the lack of standardization in the definition and diagnosis of insomnia makes it difficult to more accurately determine the symptomatology and prevalence of these disorders.

The clinical picture and etiology of sleep disorders in perimenopausal women are diverse and go beyond the mechanisms directly related to the onset of menopause itself. This points to the complex nature of sleep problems in this group of women, as the symptoms may be the result of the coexistence and interaction of many potentially independent pathogenic mechanisms (Manconi et al., 2021).

4. Sleep disorders and the psychosocial functioning of women

Fragmented sleep and chronic insomnia during menopause have profound and long-lasting consequences for normal psychophysical functioning, going beyond mere discomfort. The relationship between sleep and mental health is particularly evident in this age group of women. Sleep disorders are associated with an increase in symptoms of depression and anxiety (Bowman et al., 2021). It should be emphasized that sleep disorders in middle-aged women are not only a symptom of depression, but often occur as an independent risk factor or precursor to future depressive episodes. This phenomenon is exacerbated by a decrease in the levels of neurosteroids, such as allopregnanolone, which have anxiolytic and sedative effects and whose concentration decreases during late menopausal transition (Slopien et al., 2018).

Chronic sleep disorders are a significant risk factor for deterioration in physical health and the development of cardiometabolic diseases. Sleep fragmentation and reduced sleep duration lead to dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis and disturbances in cortisol levels (Lightman et al., 2020). The increase in abdominal obesity, insulin resistance, and dyslipidemia observed after menopause is closely related to sleep disorders in women. Reduced sleep quality can negatively affect cognitive function. Menopausal women report difficulty concentrating, memory problems, and a decline in overall productivity, which is directly correlated with fragmented sleep and awakenings induced by vasomotor disturbances (Tomida et al., 2021). The observed decline in cognitive and functional efficiency is a significant factor limiting professional productivity in this group (Kagan et al., 2021). This phenomenon points to the need for effective therapeutic interventions, as untreated sleep disorders can be a significant barrier to maintaining the

professional and social activity of women, especially at a time when they often reach the peak of their professional and intellectual potential.

Given the insufficient level of knowledge about sleep hygiene (Shi et al., 2024) and the increasingly widespread trend of using sleeping pills (Solomon et al., 2020), promoting non- pharmacological approaches is becoming particularly important. The SWAN (*Study of Women's Health Across the Nation)* cohort study conducted by Solomon et al. (2020) showed that the use of sleep medications by women complaining of sleep disorders has increased significantly over the past 20 years. Importantly, this increase was observed among perimenopausal women in all ethnic groups. It is concerning that pharmacotherapy is often the first therapeutic intervention for insomnia, usually without prior attempts at behavioral modification or first-line therapies such as cognitive behavioral therapy for insomnia (CBT-I). Long-term use of sleep medications, especially benzodiazepines, is associated with the risk of developing tolerance, dependence, and adverse effects such as falls and cognitive impairment, which pose a particular risk in the postmenopausal female population (Solomon et al., 2020).

Education on sleep hygiene and access to cognitive-behavioral therapy for insomnia should be a priority for public health care, improving not only sleep quality but also the overall health of women in various aspects of their functioning (Hale et al., 2020). From a public health perspective, promoting sleep health involves not only treating insomnia, but also taking steps to optimize quality of life. Hale et al. (2020) emphasize that sleep hygiene and broad access to non-pharmacological treatments for insomnia are effective preventive and therapeutic tools.

5. Limitations

Due to the methodology adopted, this narrative literature review has certain limitations that should be taken into account when interpreting its conclusions presented. First of all, in a narrative review, the process of selection of the presented literature was not systematic, which could have resulted in a subjective selection of sources evaluated in terms of their substantive significance and clinical relevance.

Furthermore, the methodology applied here precludes meta-analysis and statistical evaluation of study results, which is only possible in systematic reviews. In addition, the limitations of the review stem from methodological restrictions included in the analysis of the studies.

The available literature on this area is still largely based on sleep measurement methods (e.g., PSQI, ISI scales) that may be biased and differ from objective measurements (e.g., actigraphy or polysomnography). Subjective perception of sleep is often distorted by co- occurring symptoms such as depression or anxiety, which can lead to overreporting of disorders.

In terms of etiology, most of the included studies are observational or cross-sectional in nature, which makes it impossible to establish a direct cause-and-effect relationship between hormonal fluctuations and sleep disturbances. This makes it difficult to clearly distinguish whether insomnia is a direct effect of hormonal fluctuations and vasomotor symptoms, or whether it is exacerbated by secondary factors such as an increased risk of obstructive sleep apnea in the postmenopausal period, which requires a completely different therapeutic approach.

Despite these methodological limitations, this review makes an important contribution to the advancement of knowledge about sleep disorders in perimenopausal women. It can be considered a starting point for further in-depth analysis of sleep disorders, which are an important issue from the point of view of medical care for women during the menopausal transition. This review provides a basis for formulating hypotheses and identifies gaps in knowledge that need to be filled through further carefully designed prospective and randomized controlled trials.

Summary and practical implications

Sleep disorders in women during perimenopause include difficulty falling asleep, frequent nighttime awakenings, and premature morning awakening. The deterioration in sleep quality is not only a consequence of the somatic and psychological symptoms typical of menopause, but also a factor that exacerbates their occurrence, which significantly

affects the quality of life in this group of women. The etiology of these disorders is multifactorial and results from hormonal disorders as well as organic, environmental, and personal factors. Sleep disorders in perimenopausal women are often underestimated and underdiagnosed, which negatively affects their daily functioning, mental health, family life, and professional work. In addition, low awareness of healthy behaviors and proper sleep hygiene, as well as entrenched negative beliefs and attitudes, hinder the implementation of effective non-pharmacological interventions.

A critical analysis of the available literature highlights the urgent need to raise awareness among professionals involved in women's health about sleep disorders in the perimenopausal period. Downplaying insomnia as a "typical" symptom of menopause often leads to ineffective treatment and uncontrolled use of sleep medications (Solomon et al., 2020), which can mask the presence of more serious sleep disorders, such as obstructive sleep apnea (Wang et al., 2025). There is a need to reassess the role of pharmacotherapy as first-line treatment and evaluate its effectiveness in the context of lasting improvement in quality of life, rather than just short-term symptom relief (Tandon et al., 2022).

The conclusions drawn from the literature review can be used, among other things, as a basis for developing standardized review protocols and implementing uniform diagnostic and therapeutic standards aimed at optimizing interprofessional care for women in the perimenopausal period. It is crucial to adopt a holistic approach to health, in which sleep is treated not as a symptom but as one of the fundamental pillars of public health (Hale et al., 2020). The priority should be to incorporate sleep hygiene education and the widespread use of cognitive-behavioral therapies into routine medical and psychological care, enabling women to regain control over their own health and reducing the need for pharmacotherapy.

In summary, women in menopausal transition who receive optimized comprehensive, interprofessional care have a real chance of improving their sleep quality and thus alleviating other ailments typical of this period of life.

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Obesogens in food as a health risk for obesity

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Abstract: Modern society is confronted on a daily basis with the problem of obesity, which is one of the greatest threats of the 21st century. Factors in the development of obesity are well known, although one of the lesser-known but equally important factors is exposure to chemicals called obesogens. These compounds are found in cosmetics, food and plastics, among others, and exposure can occur through the skin, the respiratory tract and the gastrointestinal tract. The results of many studies highlight the need for increased control and regulation of chemicals contained in consumer products. Understanding the role of obesogens as a factor in the development of obesity can help formulate better and more effective prevention and treatment strategies, which is crucial for public health.
Keywords: adipose tissue, chemicals, environmental factors, obesogens, obesity

1. Introduction

Today's society is facing the growing problem of obesity, which is recognised as one of the greatest health threats of the 21st century. It has been identified by the World Health Organization as a pandemic. Obesity is defined as a body mass index (BMI)>30 kg/m2, while normal BMI values by standards are 18.5–24.8 kg/m2. In 2021, the European Commission defined obesity as a chronic and recurrent disease that leads to a series of different non-communicable, diet-related diseases, including type 2 diabetes, cardiovascular disease and cancer. Additionally, obesity is associated with a 20-year reduction in life expectancy and other consequences such as unemployment and increased economic burden on society (Yilmaz et al., 2025). The mechanism of obesity development is complex and multifactorial. A high-calorie diet combined with a lack of or insufficient physical activity is presented as the basis for the onset of obesity (Burki, 2021; Piché et al., 2020). However, the development of the epidemic of this disease is due to a number of other lifestyle factors. These factors include: biological factors (endocrine disorders affecting the regulation of energy balance), behavioural factors (inappropriate, high-energy diet combined with insufficient physical activity), social factors (socioeconomic status, lifestyle, urbanisation) and environmental factors (stress, disturbed diurnal rhythm) (Blüher, 2019; Piché et al., 2020). The risk factors are well known by the public, but some of the lesser-known factors influencing weight gain and thus the development of obesity to date are chemicals called obesogens. The first mention of external compounds that may impair energy homeostasis regulation, promoting weight gain and the development of obesity, was made by Grün and Blumberg, who published two article on this topic in 2006 and 2009 (Grün & Blumberg, 2006, Grün & Blumberg, 2009a; Micić et al., 2021). This has led to an increase in interest in obesogens and has triggered a number of studies to understand their sources, mechanism of action and health effects.

The aim of this study is to present the role of obesogens in the development of obesity and to assess their impact on the population.

2. Methodology

This review was conducted according to the principles of narrative and systematic literature review. A comprehensive search of the Google Scholar, PubMed and Web of Science databases was performed from 2017 up to June 2025. The search strategy combined free-text words related to 'obesogens' and 'obesogens in food'. The bibliographic entries were selected on the basis of an individual assessment of the title and abstract of the literature searched. Reports not available full text, chapters in books, text in language other than English and case studies were excluded.

3. Results and discussion

3.1. Definition of obesogens

Obesogens are defined as chemical compounds, both dietary, endogenous and pharmaceutical and xenobiotic, which, together with a number of genetic and environmental factors such as excess energy intake relative to energy expenditure, cause a predisposition to weight gain and subsequent obesity and the subsequent development of metabolic diseases (Li et al., 2011). Obesogens can be natural (e.g., metals, viruses), anthropogenic prescription drugs (e.i. antibiotics, hormonal drugs), environmental (insecticides, plastics, household chemicals, particulate matter), or food components (fructose, trans-fats, preservatives, emulsifiers)(Heindel et al., 2024). These compounds impede the proper functioning of the endocrine system by affecting metabolism and thus disrupting adipose tissue homeostasis and causing weight gain (Entezari et al., 2022). Currently, more than 1,300 substances have been identified as possibly capable of disrupting endocrine regulation (Li, 2011; Nicolaou et al., 2024).

3.2. Mechanism of action

Substances categorised as obesogens interfere with various signaling pathways in the body that affect tissues crucial to whole-body metabolism at their endpoints, resulting in altered adipose tissue function (Chamorro-Garcia & Veiga-Lopez, 2021; Shahnazaryan et al., 2019). Multiple mechanisms have been shown through which obesogens can affect adipose tissue activity (Ćurić et al., 2021). Obesogens cause weight gain by altering lipid metabolism to promote adipogenesis and lipid accumulation (Gupta et al., 2020). Obesogens inappropriately stimulate adipogenesis and fat storage in vivo in two ways: directly or indirectly (Lee & Blumberg, 2019). Direct action may occur by increasing the number of adipocytes, increasing the size of adipocytes or altering hormonal pathways that are responsible for controlling fat development (Darbre, 2017). Indirect effects may include altering hormones that regulate appetite, satiety and food preferences and altering basal metabolism (Darbre, 2017). These disturbances cause changes in various organs such as the brain, pancreas, adipose tissue, gastrointestinal tract and muscle, altering energy balance to promote calorie storage and altering the composition of the microbiome (Lee & Blumberg, 2019).

3.3. Sources of obesogens

The number of newly discovered chemicals produced and marketed is increasing every year. The introduction of these substances into the environment occurs through industry, manufacturing practices, agriculture and human activities such as the use of medicines, personal care products and cleaning products (Barra et al., 2022). While some of these compounds occur naturally in nature, most are substances that have been released into the environment as a result of human activity without knowledge of their impact on the environment and human health. Obesogens include solvents – polychlorinated biphenyls (PCBs); pesticides – e.g., dichlorodiphenyltrichloroethane (DDT), chlorpyrifos, diazinon, permethrin, neonicotinoids; non-stick coatings – e.g., per- and polyfluorinated substances (PFAS); clothing and furniture protectants; food preservatives/additives/emulsifiers – e.g., parabens, monosodium glutamate, carboxymethylcellulose, 3-tert-butyl-4-hydroxyanisole (3-BHA)); personal care products – e.g., phthalates, parabens;
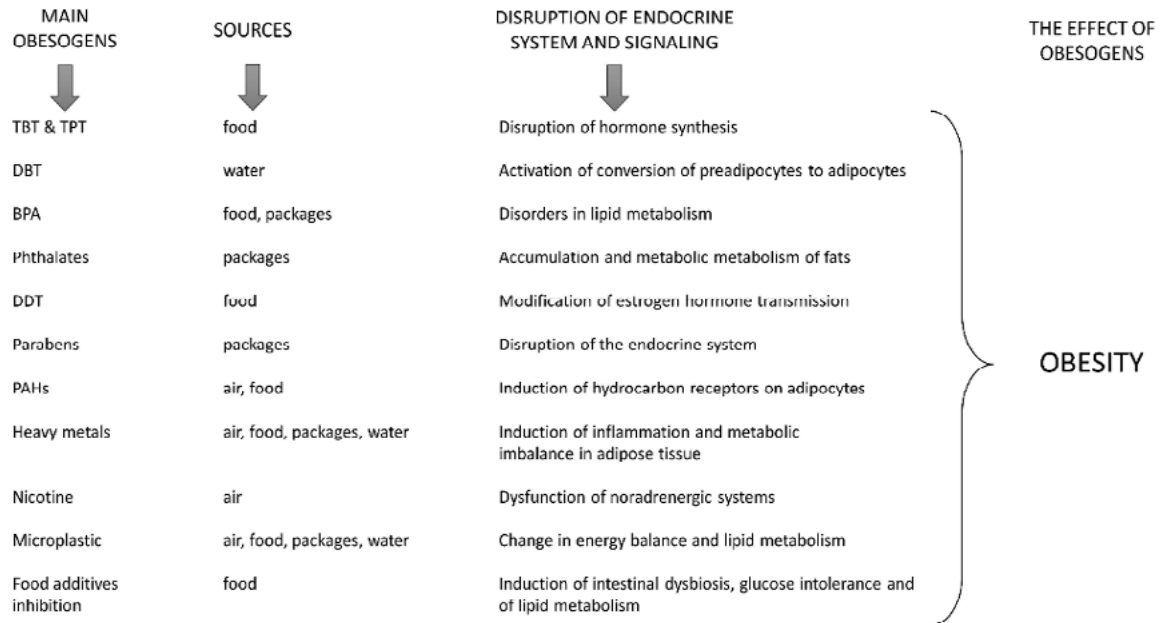
Figure 1. Sources of obesogens and their action. Complited by the author from data search on: Jaskulak et al. 2025; Kladnicka et al., 2022; Wang et al. 2024.

plastics – e.g., phthalates, bisphenols; resins and can linings – e.g., bisphenols; and air pollutants – e.g., polycyclic aromatic hydrocarbons (PAHs) (Heindel et al., 2024; Veiga-Lopez et al., 2018; Wang et al., 2024). Exposures can occur via air, water, food, skin contact or dust inhalation (Darbre, 2017; Heindel et al., 2024).

3.4. Important compounds among the obesogens

Organotins are persistent organic pollutants widely used as pesticides, disinfectants and in aquatic systems as marine antifouling agents (Grün & Blumberg, 2009b). These compounds are harmful to the endocrine system by interfering with hormone synthesis (Kladnicka et al., 2022). One of the most studied substances in this group is tributyltin (TBT) and its related compound triphenyltin (TPT). Exposure to tributyltin occurs through dietary sources, more specifically seafood and shellfish (Lee & Blumberg, 2019). Indirectly, humans are exposed to TBT through house dust (Kladnicka et al., 2022). The obe-

sogenic mechanism of these compounds is through stimulation of adipogenesis and lipogenesis (Núñez-Sánchez et al., 2023).

Dibutyltin (DBT) is the main breakdown product of TBT. This substance is more prevalent in the environment due to its presence in high concentrations in polyvinyl chloride (PVC) plastics. It may pose a risk to humans due to the penetration of this compound into drinking water from PVC pipes. Based on studies, prenatal exposure to this compound led to increased white adipose tissue (WAT) in the offspring and led to insulin resistance (Egusquiza & Blumberg, 2020).

Bisphenol A (BPA) is a phenolic compound used in the production of polycarbonate plastics and epoxy resins, which are ubiquitous in consumer products such as water bottles, water pipe linings, food and beverage can coatings, car parts and baby bottles (Darbre, 2017). Based on studies, it can be concluded that its dietary intake is the main route of human exposure (Kladnicka et al., 2022). Bisphenol A is the most extensively studied and documented obesogenic compound in relation to the occurrence of epigenetic changes associated with the onset and development of obesity (Núñez-Sánchez et al., 2023). Monomers

of this compound can leach from the plastic food and beverage containers in which they are packaged and distributed and thus integrate into hormonal and metabolic pathways in the body (Alharbi et al., 2022). Bisphenol A is a well-known compound that disrupts the endocrine system. It accumulates in white adipose tissue (WAT) and thus can affect the metabolic function of fat cells. Bisphenol A causes weight gain by disrupting the body's lipid balance, stimulating adipogenesis and lipid accumulation, and modulating the activity of nuclear receptors that accumulate lipid flux, thereby causing obesity (Martinez-Esquivel et al., 2022).

Phthalates are phthalic acid esters, which are mainly used as softeners to increase the flexibility and durability of plastic materials. They can be found in many everyday products such as adhesives, paints, children's toys, electronics, medical equipment, personal care products, air fresheners, pharmaceuticals and various textiles (Darbre, 2017). These compounds pose a risk in children because toys that contain phthalates in their composition can enter the child's body when they place them in the mouth (Kladnicka et al., 2022). The mechanism of these compounds is through their effects on fat accumulation and metabolism. Phthalates affect the function of nuclear receptors and alter the regulation of energy balance, leading to abnormal glucose metabolism and an increased risk of the onset and development of obesity and other related metabolic disorders (Amato et al., 2021; Wang et al. 2024).

Dichlorodiphenyltrichloroethane (DDT) and its breakdown product *dichlorodiphenyltrichloroethylene* (DDE) are two compounds in a group of pollutants widely distributed in the environment (Darbre, 2017). The greatest exposure to DDT and its metabolites occurs through the consumption of meat, meat products and fish, and it is also detectable in leafy vegetables, which are richer in DDT compared to other types of vegetables.

DDT and DDE act as nuclear estrogen receptor agonists (DDT), androgen receptor antagonist (DDE) and can bind to certain GPCRs. The result may be a change in estrogen signaling (Mohajer et al., 2021).

Parabens are alkyl esters of p-hydroxybenzoic acid characterised by antimicrobial and antifungal properties. They are typically used in personal care cosmetics and pharmaceuticals, which are the main source of human exposure. These compounds are endocrine disruptors (Núñez-Sánchez et al., 2023). Thus, they stimulate the formation of adipose tissue in preadipocytes and mesenchymal stem cells cells (Amato et al., 2021).

Polycyclic Aromatic Hydrocarbons (PAHs) are a group of compounds that are formed during incomplete combustion of coal, oil, gas, wood, tobacco and intensive heat treatment of meat. The main sources of exposure are the inhalation of tobacco and wood smoke and the consumption of food contaminated with PAHs. One PAH is benzopyrene, which is formed by incomplete combustion and is present in grilled or smoked foods. This compound is correlated with the development of obesity through the induction of hydrocarbon receptors in adipocytes (Martinez-Esquivel et al., 2022).

Heavy metals, some of which are involved in metabolic dysfunction including the metabolic imbalance between BAT and WAT (Mohajer et al., 2021). The main source of exposure to heavy metals is water (Martinez-Esquivel et al., 2022). Arsenic is commonly found in water, soil and sediments (Mohajer et al., 2021). Sources include water and food that has been prepared using contaminated water. Arsenic promotes lipid storage and induces inflammatory processes, and induces insulin resistance and thus the development of type II diabetes (Martinez-Esquivel et al., 2022). In the case of cadmium, the population is exposed through water, air, tobacco smoke, plastics and food. This metal shows obesogenic properties through metabolic changes in adipose tissue. Cadmium reduces the bacterial diversity of the intestinal microbiota, so exposure to this metal early in life is particularly harmful, as the bacterial flora is not adequately developed during this period (Mohajer et al., 2021). Lead pollution comes from mining, industry and the burning of fossil fuels. Lead exposure is associated with obesity because it disrupts endocrine pathways, increasing oxidative stress and inducing inflammation (Martinez-Esquivel et al., 2022).

Nicotine is a substance contained in the tobacco plant. Epidemiological studies indicate that maternal smoking during pregnancy is a major factor in the development of obesity in the offspring. Prenatal nicotine overload leads to dysfunction of the noradrenergic systems, which results in increased appetite and causes fat accumulation (Darbre, 2017).

Microplastics (MPs) are found in a wide range of products and pose a risk through inhalation of contaminated air and dust, ingested bottled water and contaminated food. At least 45 different plastics are now commonly used, including polypropylene (PP), polyethylene (PE), polyethylene terephthalate (PET) and polyvinyl chloride (PVC). Humans are estimated to ingest tens of thousands to millions of microplastic particles annually, or on the order of several milligrams daily (Kannan & Vimalkumar, 2021). The main sources of microplastic exposure are believed to come from contaminated food and water. Dietary sources of microplastic include seafood (clams, shellfish, fish, seaweed) and sea salt. Diet is identified as the third main source of microplastic, next to drinking water and inhaling polluted air. Microplastics are also commonly used in cosmetic products such as scrubs and exfoliating gels, shower gels, shampoos and creams. The microplastic content in such products can vary. Microplastic has been shown to affect adipocyte differentiation after accumulation in the liver and kidneys, resulting in changes in energy balance and lipid metabolism (ibidem).

Food additives (preservatives, antioxidants, stabilisers, colourings and sweeteners) are among the risk factors. Preservatives are ingredients that are designed to prevent potential food damage, such as oxidation, rancidity. Research results indicate that sodium benzoate, when used as a preservative, can affect glucose homeostasis. This compound, together with sodium sulphate, inhibits the release of leptin from fat cells. This results in inadequate leptin levels, which reduces metabolic rate while increasing appetite and weight gain, resulting in the development of diabetes (Ravichandran et al., 2022). Sweeteners also known as non-nutritive sweeteners (NNS) are a common dietary supplement. They can act as obesogens. Commonly used in foods and beverages, acesulfame K, sucralose, saccharin can alter the composition of the intestinal barrier and induce glucose intolerance through intestinal dysbiosis (Mohajer et al., 2021).

3.5. Health risks

Obesogens are chemicals that promote obesity by increasing the number of fat cells and the amount of fat stored in existing fat cells (Janesick & Blumberg, 2012). Obesogens affect the function of the hypothalamus, the part of the brain responsible for controlling eating behaviour. Bisphenol A induces presynaptic and postsynaptic changes in signaling pathways, thus causing compulsive eating behaviour against a background of increased dietary intake, contributing to obesity (Shahnazaryan et al., 2019). A drastic increase in the development of many metabolic diseases has been attributed to chemicals called EDCs. It is noteworthy in this case that many of them are lipophilic, which favours their accumulation in adipose tissue over years. Such bioaccumulation promotes increased fat storage, resulting in increased retention of lipophilic obesogens, which in turn leads to increased adipose tissue and a renewed influx of contaminants (Darbre, 2017). It has been hypothesised that obesogens may adversely affect male reproductive health via "modulation" of the endocrine system (Rato & Sousa, 2021; Sousa et al., 2022). These chemical compounds alter male reproductive function, mainly via adverse effects on the central nervous system. There is a known link between obesogen exposure and reduced testosterone levels, as these compounds alter the steroidogenic function of luteal cells (LCs) and all pathways involved in sex steroid formation (Rato & Sousa, 2021). Much evidence has been found that endocrine disruptors affect the neuroendocrine system, specifically the hypothalamic-pituitary-thyroid (HPT) axis, also referred to as the reproductive axis. Different chemicals present in the environment can target the HPT axis, at different locations and with different intensities, disrupting its regulation (Rato & Sousa, 2021). It has long been debated whether obesogens could be an environmental factor in the etiology of PCOS (polycystic ovary syndrome). Chronic and

prolonged exposure to an obesogen such as bisphenol A (BPA) leads to its bioaccumulation and activation of signaling pathways that can alter metabolic and reproductive functions in women. BPA can directly cause androgen production, in ovarian cells, resulting in hyperandrogenism, it also interacts with receptors in adipose tissue, beta-pancreas cells causing hyperinsulinemia. All these changes have a negative effect on the ovarian follicles, causing the symptoms of PCOS (Urbanetz et al., 2023). Bisphenol A is responsible for the development of metabolic disorders such as obesity, type II diabetes, and fatty liver disease (Lewis et al., 2024; Oliviero et al., 2022). For this reason, it has been banned in many countries, and chemicals such as bisphenol S, bisphenol F (BPF), bisphenol AF and tetramethyl BPF have been used as its substitutes Oliviero et al., 2022). Many compounds that may be obesogens are currently being analysed. These include preservatives, antimicrobials, antibiotics and bisphenols. Epidemiological studies provide indisputable evidence linking exposure to new pollutants with the risk of obesity in humans (Wu et al., 2025). Many of these compounds can disrupt endocrine and metabolic functions and contribute to the development of obesity and other metabolic disorders, such as type 2 diabetes, coronary heart disease and hypertension (Heindel, 2019; Oliviero et al., 2022). Numerous epidemiological studies have shown a positive correlation between exposure to bisphenol A (BPA), phthalates, pesticides, alkylphenols and the incidence of cardiovascular disease, diabetes and weight gain (Oliviero et al., 2022; Shahnazaryan et al., 2019). There is also much discussion about microplastic (MP) consumption and the potential risks associated with it. Biomonitoring studies of human stool, fetus, and placenta provide direct evidence of MP exposure in infants and children. MPs <20 μm were reported to cross biological membranes (Kannan & Vimalkumar, 2021). Studies involving laboratory animals have revealed the occurrence of various forms inflammation, immunological response, endocrine disruption, alteration of lipid and energy metabolism, and other disorders after exposure to microplastics. Microplastics may contain a number of compounds, such as phthalates, bisphenols, and

organotins, leading to oxidative stress, cytotoxicity, immunotoxicity, thyroid hormone disruption, and altered adipogenesis and energy production. It is suspected that ubiquitous microplastics are a potential factor in obesity (Kannan & Vimalkumar, 2021).

A recent study reports that children are also a particularly vulnerable group when it comes to obesogens. Obesogens disrupt the endocrine system in many ways. They affect appetite, promote inflammation, disrupt the functioning of the gut microbiome, and contribute directly or indirectly to the development of obesity (Kapama et al., 2025). Therefore, in addition to excessive calorie intake and physical inactivity, obesogens should be added to the existing factors predisposing to obesity (Nicolaou et al., 2024). Another recent review of 75 studies showed that early exposure to certain obesogens increases the risk of obesity later in life (Jaskulak et al., 2025). Epidemiological studies provide evidence of a link between prenatal or early exposure and an increased risk of obesity in offspring. Certain compounds such as phthalates, parabens and bisphenols disrupt hormone balance (EDCs), predisposing children and women to obesity or metabolic disorders. Phthalates are key compounds that pose a threat to children (Jaskulak et al., 2025).

Heindel et al. (2024) present other models leading to obesity in addition to obesogens that disrupt hormonal signalling. The energy balance model, the carbohydrate-insulin model, and the oxidation-reduction model also lead to obesity. The first is based on increased energy supply, the second on increased supply of rapidly digestible carbohydrates causing increased insulin response promoting lipogenesis, and the last on oxidative stress resulting from an excess of reactive oxygen species (ROS).

Recent research warns consuming food additives may result in serious health risks, not only for adults but also for children. Studies of food additives in various experimental animals, cell cultures, and the human population demonstrate numerous risk factors, including obesity, dyslipidemia, weight gain, hyperglycaemia, insulin resistance, glucose intolerance, energy imbalance, and hormonal intervention (Ravichandran et al., 2022). Reducing the marketing of energy-dense snacks to children and increasing

the promotion of healthier foods, such as fruits and vegetables, may be an effective and necessary instrument to improve the dietary intake of children and reduce the risk of their experiencing some chronic diseases later in life (Folkvord et al., 2021).

Conclusion

From the analysis of studies available in the scientific literature, it can be concluded that obesogens have a significant impact on fat metabolism and the body's endocrine system, which contributes to the development of obesity. It has been noted that these substances are present in many everyday products, including food, cosmetics and plastics. The results of many studies highlight the need for greater control and regulation of chemicals used in consumer products. Further research is also recommended to identify new obesogens and to study their mechanisms of action. It is also important to develop a strategy to reduce exposure to these substances, mainly in vulnerable groups such as children and pregnant women. Other factors leading to obesity should not be overlooked either. Preventive measures are also important. The availability of healthy food and a proper diet combined with physical activity affect the gut microbiota and play a key role in obesity prevention.

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The destruction of the material heritage of Jews in post-war Poland in the light of documents concerning the liquidation of the Jewish cemetery in Chorzów[1]

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Abstract: The main purpose of the article is to present the mechanisms involved in the removal of traces of Jewish material heritage in postwar Poland, based on a case study—the liquidation of the Jewish cemetery in Chorzów. This was made possible thanks to preserved archival documents— a file titled *Sprawy zlikwidowanego cmentarza żydowskiego (ul. Krzywa 18). Dotyczą okresu 1958-87* [Matters of the Liquidated Jewish Cemetery (18 Krzywa Street), covering the years 1958–1987] and stored at the Chorzów City Hall. In addition, the article will present little-known facts concerning the history of the cemetery, its urban layout and architecture, as well as largely unpublished iconographic material. The source analysis employs the traditional scholarly method of historical-interpretative research. Documents—mainly archival—and factual information about the site were collected and then subjected to analysis and interpretation. Iconographic sources—plans, designs, and photographs—were examined and confronted with surviving descriptions and the results of empirical research. Thanks to the preserved archival materials, the legal and administrative mechanisms for removing traces of Jewish material heritage in postwar Poland were reconstructed on the basis of this case study—the liquidation of the Jewish cemetery in Chorzów. The article analyzes and cites legal acts and circulars that enabled the expropriation and liquidation of the necropolis, as well as the sale of tombstones and tombstone stone. Based on archival documents, preserved plans, and photographs, the article reconstructs (as far as possible) the appearance of the cemetery and the funeral home prior to their destruction, and then presents the history of their devastation along with photographs taken just before the liquidation.The Jewish cemetery in Chorzów was established around 1864 on Ziegeleistrasse (now Krzywa Street) in Königshütte (now Chorzów). At the end of the 19th century, an impressive funeral house designed by Edmund Trossin (design dated 1898) was erected at the main entrance. Around 1906, the cemetery was expanded to the southwest according to a design by Franz Jaunich. It covered an area of 0.8 hectares and, according to postwar records, contained 1,700 graves with 900 tombstones. In 1959 it was closed, and between 1972 and 1973 it was liquidated. For years it had been systematically destroyed, and only in 2006 was it commemorated by the erection of a monument.
Keywords: cemetery architecture, Jewish cemetery, Jewish heritage in Poland

1. Introduction

The main objective of this article is to present the mechanisms involved in the removal of traces of Jewish material heritage in post-war Poland, based on a case study – the liquidation of the Jewish cemetery in Chorzów. This research was made possible by the discovery in 2023 of a set of archival documents contained in a file entitled *Sprawy zlikwidowanego cmentarza żydowskiego (ul. Krzywa 18). Dotyczą okresu 1958-87* [Files concerning the defunct Jewish cemetery (18 Krzywa Street). They cover the period 1958–1987.]. The file is preserved at the Chorzów City Hall (*Sprawy zlikwidowanego cmentarza...*, 1958–1987). In addition, the article presents little-known facts concerning the history of the cemetery, its urban layout and architecture, as well as largely unpublished iconographic material. The state of research on the Chorzów necropolis is very limited. Sławomir Pastuszka published a brief history of the site on the *Wirtualny Sztetl*[2] website, dedicated to the history and traditions of Polish Jews

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and their material culture and run by the POLIN Museum of the History of Polish Jews in Warsaw (Pastuszka, 2006).

In 2012, an article entitled "Cmentarz żydowski w Chorzowie. Okoliczności związane z jego likwidacją" [The Jewish Cemetery in Chorzów: Circumstances of Its Liquidation] was published (Skoczek, 2012). The author of the article presented an extensive chronology of events, but did not address the legal and practical mechanisms that enabled the devastation and sale of tombstones and, ultimately, the liquidation of the cemetery.

The Chorzów necropolis is not mentioned in articles devoted to Jewish cemeteries in the Katowice Province, either by Krzysztof Domański in his 1993 study "O destrukcji cmentarzy żydowskich w Górnośląskim Okręgu Przemysłowym" [On the Destruction of Jewish Cemeteries in the Upper Silesian Industrial Region] (Domański, 1993), or by Dariusz Waleriański in his 1998 article "Cmentarze żydowskie w województwie katowickim: historia, stan zachowania, problemy ochrony" [Jewish Cemeteries in the Katowice Province: History, State of Preservation, and Protection Issues] (Waleriański, 1998). It is, however, mentioned by Krzysztof Bielawski in his book *Zagłada cmentarzy żydowskich* [The Destruction of Jewish Cemeteries] (Bielawski, 2020, pp. 90, 99, 189).

Legal aspects and source materials concerning the liquidation of material traces of Jewish culture in post-war Poland are discussed in the above-mentioned publication, as well as in the following works: Małgorzata Bednarek's *Sytuacja prawna cmentarzy żydowskich w Polsce 1944–2019* [The Legal Situation of Jewish Cemeteries in Poland, 1944–2019] (Bednarek, 2020), and Kazimierz Urban's *Cmentarze żydowskie, synagogi i domy modlitwy w Polsce w latach 1944–1966 (wybór materiałów)* [Jewish Cemeteries, Synagogues, and Houses of Prayer in Poland, 1944–1966 (Selected Materials)] (Urban, 2006).

This article employs the traditional scholarly method of historical and interpretative research. Documents – primarily archival materials – and information concerning the site were collected and subsequently analysed and interpreted. Iconographic sources, including plans, designs, and photographs,

were also analysed and compared with preserved descriptions and the results of empirical research conducted in situ.

2. The history of the Jewish cemetery in Chorzów

Thanks to preserved archival materials, the legal and administrative mechanisms of the process of removing traces of Jewish material heritage in post-war Poland have been reconstructed on the basis of a case study – the liquidation of the Jewish cemetery in Chorzów. Legal acts and circulars that enabled the transfer of Jewish property, the liquidation of the necropolis, and the sale of tombstones and gravestones were analysed and cited. Based on archival documents, preserved plans and photographs, the image of the cemetery and funeral home before its destruction was reconstructed (as far as possible), and then the history of its devastation and photographs taken just before its liquidation were presented.

2.1. The urban layout of the Jewish cemetery in Chorzów and the architecture of the pre-funeral home

The Jewish religious community was established in Królewska Huta in 1860. The Jewish cemetery was founded on Ziegeleistrasse in Königshütte, today's Krzywa Street in Chorzów, on the site where Park pod Kasztanami is currently located. Renata Skoczek indicates 1862 as the date of its establishment (Skoczek, 2012, p. 395), but Sławomir Pastuszka states that permission to establish it was not obtained until 1864, and the first burial took place three years later (Pastuszka, 2006). The cemetery was established on an elongated, rectangular plot measuring 81.35x57.40 m, located south-west of Krzywa Street. It had a regular spatial layout – one main avenue and two side avenues were separated, all perpendicular to the street. This created two almost identical sections. Directly on the street, around 1898, an impressive funeral home was built, designed by Edmund Trossin, an architect and builder from Katowice [fig. 1], which replaced an older building. Its characteristics

are presented in the appraisal report prepared on 4 July 1963 by Longin Ziembiński (Ziembiński, 1963). It was a single-storey building with a partial basement, brick walls and wooden ceilings. It had an elongated rectangular floor plan, measuring 27.40 x 11.30 m, with an area of 350 m² and a volume of approx. 2,100 m³ [fig. 2]. The central part was occupied by a high mortuary hall with an area of 225 m², topped with a dome, while the lower side parts housed a mortuary washroom, a hearse carriage house and a guard's apartment [fig. 3]. The façades were given a historicist style with a predominance of Neo-Romanesque elements (full arches of windows and doors and a rosette) and Moorish elements (onion-shaped domes above the pilasters). Around 1906, it was decided to enlarge the cemetery to the south-west by another section measuring approx. 75x58 m. At that time, Franz Jaunich from Królewska Huta designed the extension of the cemetery [fig. 4] – stairs and passages from the old to the new part [fig. 5] and a brick fence [fig. 6]. The existing alleys were extended and four new plots were separated. After the expansion, the cemetery had an area of 8,000 m² and was surrounded by a wall approximately 40 cm thick, made of broken stone and partially reinforced concrete elements (Skoczek, 2012, p. 396). The new section was put into use in 1915 (Pastuszka, 2006). A book of the deceased from the early 20th century, supplemented in later years, has been preserved, in which 948 people buried in the old part and 421 in the new part were recorded (ibid.).

During World War II, the cemetery was not destroyed, and its condition in 1945 could be described as good, although neglected (Pastuszka, 2006). After the war, it remained in use – probably after 1945, twenty-four people were buried there, with the last funeral taking place in 1954 (Drenda, 1972). In 1952, there were 1,700 graves with 900 tombstones, 460 of which required repair. There were 128 trees growing on its grounds. Until 1949, the funeral home was occupied by a Jewish family (Skoczek, 2012, p. 396), but after they moved out, it was estimated in 1952 that it was about 30 per cent destroyed (*Cmentarz żydowski...* [The Jewish cemetery...], 1952). At that time, renovation and cleaning works were carried out

at the necropolis, financed largely by the American Jewish Joint Distribution Committee (Bielawski, 2020, 189-190), a Jewish organisation from New York working to provide aid to Jews (Beizer, 2025).

In 1958, the Ministry of Municipal Economy carried out a spring renovation and clean-up campaign of religious cemeteries (Bielawski, 2019, p. 548), but in order to proceed with it, the necropolis had to be closed first (Wojewódzki Zarząd Gospodarki Komunalnej i Mieszkaniowej, 1958). Therefore, on 3 April 1959, the Presidium of the Municipal National Council in Chorzów [hereinafter referred to as PMNC] adopted Resolution No. 13/59 on the closure of the Jewish cemetery in Chorzów and its takeover by the State Treasury (Prezydium Miejskiej Rady Narodowej w Chorzowie, 1959). Under this act, the Municipal Board of Municipal and Housing Management was obliged to maintain it properly, carry out the necessary cleaning work, arrange green areas in places without burials and demolish damaged buildings. At that time, maintenance work was carried out on the greenery, the graves were cleared of bushes and the tree crowns were thinned out. Before the cemetery was taken over by the State Treasury, the burial register was maintained by Mojżesz Fiber (or Fider), who lived at 21/6 Powstańców Street in Chorzów, who handed it over to the Jewish Religious Congregation in Katowice. Another burial register was maintained by a man known only as Dudek (*Protokół z przeprowadzonej narady...* [The protocol from the meeting...], 1971).

The takeover was made possible by the regulations in force at the time: cemeteries belonging to Jewish religious communities became the property of the state on 1 January 1956 as "abandoned property" pursuant to Article 34, letter a of the Decree of 8 March 1946 on abandoned and former German property as a result of the expiry of the 10-year period for submitting an application for the restoration of ownership (Dekret z dnia 8 marca 1946 r... [The Decree of 8 March 1946...], 1946; Wytyczne w sprawie przeprowadzenia prac porządkowych... [The guidelines for carrying out cleaning works...], n.d.). The entry in the land and mortgage register of the State Treasury as the new owner of the Jewish

cemetery in Chorzów was made pursuant to the decision of the District Court in Chorzów of 10 September 1959.

2.2. Legal regulations enabling the takeover and liquidation of cemeteries.

The post-war fate of Jewish cemeteries was greatly influenced by legal regulations and circulars issued by various authorities. It is therefore worth mentioning at least the most important ones.

Zarządzenie Ministra Administracji Publicznej Nr 3 z 26 lutego 1945 r [Decree No. 3 of the Minister of Public Administration of 26 February 1945] recommended that the then starosts immediately hand over the properties to the former Jewish Religious Associations (after: Bednarek, 2020, p. 581). Pursuant to the *Okólnik nr 3 Ministra Administracji Publicznej z 6 lutego 1945 r. o tymczasowym uregulowaniu spraw wyznaniowych ludności żydowskiej* [Circular No. 3 of the Minister of Public Administration of 6 February 1945 on the temporary regulation of religious matters of the Jewish population], they were placed under temporary state administration (ibid., pp. 525-527).

Pursuant to the *Ustawa z dnia 6 maja 1945 r. o majątkach opuszczonych i porzuconych...* [Act of 6 May 1945 on abandoned and deserted property...] (1945), Jewish Religious Associations and Jewish Congregations could only apply for the administration of the above-mentioned properties, but they were not their actual owners. Pursuant to the *Dekret z dnia 8 marca 1946 r. o majątkach opuszczonych i poniemieckich* [Decree of 8 March 1946 on abandoned and former German property] (1946), they were nationalised and became the property of the state on 1 January 1956. The introduction of the *Ustawa z dnia 14 lipca 1961 r. o gospodarce terenami w miastach i osiedlach* [Act of 14 July 1961 on the management of land in cities and housing estates] (1961) enabled the state to register the ownership of real estate in its name in the land and mortgage registers. *Ustawa z dnia 31 stycznia 1959 r. o cmentarzach i chowaniu zmarłych* [The Act of 31 January 1959 on cemeteries and the burial of the deceased] (1959) played an important role, as it outlined the legal framework for the closure and liquidation of

cemeteries. After closure, they became "cemetery land", which allowed for the exhumation of remains and the development of the land for other purposes, such as recreation or housing. This was conditional on at least 40 years having passed since the last burial, but there were exceptions to this rule, e.g. when there were exceptional circumstances related to public utility. According to *Pismo okólne nr 3 w sprawie przedkładania wniosków o zamykanie i likwidację cmentarzy Ministra Gospodarki Komunalnej i Usług Komunalnych...* [Circular No. 3 on the submission of applications for the closure and liquidation of cemeteries by the Minister of Municipal Economy and Municipal Services...] (1962), the Presidium of the Municipal National Council submitted a request to close a cemetery, after consultation with the provincial authorities, and the decision was made by the Minister of Municipal Economy in consultation with the Minister of Health and the Office for Religious Affairs.

On 3 August 1964, the Minister of Municipal Economy issued *Okólnik nr 11* [Circular No. 11] on disused cemeteries, which stated that Jewish cemeteries that constituted abandoned property became the property of the State by prescription (as cited in: Urban, 2006, pp. 645, 649-652).

In 1948, an important *Okólnik Nr 44 Ministra Administracji Publicznej...* [Circular No. 44 of the Minister of Public Administration...] (1948) on gravestones from Jewish cemeteries, ordering the return of gravestones and tombstones to the "appropriate representatives of the Jewish population" at the expense of the municipality. This is the most important of the normative acts and circulars that directly or indirectly concerned Jewish cemeteries in post-war Poland.

2.3. Liquidation of the Jewish cemetery in Chorzów – a case study

In 1960, the authorities of the city of Chorzów commissioned construction, assembly and maintenance works in accordance with *the Wytyczne w sprawie przeprowadzenia prac porządkowych na nieczynnych cmentarzach pozostających w zarządzie resortu gospodarki komunalnej* [Guidelines for clean-

ing up disused cemeteries managed by the municipal services department] (n.d.). These guidelines had a direct impact on the condition of many cemeteries in post-war Poland. According to them:

> Gravestones lying next to graves or leaning should be placed on the appropriate graves. Gravestones or parts thereof lying on roads, whose ownership cannot be determined, should be removed from the cemetery to a place indicated by the competent municipal authority, sorted, piled up and the volume of stone calculated, or, in the case of a large amount of stone and appropriate security measures, stacked in a designated area within the cemetery.

After drawing up a handover report, the stone material could be used for the purposes specified in *Okólnik Ministra Gospodarki Komunalnej nr 30 z dnia 13.09.1956 r.* [Circular No. 30 of the Minister of Municipal Services of 13 September 1956] (1956), which reads: "Grave scrap (completely broken gravestones) should be used for matters related to the tidying up of cemeteries", as stated in the Guidelines (*Wytyczne...*, n.d.). Also, in accordance with these guidelines, unnecessary gates were to be renovated and used in cemeteries in the city that did not have them.

On 13 February 1960, a cost estimate for the renovation of the Jewish cemetery in Chorzów was drawn up for the amount of 74,116 zlotys (in *Sprawy zlikwidowanego cmentarza..., 1958-1987),* approved by the Ministry of Municipal Economy in Warsaw. In accordance with the aforementioned Guidelines (*Wytyczne...*, n.d.)*,* in 1960, work was carried out to place gravestones on the appropriate graves and to cover fragments or those whose location could not be determined. The fence was also repaired.

2.3.1. Devastation of the cemetery.

Unfortunately, even then the cemetery was already in poor condition. A handwritten note dated 24 September 1960 (in *Sprawy zlikwidowanego cmentarza...,* 1958-1987) indicates that most of the gravestones had

been knocked over and it was not known to which graves they belonged. Theft also contributed to this state of affairs. Leopold Chwastek, director of the Municipal Greenery Management Board [hereinafter MGMB] of the Presidium of the Municipal National Council [hereinafter PMNC], repeatedly reported damage to the fence and looting to the Citizens' Militia, asking for their assistance. On 18 June 1959, during one of the inspections by the Municipal and Housing Department [hereinafter MHD] of the PMNC in Chorzów, it was found that "a whole pile of gravestones was prepared for transport", and on 18 January 1960, the same department reported to the Citizens' Militia Headquarters in Chorzów that "some of the precious monuments had been taken by unknown perpetrators" (in *Sprawy zlikwidowanego cmentarza..., 1958-1987*).

In 1960, an idea emerged to liquidate the oldest part of the cemetery and use it, together with the funeral home building, for the purposes of the Municipal Greenery Management Board. At that time, Director L. Chwastek approached the PMNC in Chorzów with the idea of placing the offices of his unit and the Municipal Housing Authority there (*Notatka służbowa z konferencji...* [Official memo from the conference...], 1960). On 6 August 1960, the PMNC in Chorzów officially requested permission from the Jewish Housing Congregation in Katowice. The matter was revisited two years later, but during an inspection on 23 October 1962, the building was found to be in poor technical condition and the idea was abandoned (*Protokół z wizji lokalnej...* [Minutes from the site inspection...], 1962).

In 1962, an inspection of the cemetery was carried out with the participation of a representative of the Ministry of Municipal Economy, which revealed the poor condition of the building. At that time, the Municipal Greenery Management Board treated the cemetery area as a utility facility – stone cubes, paving slabs and pipes were stored there, composters were set up, and a temporary storage area for trees and shrubs was created. The gravestones were deposited in the third, undeveloped part of the cemetery. The Ministry of Municipal Economy recommended securing the small architectural elements and remaining gravestones against further damage. The clean-up

work was carried out, but not completely, and at the end of 1963, the supervisory authority ordered its completion, including the removal of stored debris and wooden beams. At that time, an information board was ordered to be placed with the following text: "The Jewish cemetery is closed by Order of the Minister of Municipal Economy No. ... of ... pursuant to Article 1(2) of the Act of 31 January 1959 on cemeteries and the burial of the deceased (Journal of Laws No. 11, item 62). The use of the cemetery grounds is prohibited under penalty of law. It is also forbidden to destroy cemetery facilities" (in *Sprawy zlikwidowanego cmentarza...*, 1958-1987).

Despite this, acts of vandalism, desecration and theft continued to occur. The director of MGMB was responsible for maintaining order, but he did not perform this task properly, as evidenced, among other things, by a letter dated 6 June 1966 from the head of the Municipal Housing Department in Chorzów concerning the failure to carry out the order "to investigate the desecration and theft of gravestones" (Nowak, 1966). It was described as follows: "In this densely wooded area, groups of hooligans use the facility for various antics. Numerous interventions by the militia are ineffective" (Kasperek, 1970) and "In later years, due to the lack of proper control by the Ministry of Defence, which was asked for help several times in writing, the cemetery suffered greater devastation, hooliganism and even robberies of the graves" (*Informacja dotycząca cmentarza...* [Information concerning the cemetery...], 1970).

In 1963, the city authorities decided to liquidate part of the cemetery, most likely the oldest part, located next to the funeral home. On 12 July 1963, a request was made to the MHD Presidium of the Provincial National Council in Katowice, but the deputy head of Department Z. Białoskórski took a negative stance due to the lack of necessary documents: a resolution of the Provincial National Council in Chorzów and the opinion of the Provincial Conservator of Monuments required under the Act on Cemeteries and Burial of the Deceased of 1959. These documents were apparently supplemented because in July 1963, the liquidation of the old burial area with an area of 0.12 ha, dating from 1848 (sic!), was announced, and at the same time,

a decision was made by a commission to demolish the pre-burial building, which was in poor technical condition [fig. 7] (Kucharski, 1963; Ziembiński, 1963). On 10 January 1963, a few months earlier, city architect J. Karmański issued an order for its demolition, setting the deadline for completion between 25 March and 30 May 1963. In fact, the demolition of the building began in June 1963 ([Odręczna adnotacja...] [Handwritten annotation...], 1963). In its place, a MGMB barracks was to be built from the recovered bricks. At that time, an iron gate was also made, the fence was completed, and the area of the demolished part of the cemetery was planted with shrubs ([Notatka służbowa...] [Official note...], 1963). MGMB then piled up the stones. It is not known whether this was done in accordance with the order of MHD PMNC in Chorzów to pile up only gravestones "lying loose, not next to the grave", not to remove stones from the graves and not to level the ground (F. Nowak, 1965).

The security measures did not prevent further thefts. In May 1964, F. Nowak informed MGMB in writing that the cemetery was not closed and the gate was wide open, and again instructed them to secure the stone. Unfortunately, no one made an inventory of the gravestones at that time. Despite the fact that in 1963 the Ministry of Municipal Economy imposed such an obligation on MGMB, it was not carried out, and the Company responded to written reminders that inventorying during the summer was not possible "due to a heavy workload" and promised to do so during the winter (Zarząd Zieleni Miejskiej [Municipal Greenery Management Board], 1965). No documents confirming the preparation of such documentation have survived.

F. Nowak (1966) described the dramatic condition of the cemetery:

The inspection revealed a complete lack of care and maintenance of the graves – to date, the gravestones have not been inventoried, the graves are being vandalised – dismantled, and no one has reported the desecration of graves and theft of gravestones to the Municipal Citizens' Militia Headquarters. Despite numerous interven-

tions by the Provincial National Council and the local Department, the graves are becoming increasingly devastated. Only in three cases this year has permission been granted to collect piled up sandstone. Meanwhile, during the collection of granite stones, sandstone stones disappeared from graves that were in good condition.

In 1967, the gate was broken and lay overturned, the area was untidy, and the gravestone was piled up. An inspection in October of that year showed that the stones had been placed in three locations, or rather on three piles, referred to as "old" (located to the right of the exit), "new" (to the left of the exit) and "at the bottom" (consisting of small and large fragments of gravestones). The deputy head of MHD PMNC, Franciszek Nowak, decided to combine and fence off these piles, but an anonymous author of a note dated 21 October 1967 wrote that there was nothing left to fence off ([Odręczna notatka...] [Handwritten note...], 1967). Ultimately, the head of the Department, J. Polednia, ordered the removal of the remains of stone from the cemetery grounds.

In May 1969, another municipal commission was held, and its minutes described the condition of the gravestones:

> After examining the condition of the stones, those present conclude that they are only unsuitable remnants of monuments sold in previous years. They are mostly granite, side stones, cracked and otherwise damaged, of minimal material value (*Protokół z wizji lokalnej...* [Minutes of the site inspection...], 1969).

It was decided at that time that they would be removed by the Specialised Cooperative for Drilling and Construction and Assembly Works in Chorzów, which would tidy up the area in return. In July 1969, representatives of the city met with the president of the cooperative, but he was interested in only a few good stones, and the rest, in his opinion, were only suitable for road foundations ([Odręczna notatka...] [Handwritten note...], 1969).

2.3.2. Sale of gravestones.

In addition to theft, the official sale of gravestones by local authorities, which was carried out on the basis of the regulations and circulars in force at the time, contributed to their liquidation. Before 1963, this was done on the basis of point 9 *of Okólnik nr 30 Ministerstwa Gospodarki Komunalnej z dnia 13.09.1956 r. w sprawie właściwej gospodarki na cmentarzach podległych resortowi gospodarki komunalnej* [Circular No. 30 of the Ministry of Municipal Economy of 13 September 1956 on the proper management of cemeteries subordinate to the municipal economy department] (1956), which clearly specified the purposes for which gravestone stone could be used:

> Filled burial plots in active municipal cemeteries, which are designated in accordance with Article 1 of the Act of 17 March 1952 on the burial of the deceased and the determination of the cause of death for the reburial of corpses, shall be liquidated after a public announcement of the intended change. Graves for which objections to liquidation have been submitted by interested parties and for which a fee has been paid to preserve the grave for a further 20 years, as well as graves of historical and artistic value, shall remain in the liquidated plots.

> After the public announcement of the liquidation of the plot, if the owners did not come forward, the stone could be sorted and deposited in a place indicated by the presidium of the municipal council.

> The use of ownerless gravestones from liquidated cemeteries or plots is carried out by way of sale by the presidium of the national councils at fixed prices, for the purposes of building war cemeteries, mausoleums in municipal cemeteries and carrying out planned works related to cemeteries or tombs. It is unacceptable to sell stones to private individuals. At the same time, the local Department explains that when closing burial plots and inactive cemeteries,

the opinion of the Provincial Conservator of Monuments should be sought in each case in order to avoid the destruction and damage of monuments of historical and artistic value (Prezydium Wojewódzkiej Rady Narodowej [Presidium of the Provincial National Council], 1963).

As can be seen from the above excerpts, *Okólnik nr 30* [Circular No. 30] did not allow the sale of gravestones or parts thereof to private individuals without consulting the monument protection authorities, but despite this, such practices took place in the case of the Jewish cemetery in Chorzów.

When issuing permits for the sale of gravestone stone, reference was also made to other circulars of the Minister of Municipal Economy: *Okólnik nr 8 z 25.06.1964 r. w sprawie wykorzystania kamienia nagrobkowego pochodzącego z likwidowanych kwater grzebalnych cmentarzy, pozostających w zarządzaniu i użytkowaniu organów do spraw gospodarki komunalnej* [Circular No. 8 of 25 June 1964 on the use of gravestone stone from liquidated burial plots of cemeteries managed and used by municipal authorities](1964), replaced in 1968 by *Okólnik nr 2 z dnia 20.05.1968 r. w sprawie wykorzystania kamienia nagrobkowego pochodzącego z likwidowanych kwater grzebalnych i cmentarzy* [Circular No. 2 of 20 May 1968 on the use of gravestones from liquidated burial plots and cemeteries] (in *Sprawy zlikwidowanego cmentarza...*, 1958-1987).

It is worth taking a closer look at selected regulations. In the latter document, square metres and slab thickness were introduced instead of pieces when calculating the price, and sales could only take place on the basis of a permit issued by the municipal and housing authorities of the presidia of national councils. A register of permits was also introduced, and priority in the purchase of stone was given to local economic entities carrying out tasks related to war graves and municipal cemeteries. The prices of gravestones and stone sold were also regulated. The Minister of Municipal Economy specified them in *Pismo okólne Nr 37 z dnia 30.11.1963 r. w sprawie cen za kamień nagrobkowy pochodzący z likwidowanych cmentarzy i kwater grzebalnych...* [Circular No. 37 of

30 November 1963 on the prices of gravestone stone from liquidated cemeteries and burial plots...] (1963), and from 1 April 1968, prices were set on the basis of *Zarządzenie nr 81/68 Państwowej Komisji Cen z dnia 6.03.1968 r. w sprawie zmiany cen kamienia pochodzącego z likwidowanych kwater grzebalnych i cmentarzy* [Order No. 81/68 of the State Price Commission of 6 March 1968 on changes in the prices of stone from liquidated burial plots and cemeteries], (1968).

Based on preserved documents, it is possible to reconstruct how, between 1962 and 1970, the municipal authorities of Chorzów sold gravestones and tombstones from the Jewish cemetery in Chorzów. Usually, private individuals submitted applications to the MHD PMNC in Chorzów. After obtaining written permission, the MGMB issued the applicant with gravestone stone (Zarząd Zieleni Miejskiej [Municipal Greenery Management Board], 1966). These were whole gravestones or parts of them, including marble and Strzegom granite slabs. Usually, their use was declared for the construction of gravestones in nearby cemeteries: in Chorzów, Świętochłowice, Siemianowice Śląskie, Sosnowiec, Katowice and Bytom-Łagiewniki. Private individuals justified the need for purchase in various ways. For example, B.W., employed at the Department of Internal Affairs of the PMNC in Chorzów in 1966, applied to purchase "waste stone from the Jewish cemetery" for the construction of a monument for her parents (B. W., 1966). Similarly, J. S. paid 300 zlotys for three pieces (J. S., 1966). In the same year, stone was sold to G. M., a cleaner employed at the office. In 1967, purchases were made by: I. P. for her grandfather's grave in Katowice-Wełnowiec, in 1968 J. S. for the border of her husband's grave, M. M. for the monument of her mother B. S. and sister in the cemetery on Cmentarna Street in Świętochłowice. In a 1964 application by director A. P., there is a mention of the purchase of "black marble, which remained after the liquidation of the Jewish cemetery" (A. P., 1964). Complete gravestones were also sold, as evidenced by the permit issued by the deputy director of MGMB in Chorzów, engineer F. Sojka, on 20 August 1964 (in *Sprawy zlikwidowanego cmentarza...*, 1958-1987) stating that "The Municipal Greenery Management

Board permits the removal of one gravestone, two pyramids and a border with granite cubes, made of black granite, and four border slabs made of grey granite from the cemetery at 1 Krzywa Street." The record holder was G. P. from Katowice-Załęże, who in 1966 applied for permission to purchase 12 pieces of marble, and J. B. from Chorzów, who purchased 18 pieces in 1970.

The documents show that some buyers were able to choose the stone (Wydział Gospodarki Komunalnej [Department of Municipal Services], 1964). A handwritten note from 16 September 1970 has been preserved: "At the Jewish cemetery, there is still something to choose from sandstone, white marble, with chipped edges" (in *Sprawy zlikwidowanego cmentarza...,* 1958-1987).

The appearance of the gravestones sold is unknown, although in one case a slightly more detailed description was provided. A. P. wrote in her application of 5 September 1965: "The above stones do not currently belong to any of the existing graves and are stored loosely on the cemetery grounds. Each stone is a truncated pyramid 112 cm high, with a smaller base measuring 45/20 cm and a larger base measuring 50/20 cm" (A. P., 1964).

2.3.3. Official liquidation of the cemetery and exhumation of bodies

In 1968, another attempt was made to liquidate part of the cemetery. The Automotive Services Plant applied to the Presidium of the Municipal National Council in Chorzów for the transfer of a section of the necropolis for the purposes of a planned car service station expansion (Drenda, 1968). This involved a 15-metre-wide strip of land parallel to Krzywa Street, long enough to build portable shelters. The existing law allowed for this possibility after obtaining the relevant permits and exhuming the remains (Polednia, 1967).

In 1970, it was decided that further measures to secure the gravestones were pointless due to their extensive damage. The report from the cemetery inspection stated: "almost all of the monuments are illegible and scattered around the graves" (*Protokół z odbytej wizji...* [Report from the inspection...],

1970), and in the description of the Jewish cemetery from July 1972... (Drenda, 1972), it was characterised as follows:

> The current condition is extremely poor. The tombs no longer exist, the facing stones are broken and scattered, and the graves have collapsed to such an extent that it is impossible to identify individual graves. The fences surrounding the cemetery have been completely destroyed. Currently, the cemetery is a meeting place for various types of hooligans and criminals, where the Citizens' Militia constantly has to intervene [...]. A modern housing estate called "Różanka" has been built around the cemetery and is still under development. The cemetery and its immediate surroundings do not contribute to the beautification of the area and constitute an obstacle to the functional design of the site [fig. 8-10].

In 1970, the Presidium of the Municipal National Council in Chorzów, chaired by engineer Jerzy Świrada, decided that a school for the new "Różanka" housing estate would be built on the site of the cemetery (*Protokół z przeprowadzonej narady...* [Minutes of the meeting...], 1971). With regard to the above, MHD PMNC asked the Presidium of the Provincial National Council in Katowice for permission to close the cemetery, but the request was refused because the 40-year period required by law from the date of the last burial had not yet expired. According to *Pismo okólne nr 3 Ministerstwa Gospodarki Komunalnej (...) w sprawie przedkładania wniosków o zamykaniu, likwidacji cmentarzy* [Circular No. 3 of the Ministry of Municipal Economy (...) on the submission of applications for the closure and liquidation of cemeteries], (1962), in such a case, the decision to liquidate the cemetery was issued by the Minister of Municipal Economy in consultation with the Ministers of Health, Culture and Art, and the Office for Religious Affairs. On 11 February 1971, the PMNC in Chorzów submitted a letter on this matter to the Minister of Municipal Economy in Warsaw (Prezydium Miejskiej Rady Narodowej... [Presidium of

the Municipal National Council...], 1971), arguing that: "[...] the cemetery around which a modern housing estate has been built does not contribute in any way to the beautification of the area and, moreover, constitutes an obstacle to the functional design of the area." In 1971, the Chorzów Housing Cooperative wanted to use part of the cemetery as a temporary storage site for building materials in relation with the construction of a pavilion, but the city did not give its consent until the ministry granted permission for its liquidation. On 11 March 1971, the Municipal Sanitary and Epidemiological Station agreed to the liquidation of the cemetery before the expiry of 40 years from the last burial. On 25 May 1972, the PMNC in Chorzów adopted Resolution No. 94/599/72 on the liquidation of the Jewish cemetery in Chorzów, with a deadline of 31 January 1973. The legal basis for this was Article 1(4) of the *Ustawa z dnia 31.01.1959 r. o cmentarzach i chowaniu zmarłych* [Act of 31 January 1959 on cemeteries and the burial of the deceased], and *Pismo okólne nr 3 Ministerstwa Gospodarki Komunalnej z 27.01.1962 r. w sprawie przedkładania wniosków o zamykaniu, likwidacji cmentarzy* [Circular No. 3 of the Ministry of Municipal Economy of 27 January 1962 on the submission of applications for the closure and liquidation of cemeteries]. The resolution states: "This facility has been closed for many years, and the graves of the deceased show a complete lack of maintenance and care on the part of the families of the deceased – the gravestones have been partially dismantled."

On 3 August 1972, Jerzy Jóźwiak, deputy chairman of the Municipal National Council in Chorzów, engineer Andrzej Piątek, applied to the Department of Municipal and Housing Economy of the Presidium of the Provincial National Council in Katowice for permission to liquidate the cemetery (in *Sprawy zlikwidowanego cmentarza...*, 1958-1987). On 10 March 1973, acting head of the Department E. Paszka issued a decision to close it and develop the area for construction in accordance with the spatial development plan of the city of Chorzów (in *Sprawy zlikwidowanego cmentarza...*, 1958-1987). The area was designated for the construction of a primary school, but this did not happen.

The next step towards the liquidation of the cemetery was the exhumation of the remains, carried out between 15 February and 3 March 1973, the history of which was described in an article by Renata Skoczek (Skoczek, 2012, pp. 399- 402). The municipal authorities did not obtain the cemetery register, and the list of people who died between 1934 and 1945 was compiled on the basis of the civil registry in Chorzów (29 people) and information from a private individual (3 people). In parallel with obtaining the relevant approvals from higher authorities, on 25 January 1972, the city authorities applied to the Social and Cultural Society of Jews in Poland, Katowice Branch, for permission to liquidate the cemetery due to the need to expand the "Różanka" housing estate. It was proposed that the exhumed bodies be transferred to a location designated by the Society. On 2 May 1972, the Jewish Religious Community, after consulting with the Katowice branch of the Social and Cultural Society of Jews in Poland, agreed to the exhumation.

The remains of 32 deceased persons buried between 1933 and 1945 were exhumed. Plaques with the names of the deceased were made and, after being placed on the graves, photographed [fig. 11-12]. The documentation has been preserved in the files of the Chorzów City Archives. The remains were transferred to the Jewish cemetery at 56 Piekarska Street in Bytom and placed in a mass grave (W. Nowak, 1987). Earlier graves were not subject to exhumation in accordance with *the Act (...) on cemeteries and the burial of the deceased* (1959).

Due to the economic crisis in Poland, the school and kindergarten were not built. A park was established on the cemetery grounds – Park pod Kasztanami (Chestnut Park), and the old gate [fig. 13], the remains of a stone fence [fig. 14] and a monument [fig. 15] remind us of the existence of the necropolis. It was created in 2006 on the initiative of the Juliusz Ligoń Association of Chorzów Enthusiasts and the Katowice Branch of the Social and Cultural Society of Jews in Poland, and its author is Gerard Grzywaczyk. It takes the form of two matzevah-like slabs with an engraved fragment of a menorah and

the words "God bless". Below is the inscription: "In memory of the Jewish community of Chorzów, the residents of the city, 2006" (Skoczek, 2012, p. 403).

3. Conclusions

The article presents the mechanisms that led to the loss of traces of the material heritage of Jews in post-war Poland, based on a case study – the liquidation of the Jewish cemetery in Chorzów. They were reconstructed on the basis of extensive archival documentation stored in the Archives of the Chorzów City Council. In addition, little-known facts about the history of the cemetery, its urban planning and architecture, as well as mostly unpublished iconographic material, were presented.

After 1945, the Polish authorities created a legal system enabling the state to take over religious cemeteries. From 1946 to 1956, Jewish religious associations were allowed to manage cemeteries, but for economic and logistical reasons, they did not do so very often. After nationalisation, the maintenance of these areas became problematic for the state. For ideological and financial reasons, no one cared for them. Regulations were introduced to guarantee the protection of historic cemeteries and tombstones, but they were not respected. Part of society, people without knowledge, sensitivity, cultural and religious background, devastated and desecrated cemeteries. Officials and the militia in the service of the then state authorities did not intervene or intervened ineffectively. The post-war economy of scarcity contributed to the unrestrained illegal acquisition of stone or entire gravestones, their sale and use for various, not always religious, purposes. A legal system based on circulars was also created, which allowed for the official acquisition of stone and gravestones. Thus, the state not only cleared the area, but also generated income. The regulations were circumvented to suit the needs of the moment; for example, there was a ban on the resale of gravestones to private individuals, yet this was done. It was not possible to sell historical monuments, but the lack of an inventory and, consequently, an understanding of their value made this practically possible.

The long-term process of devastation usually led to the area becoming an image-related problem for local and national authorities, which they wanted to solve as quickly as possible. In the case of large cities such as Chorzów, the areas of former cemeteries were extremely attractive due to their urban development potential resulting from the extensive growth of these centres. However, regulations stood in the way of their rapid development – 40 years had to pass since the last burial. However, even in this case, the authorities left themselves a loophole in the regulations – investments of significant public utility were exempt, and these could include anything from housing estates to the expansion of the transport base adjacent to the cemetery. The regulations allowed for the non-exhumation of remains older than 40 years, which led to the desecration of most of them during construction work.

The case of Chorzów shows that even when determining which graves to exhume, the authorities did not always exercise due diligence – despite the existence of a cemetery register, they did not consult it, and what is more, after obtaining information about the location of the mass graves of prisoners of war, no search or exhumation was carried out (*Notatka służbowa spisana na okoliczność zgłoszenia się świadka...* [Official memo written on the occasion of a witness coming forward...], 1973).

It is worth highlighting another aspect of this story related to the demolition of a historically and architecturally valuable monument – the funeral home designed by Edmund Trossin in 1898. The authorities, including the conservation authorities, did not identify the value of the building and did not place it under protection, which allowed it to be demolished in 1963. This was not an isolated case – such buildings disappeared not only for economic reasons, but also for ideological reasons, as traces of an "unwanted" heritage.

Over the course of several decades, the authorities of the time led to the destruction of the material heritage of the Jews of Chorzów. Many were responsible, both among those who created the legal and administrative system that enabled this process, but also among ordinary people: officials, stone buyers and hooligans who did not intervene, committed

acts of vandalism, and finally bought gravestones or parts of them. This is a very sad and still somewhat forgotten fragment of post-war Polish history, which, thanks to preserved documents, has been presented in a case study – the Jewish cemetery in Chorzów.

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List of figures

1. Edmund Trossin, the design of the funeral home at the Jewish cemetery in Chorzów, 1898. The side elevation. The City Hall Archive in Chorzów.
2. Edmund Trossin, the design of the funeral home at the Jewish cemetery in Chorzów, 1898. The floor plan. The City Hall Archive in Chorzów.
3. Edmund Trossin, the design of the funeral home at the Jewish cemetery in Chorzów, 1898. The cross-section. The City Hall Archive in Chorzów.
4. Franz Jaunich, the project for the expansion of the Jewish cemetery in Chorzów, 1906 r. The land development project. The City Hall Archive in Chorzów.
5. Franz Jaunich, the project for the expansion of the Jewish cemetery in Chorzów, 1906 r. Stairs between the old and new parts of the cemetery. The City Hall Archive in Chorzów.
6. Franz Jaunich, the project for the expansion of the Jewish cemetery in Chorzów, 1906 r. The fence. The City Hall Archive in Chorzów.
7. The photograph of the funeral home in Chorzów, 1961, author unknown. The album entitled "Chorzów. The sanitation and cleanup campaign". The Municipal Conservator of Monuments office in Chorzów.
8. The photograph of the Jewish cemetery in Chorzów before its liquidation, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.
9. The photograph of the Jewish cemetery in Chorzów before its liquidation, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.
10. The photograph of the Jewish cemetery in Chorzów before its liquidation, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.
11. The photograph of the remains of tombstones from the Jewish cemetery in Chorzów before exhumation, with plaques bearing the names of the buried, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.
12. The photograph of the remains of tombstones from the Jewish cemetery in Chorzów before exhumation, with plaques bearing the names of the buried, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.
13. Old trees in the former Jewish cemetery in Chorzów, now Pod Kasztanami Park (The Chestnut Trees Park). A. Borowik, 2025.
14. Remains of the stone fence of the Jewish cemetery in Chorzów. A. Borowik, 2025.
15. The monument commemorating the Jewish community of Chorzów, designed by Gerard Grzywaczyk. A. Borowik, 2025.

Fig. 1. Edmund Trossin, the design of the funeral home at the Jewish cemetery in Chorzów, 1898. The side elevation. The City Hall Archive in Chorzów.
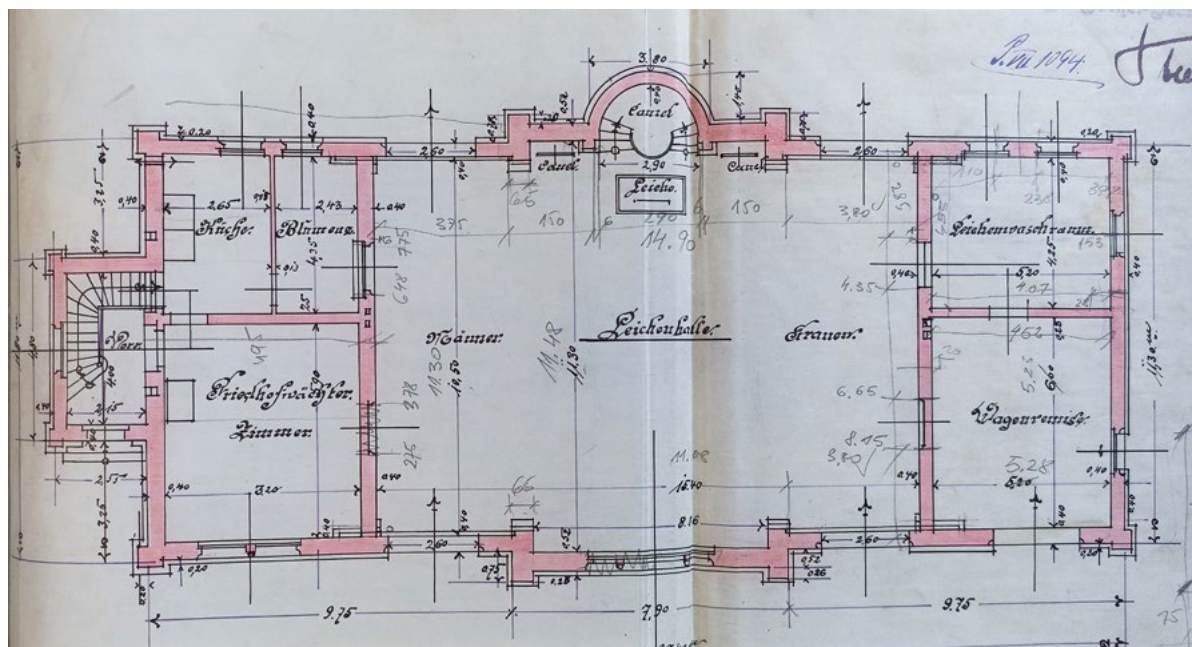

Fig. 2. Edmund Trossin, the design of the funeral home at the Jewish cemetery in Chorzów, 1898. The floor plan. The City Hall Archive in Chorzów.

Fig. 3. Edmund Trossin, the design of the funeral home at the Jewish cemetery in Chorzów, 1898. The cross-section. The City Hall Archive in Chorzów.
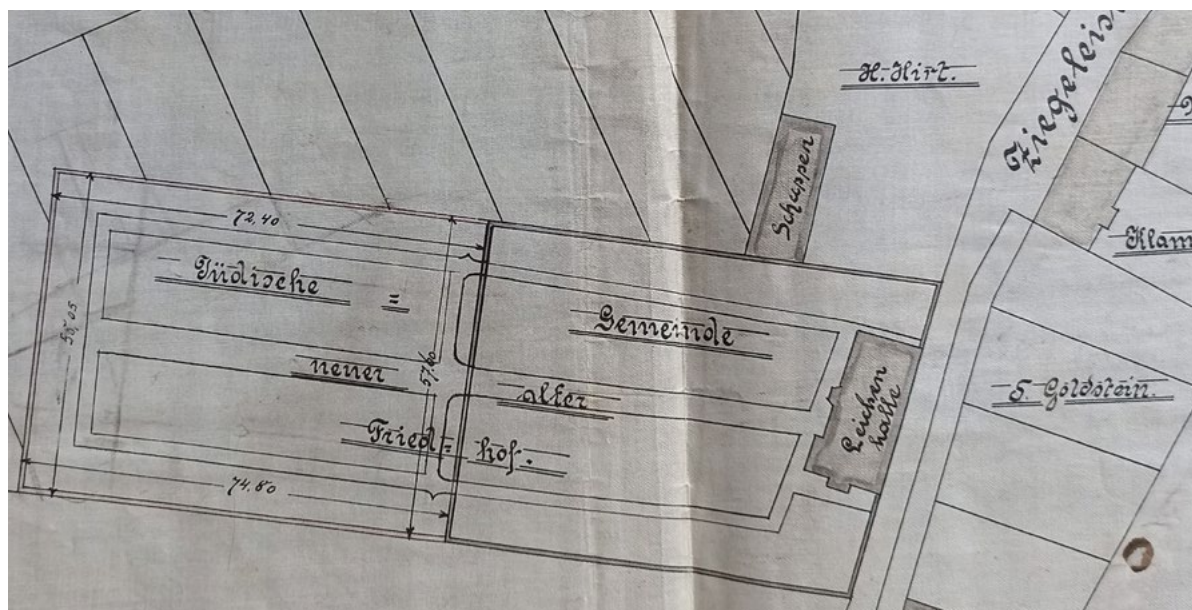

Fig. 4. Franz Jaunich, the project for the expansion of the Jewish cemetery in Chorzów, 1906 r. The land development project. The City Hall Archive in Chorzów.

Fig. 5. Franz Jaunich, the project for the expansion of the Jewish cemetery in Chorzów, 1906 r. Stairs between the old and new parts of the cemetery. The City Hall Archive in Chorzów.
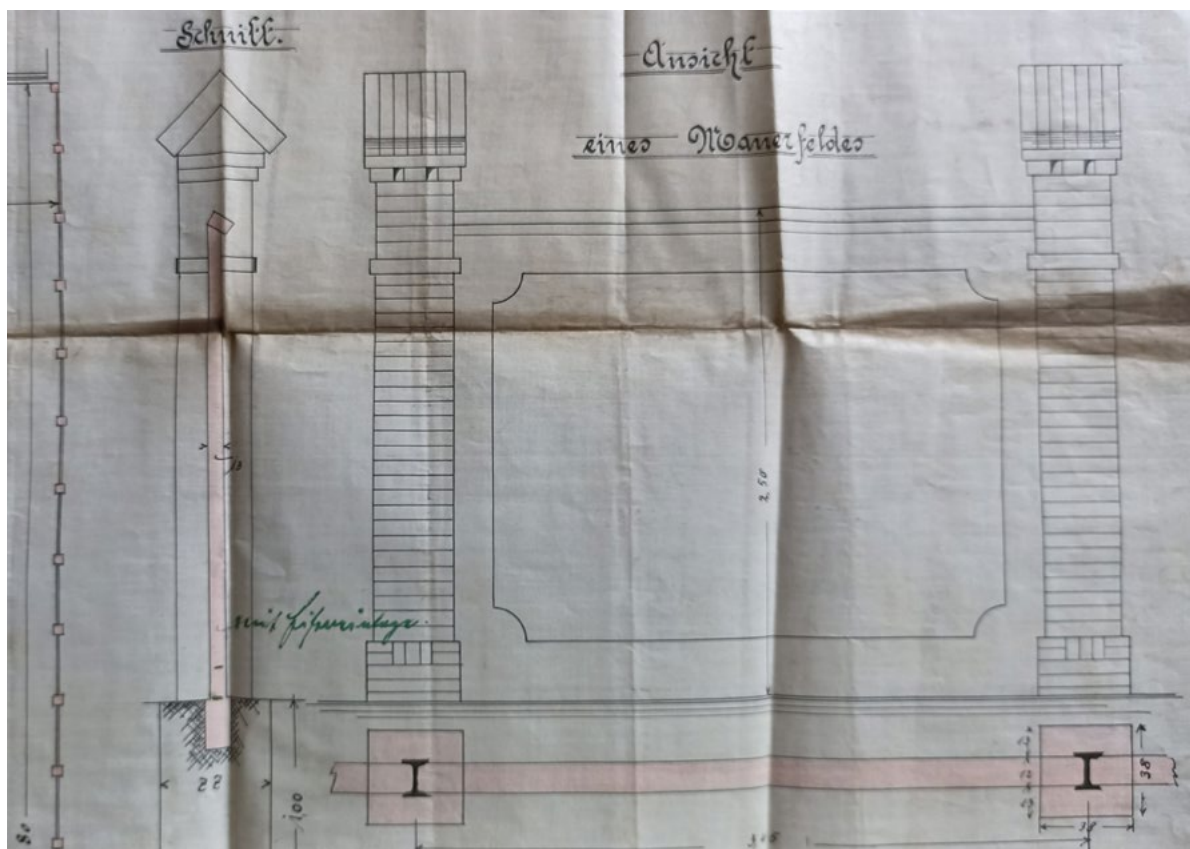

Fig. 6. Franz Jaunich, the project for the expansion of the Jewish cemetery in Chorzów, 1906 r. The fence. The City Hall Archive in Chorzów.

Fig. 7. The funeral home in Chorzów, 1961, author unknown. The album entitled "Chorzów. The sanitation and cleanup campaign". The Municipal Conservator of Monuments office in Chorzów.

Fig. 8. The photograph of the Jewish cemetery in Chorzów before its liquidation, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.

Fig. 9. The photograph of the Jewish cemetery in Chorzów before its liquidation, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.

Fig. 10. The photograph of the Jewish cemetery in Chorzów before its liquidation, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.

Fig. 11. The photograph of the remains of tombstones from the Jewish cemetery in Chorzów before exhumation, with plaques bearing the names of the buried, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.

Fig. 12. The photograph of the remains of tombstones from the Jewish cemetery in Chorzów before exhumation, with plaques bearing the names of the buried, ca. 1972, author unknown. List 158/10, ref. no. UKEKS 1. The City Hall Archive in Chorzów.

Fig. 13. Old trees in the former Jewish cemetery in Chorzów, now Pod Kasztanami Park (The Chestnut Trees Park). A. Borowik, 2025.

Fig. 14. Remains of the stone fence of the Jewish cemetery in Chorzów. A. Borowik, 2025.

Fig. 15. The monument commemorating the Jewish community of Chorzów, designed by Gerard Grzywaczyk. A. Borowik, 2025.

The interplay between local and global culture.
Areas of conflict and areas of synergy

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Abstract: The processes of globalisation, which have accelerated since the last decade of the 20th century, have had an impact on the formation of both national and local culture. Their impact, however, has been very ambiguous and perceived in various ways. Local and national cultures have also had an impact on global processes: global culture is now shaped not only by dominant civilisations or great nations. To some extent, everyone participates in this process – all cultures. On the one hand, we can see the mutual reinforcement of local and global processes, and on the other hand, more noticeable today, we see tensions between what is local and what is global. These struggles permeate social reality in various spheres and at various levels. The aim of this article is to identify the most common areas of conflict and synergy, to determine their sources and nature, and then attempt to discuss and present a new perspective on these mutual relationships in order to eliminate as many areas of conflict as possible.
Keywords: globalisation, global culture, local culture, national culture, anthropology

Introduction

The tension between the local and the global permeates social reality in various spheres and at various levels. The processes of globalisation have accelerated since the second half of the 20th century, especially in its last decade. The concept of the "global village" was introduced into sociology as early as 1964 (McLuhan, 1964). These processes have continued to develop in the current century, but particular trends have come to the fore, associated with emphasising and appreciating what is national, regional, and local (Dudziak, 2010). The term glocalisation was coined and applied to social sciences by Roland Robertson (see Robertson, 1994 and 1995) with the intention of expressing the connection between these two trends. However, this connection is not as simple and obvious as the word 'glocalisation' itself. Many authors have introduced their own concepts regarding the coexistence of these realities and the changes that occur in society as a result. Many of these concepts can be introduced in the three most frequently cited scenarios: homogenisation, heterogenisation or hybridisation of culture (Hassi and Storti, 2012).

The aim of this article is to introduce a new approach to the relationship between the global and the local. It assumes not only the possibility of both dimensions of culture coexisting, but also their necessity for common proper development. It refers to what a human being is, as a creator of culture, and to the various dimensions of their existence and functioning in the world. The reference to anthropology results not only from the fact that a person is a creator of culture, but also because of the connection with their needs and spaces of development.

The concept of culture has many definitions (cf. Kłoskowska, 2007, 17-31). This article, unless indicated otherwise, explores the majority of its established interpretations, both broad and narrow, from every human work, including internal, to products that are referred to as 'high culture'. They concern both what Margaret Archer calls

the 'cultural system' and the 'socio-cultural system' (Archer, 1996). Culture, in its essence, is an expression of human life and serves the development of humanity: "A person's personal life–both individual and social, both private and public–constitutes the 'world of culture' in the most elementary sense of the term" (Rodziński, 1989, 207).

1. Development of global culture

The first step in avoiding unnecessary conflicts between global culture and local culture is to draw attention to the very understanding of the concept of globalisation, and consequently of global culture. Secondly, there is the problem of the use of globalisation processes by the main actors in the world, both political and economic, for their own interests. Globalisation has so far been discussed mainly in connection with processes that have accelerated rapidly thanks to new means of communication, especially the internet, but also including television (cf. Mcluhan, 1964, 1989), mobile phones, more sophisticated means of transport like aircraft and faster trains, , as well as economic processes leading to the standardisation of products and services provided (e.g. the so-called McDonaldisation process; Ritzer, 1993). The interests of large corporations, originating primarily from the most developed countries, are strongly connected with this last dimension in particular. Political issues are also inevitably connected with this, including the so-called Washington Consensus, i.e. the promotion of liberal democracy and the free market (Berger, 1997 and 2002, 1-16; Mirrlees, 2020, 117-133). A certain questioning of globalisation in relation to economic processes has been clearly visible recently, in connection with a change in the approach of the main economic world power.

The development of cultural processes (in the narrower sense) in a global perspective and the shaping of what is referred to as global culture or universal culture are of a different nature. Cultural processes generally develop more slowly than technological or economic processes. For these reasons, the experience of greater closeness, connectedness and economic integration at a global level does not automatically lead to the formation of a mature global culture. The emergence of a specific culture requires the appropriate integration of a given community that shares common values and adopts common norms of conduct that transform into specific practices, traditions or customs, also associated with specific material products (Rodziński, 1989, 205-236).

However, such processes have been taking place at a global level for a long time and in various dimensions, so undoubtedly require long development and shaping. It is worth mentioning here the 1948 Universal Declaration of Human Rights, an expression of the sharing of certain common values by the entire international community, as well as various other international conventions that are sets of certain principles and norms of conduct established, for example, in times of war. Certain cultural products, even ancient ones, that have a general human character, can also be considered universal and therefore constitute part of global culture. All this precedes or develops in parallel with what has been identified as globalisation in a contemporary sense.

In this context, it is also necessary to discuss the processes relating to attempts at political unification of the entire world that have developed throughout human history. This is evidenced by the great empires that emerged in antiquity (the Babylonian, Persian, Greek, and Roman dominions) and in more modern times, although clearly the formation of nation states in recent centuries and the rapid growth of population on all continents have significantly limited the full realisation of such aspirations. On the other hand, the development of technology brings new tools that can once again provide opportunities to those so inclined to rule the entire world. History shows that such attempts were associated with the desire to impose the culture of the imperial power on those it had taken possession of, with the concomitant eradication of local systems of values, traditions, and even material achievements that were their expression. Great empires are one of the main factors in the formation of what is defined as a civilisation (cf. Mirrlees, 2020, 124-128). Such a drive for cultural homogenisation is most often the main reason for resistance to what is understood as universal or global culture.

2. Areas of conflict with local and national cultures

Culture, which is a product of a specific community, is shaped during the course of historical development, shows different stages of development within a given community, and exemplifies eras of its history. It defines the identity of a given community, its specificity and for this reason is the basis for its integration and unity.

Introducing culturally foreign elements, and even more, imposing them, can undermine the foundations of national unity, or at least threaten to do so. These processes occur as a result of the previously mentioned globalisation processes, together with which economic imperialism is often implemented, and is associated with the activities of large corporations and the largest economic powers (Chukwuemeka, Okpe and Adakwa, 2024; Kranz-Szurek, 2012, 17-22). The presence of these two trends can be seen in society (e.g. aversion to both foreigners and promotion of openness to people from other countries), in politics (nationalist parties and groups versus liberal, ecological parties), in economics (protectionism and liberalism) and art (national, local art and universal art).

Behind these different aspirations stand people who identify more either with the universal perspective or with the local perspective. Social tensions and conflicts arise, which are strongly manifested in the political life of individual countries. People's aspirations to be "citizens of the world", "universal" or "global" is present in the history of individual countries and nations. Such people, formerly termed 'cosmopolitans', expressed their contempt for what was local, parochial or narrow-minded. On the other hand, they were often treated by people attached to the national culture as traitors, ingrates, people without any values. It is worth noting that in the case of many cosmopolitans, there was no identification with a global culture, but usually with the culture dominant in a given area, and therefore identification with a larger and stronger one.

It seems, therefore, that in this case too, there was a frequent misunderstanding of the essence of global culture. Cosmopolitans, as people open to external influences, did not always move towards global culture, but only towards another culture or cultures, depending on the fashion (and strength of that culture). One can point to, for example, the historical influence of French, Italian, English, Russian or Chinese culture in various parts of the world. Their influence can be seen, for example, in language, including word borrowings from different cultures – a simple example concerning just Polish is the absorption of foreign-derived words like 'makaron' (macaroni, from Italian), 'koszmar' (nightmare – from the French 'cauchemar') or more latterly, the verb 'startować' (to start, from English). In art, this was expressed by the adoption of various trends in painting, sculpture and architecture, depending on the strength of a given culture and cultural trend. However, these were not products of the "entire community" of the world.

Today, some people identify the development of global culture–or at least some of its elements – with so-called 'mass culture' (Krzysztof Wielecki questions the definition of this human production as culture; see Wielecki, 2024). It brings about a certain unification, although this is often associated with the promotion – or even imposition – of certain trends and behaviours by specific interest groups. This kind of behaviour also causes resistance and thenceforth the creation of cultural niches within local communities. The extent to which a given element of localised mass culture will actually become a part of global culture depends on whether it is accepted as such by the world community as a whole (Mirrlees, 2020, 128-130).

The progress of integration, mutual exchange and interpenetration of ideas and ways of expressing them in material culture will gradually and inevitably lead to the increasingly widespread production of elements of global culture. This may, therefore, pose a potential threat to local and national cultures. Examples can be given of the destruction of such unique local cultures, even in recent decades (Vincent, 2006).

In addition to the disappearance of small local cultures, attention should also be paid to what has been referred to as the "clash of civilisations" (Huntington, 1996). When cultures meet and converge, specific conflicts and tensions arise between entire civilisa-

tions that are based on different values. An example here are Christian and Muslim civilisations, which are largely based on religious values. Religions play an important role in creating culture and integrating communities, but additional tensions can also arise between individual cultures in the creation of which different religions play a key role.

Some hermetic national cultures can also be a source of conflict and tension, by excluding a broader opening up to other cultures and hindering the progress of interpersonal integration and the development of a universal culture, and, as a result, stymying the creation of universal interpersonal bonds (Francis, 2020). However, it should be added that these attitudes often result from the reasons mentioned above, namely, from a sense of threat from a stronger, larger culture or even the dominance of so-called mass culture.

3. Areas of synergy – proper perception and cooperation

Does the development of global culture therefore have to pose a threat to national and local cultures? Not necessarily, or at least not when this development is properly understood and shaped in full mutual respect. The development of global culture does not have to, and even should not, proceed in a way that will lead to it becoming increasingly important in the lives of individual people. It seems entirely possible that, should the current gradual increase in the integration of the world community persist, it would necessarily lead to the accelerated development of global culture to the detriment of local culture. As a result, it would gain an increasing advantage over national culture, until the latter completely disappeared.

However, local or national culture has its own power of influence and significance. It is the product of a specific local community, which is necessary for the proper development of the humanity of every person. According to the principle of subsidiarity, it allows for better development, gives a sense of closeness, greater durability of relationships, security, belonging, a sense of rootedness and is the basis

for building one's own identity, especially its social dimension (Kłoskowska, 2005; Korporowicz, 2024, 158-159; Pius XII, 1939, n. 39-40). It therefore satisfies important basic human needs.

On the other hand, one can find in a person a desire – expressed in an extreme or exclusive way by cosmopolitans – to be a citizen of the world. One has a sense of connection, brotherhood and solidarity with other people who do not necessarily belonging to the same nation or culture. Many common elements can be identified, despite existing differences (Francis, 2020, Pius XII, 1939). Mutual contempt often results from extreme attitudes, which is closely connected with a lack of respect for the dignity of every person and every nation, and therefore also for its culture.

The development of global culture does not have to eliminate or even limit the development of national culture. Sometimes, this contact can lead to new mutual inspirations. Already today, we can see a certain shift towards developing cultural life within narrower, specific communities (Taptiani et al., 2024, 96-97). This orientation also results from practical considerations that are important for optimising the conditions for human development, such as the issue of limited possibilities for establishing contact with others (limited by the number and availability of contacts), as well as issues related to moving over different distances and the nature of the relationships created.

At the same time, it should be noted that, to a greater or lesser extent, in every culture there are universal elements, proving that human beings are the same everywhere – having the same dignity, focused on goodness, truth and beauty, having similar aspirations and ideals (cf. Wysocki, 2014). This also suggests a person is a creator of culture, and not only its recipient or shaped by it. Human beings are the authors (agents) of the entire cultural system (cf. Archer, 1996). Universal elements present in every culture indicate that we have been witnessing the development of a universal or global culture from the very beginning of human activity.

Both of these dimensions, the particular and the universal, are necessary for the development of true culture, which is "human", and therefore must

be related to what a human being is. The development of a locally conditioned culture, related to the functioning of a narrower community, a nation, is something that constitutes the identity of a given group and distinguishes it from others, just as an individual person has their own characteristics and needs to distinguish themselves from others, being also aware of community and closeness to others, having similar properties and spiritual powers. For this reason, a true national culture, even if it were completely hermetic, could not develop properly (Francis, 2020, n. 146). It needs participation in this universal dimension – a human dimension – common to all people and for this reason, universal.

The development of each person requires the following: an awareness of their own distinctiveness, a recognition of the uniqueness of their personality, the shaping of their own identity, the defining of a personal hierarchy of values and the specificity of the relationships they establish – people and communities with whom they enter into relationships and taking into account the nature of the historical and cultural conditions in which they live. All this translates into the culture a given person participates in creating and which also shapes them.

On the other hand, each person gradually recognises and becomes aware of the existential, spiritual and physical constitution common to all, having the same spiritual powers, the need for relationality and sharing common values referred to as universally human. This dimension of human existence is the basis for creating a common, universal culture, which also affects the formation of a person and his social relations.

In this dynamic of changes (morphogenesis) related to the relationship between human agency and the impact of culture, priority, according to Archer's concept, falls to a person as the creator of culture, as well as the subject constantly developing the socio-cultural system and leading to the elaboration of the cultural system (Archer, 1996, chapt. 7 and 8). The universal dimension of culture is not only an expression of a certain common state of humanity for all people, but also the effect of the development of the potential inscribed in each person, a common striving to create a more humane world, humanise

the living environment and subjectively shape the reality surrounding them (Wielecki, 2024). From the considerations above, it can also be concluded that in the relationship between universal (global) culture and particular (local) culture, particular culture has the primary character. For this reason, it is not possible to completely eliminate it.

The development of a true global culture is therefore based on the community of values referring to humanity, namely, who a person is. Its basis is a common human nature, a common origin, including problems that unite everyone and are understandable, which we define as universally human. Artists who refer to these are usually more easily recognized and understood by others. Humanity is connected by interpersonal relationships, common to all people and experienced similarly, which include aspects such as love, heroism, honesty, loyalty and forgiveness, but also jealousy, hatred, betrayal, greed and the struggle for power. The harmony and beauty of the human body depicted by ancient Greek sculptors is something that can be understood and admired by everyone. What Virgil wrote in the *Aeneid* about the Trojan trap, and Homer in the *Odyssey* about Odysseus' return to his family contained attitudes and feelings familiar to everyone.

The coexistence of global and local culture is therefore not only possible but essential for the proper development of individuals and entire societies.
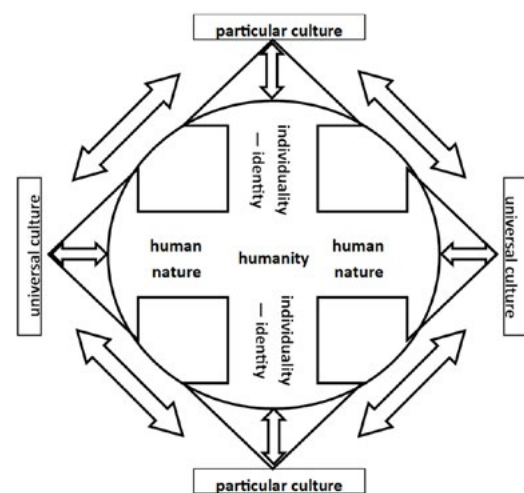

Diagram 1. Relationships between local and global culture from an anthropological perspective. Source: Author.

A proper understanding of the place of these different dimensions of culture allows for mutual support and strengthening of development, which are synergistic in nature. Most universal cultural resources first developed within local culture, forming part of it. Their adoption as part of world heritage makes them a special element of a region's identity, something that, being widely known and appreciated, is displayed in a given region or country as its achievements and a part of its identity. These elements are easy in a cultural communication and have a strong unifying effect. Global culture brings a wide flow of information and knowledge, which can also become an inspiration for local culture. It also offers new and broader opportunities for the legal protection of local cultures and traditions, as well as greater financial support from international institutions. Support for local culture is also clearly visible in the development of global tourism, which increases interest in local cultures, as well as in the development of modern global media, which bring out the richness of local cultures, thus strengthening local traditions (cf. Taptiani et al., 2024, 93-94; Tai, 2024).

Local culture is not "worse" because it is less understandable to people living outside it. Most often it simply requires an introduction, an explanation of the context, so that it can be well understood. It is directly understood by those who are raised in it and who co-create it. However, universal elements, common to all, are always woven into this local context.

Religions have had – and continue to have – a significant influence on individual cultural systems and their development. They are often a fundamental element of individual nations' identities. Great religions, which cross state borders, also have a universalising dimension. A common religion can also unite different societies and nations by spreading certain common elements of culture associated with it. In the case of the largest ones, such as Christianity, which has permeated all national and local cultures in the world, we can already speak of a significant universalisation of the culture associated with it. Nevertheless, we should also remember what has been said in relation to civilisations, namely, that differing religions can also be a source of tension between each other if the values they carry are significantly dissimilar.

Conclusions

Culture demands a community of values, otherwise there is no true culture. For this reason, global culture also requires common values, though these cannot be values imposed by dominant empires or large corporations – cannot even be the culture of the majority. The basis of true global culture is one that is common to all people. In this, it finds a proper basis, but at the same time also a limitation – there should be no striving for artificial unification or homogenisation. What is common to the human spirit has a chance to develop and spread quickly, to be received and accepted as the heritage of world culture, due to the community of human nature and common personal dignity. It is necessary to identify inappropriate approaches in past history, relating to the imposition of cultural elements on other nations, often involving religion (here, unfortunately, Christian states have also been at fault).

In the development of culture understood in this way, there is room for the development of local and national cultures. Similarly to a particular country, the development of national culture and respect for it does not have to negate the development of local culture, which emphasises local identity and its specificity. A person who participates and functions in various communities and societies also needs smaller ones that provide a sense of closeness, emotional security and familiarity, as well as the wider space that opens up to them with the ever-growing technical possibilities related to communication and transport.

The movement that will support the development of both global and national cultures is the building of unity in diversity. This is a model of mutual enrichment and complementarity. Each of these dimensions has its own space in which to develop. Therefore, one can and should try to avoid unnecessary conflicts, thanks to proper understanding and mutual respect. However, there is a certain assumption in this of what constitutes 'proper understanding' and 'proper attitudes' for everyone, which in practice is difficult to implement, so it must be acknowledged that avoiding conflict is not wholly achievable. On the other hand, one should strive to reduce tensions and use emerging conflicts to create new spaces of

the common good. Tensions can also have a positive impact on the development of of what is global and what is local. Of course, too much tension, leading to conflict, is inappropriate and destructive, but a little can mobilise and force greater creativity and faster development.

The slogan "Think globally, act locally", one of the key ideas from Agenda 21 in Rio de Janeiro, also showed one direction for action in building relationships between the global and the local. What is created locally can have universal significance, because the range of influence of even small cultures is difficult to define. As Rodziński wrote: "When it comes to different environmental cultures, geographically and historically placed, it is easier to point out individual foci from which these cultures radiate, than to outline the boundaries beyond which their influence does not reach" (Rodziński, 1989, 231). In turn, contemporary tools of globalisation provide the opportunity to spread the wealth of local traditions and cultures faster, making them more common. Sometimes, they also allow them to be saved and developed. (Tai, 2024; Taptiani et al., 2024, 96-97).

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