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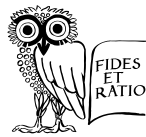
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Interpersonal relationships and communication in romantic relationships vs digitization of life

Komunikacja i relacje interpersonalne w związkach romantycznych a cyfryzacja życia¹
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Katarzyna Kamila Wałęcka-Matyja^a✉, Julitta Dębska^b

^a Associate Professor Katarzyna Kamila Wałęcka-Matyja^a, PhD, <https://orcid.org/0000-0001-8222-729X>

^b Julitta Dębska^b, MA, <https://orcid.org/0009-0008-7214-7024>

¹ Institute of Psychology, Department of Social Psychology and Family Study, University of Łódź

✉ Corresponding author: katarzyna.walecka@now.umi.lodz.pl

Abstract: The digitization of life turned out to be both necessary and salutary for maintaining the continuity of functioning of societies and individuals during the pandemic. Meetings with people were mostly held remotely, as were medical and legal consultations or shopping. And although tools for online communication were known before 2020, their heyday and widespread use fell on the years of the pandemic crisis. Today, digitization is largely associated with all spheres of human life, including those that relate to the creation of close interpersonal relationships. The aim of the article is to present the conclusions of scientific considerations on the psychological aspects of interpersonal communication in romantic relationships in the context of the digitization of life. Models and dimensions of communication in romantic relationships and their importance for human functioning are presented. Some psychological aspects of interpersonal communication at three stages of a romantic relationship are discussed, i.e. creating a new, close relationship in the network, duration of the relationship in the digital reality and ending the romantic relationship.

Keywords: digitization of life, online communication, offline communication, romantic relationship

Abstrakt: Cyfryzacja życia okazała się zarówno niezbędna, jak i ważna dla zachowania ciągłości funkcjonowania społeczeństw oraz jednostek w okresie pandemii. Spotkania z ludźmi odbywały się w większości zdalnie, tak jak konsultacje lekarskie, prawnicze czy zakupy. I choć przed 2020 rokiem narzędzia służące do komunikacji w sieci były znane, to ich rozkwit i powszechne wykorzystanie przypadły na lata kryzysu pandemicznego. Współcześnie cyfryzacja w dużym stopniu wiąże się ze wszystkimi sferami ludzkiego życia, także tymi, które odnoszą się do tworzenia bliskich relacji interpersonalnych. Celem artykułu jest przedstawienie wniosków płynących z rozważań naukowych nad psychologicznymi aspektami komunikacji interpersonalnej w związkach romantycznych, w kontekście cyfryzacji życia. Przedstawiono modele oraz wymiary komunikacji w związkach romantycznych oraz ich znaczenie dla funkcjonowania człowieka. Omówiono niektóre psychologiczne aspekty komunikacji interpersonalnej na trzech etapach związku romantycznego, tj. tworzenia nowej, bliskiej relacji w sieci, trwania związku w cyfrowej rzeczywistości oraz zakończenia związku romantycznego.

Słowa kluczowe: cyfryzacja życia, komunikacja online, komunikacja offline, związek romantyczny.

Introduction

The word “communication” originates from the Latin words “communicare” and “communis”, which mean sharing, participating and doing something together (Ansari, 2021). Communication means sharing words, messages, intentions, ideas and emotions (Alshenqeti, 2016; Lamichhane, 2016). People share their thoughts and feelings using their verbal and non-verbal skills (Ansari, 2021). According to De Vito (2016), inter-

personal communication is a form of communication between people who are somehow related and mutually dependent, which means that the activities of one of the persons affect the other. Interpersonal communication is necessary for maintaining healthy relationships based on mutual understanding (Ansari, 2021). Without communication neither an individual nor the whole social system could function properly (Ayee, 2013). This process is

¹ Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2023-2Maty.pdf>

open and serves not only to pass on information but also to create meanings (Lamichhane, 2016). The acceptance of mutual differences, even those concerning the ways to create messages, is the basis for effective communication (Nehal, 2017). Regardless of the fact whether communication is verbal or non-verbal, its lack makes talking difficult (Venter, 2019). In order to make the exchange of information effective, it is essential to have some communication rules which are respected by the parties (Naumovski, Dana, Pesakovic and Fidanoski, 2016). In the process of two-way communication we expect to find some indicators of its effectiveness (Lusiawati, 2019). Interpersonal communication can affect the future success and is regarded as an important tool for mutual understanding, providing instant feedback and solving problems that result from disagreements and ambiguities (Naumowski et al., 2016; Purnomo et al., 2021). Persons who can communicate properly are able to identify the needs of their communication partners. The people who are engaged in communication hope that it will result in an increase in confidence, mental well-being and mutual satisfaction. A conversation can have a positive or negative influence on someone's emotions (Naumovski et al., 2016). Communication can be considered effective not only if the interlocutors feel comfortable but also if the set goals have been achieved. A great part in effective communication is played by the emotional intelligence (Nguyen, White, Hall, Bell and Ballentine, 2019) and self-confidence of the interlocutor (Rais, 2020).

Both technological progress and digitization of society contribute to dynamic changes taking place in the area of communication (Przywara and Leonowicz-Bukała, 2020). Communication, whose essence is to pass on information, has been significantly modified on all the levels of the McQuail pyramid (McQuail, 2010). In the present study we adopted the assumptions of the mediatization concept (Couldry and Hepp, 2013). It was agreed on that media should be treated as a whole, understood as all the tools used for communicating, without an attempt to identify the influences of individual media or programmes on the recipients. The Internet was treated as both the environment where various users functioned on different platforms and a tool designed for communication. To describe the communication processes taking place online and in

the real world, we used the terms from the current literature on the subject. Communication taking place in the virtual environment is described by researchers as online communication, digital communication and internet-mediated communication. On the other hand, communication taking place in the real world is called offline communication, non-mediated communication, face-to-face communication and traditional communication (Adler, Rosenfeld and Proctor, 2018; Al-Saggaf, MacCulloch and Wiener, 2018; Przywara and Leonowicz-Bukała, 2020). Based on the literature on the subject, we showed the most important differences and similarities between online and offline communication.

1. Specifics of online and offline communication

The biggest difference between face-to-face communication with a partner and its digital form is a lack of non-verbal messages. It has been noticed that direct verbal communication is connected with numerous non-verbal cues, which results in a lower risk of misunderstanding it. A good example can be a situation when a person is talking about a happy event. In such a case their smile, tone of voice, facial expression and body posture confirm the correct understanding of the message. This kind of verbal communication is characterized by so called richness of expression. In the process of communicating by e-mail or social media there are much fewer signals which can help to read verbal messages. Such a message is called colourless and dull (Otondo, van Scotter, Allen and Palvia, 2008). Insufficiency of non-verbal cues can result in poorer understanding between the communicating parties, not getting jokes, as well as creating an idealized image of the interlocutor.

However, it is emphasized that according to the assumptions of the Social Information Processing Theory of J. B. Walther (1992) people communicating by means of modern technology devices, without non-verbal cues, try to adjust their communicating behaviours as much as possible. With time they learn to use available options in a more effective way. It has been noticed that the text message form can help to reveal information which would be difficult to reveal

in a traditional conversation. Written communication is appreciated by young people who, in this way, can better control the way of expressing their thoughts and more strongly engage in the conversation, which, in consequence, leads to strengthening the relationships. Some people consider this form of communication safer, especially when they need to touch difficult issues or solve problems, and therefore it is believed to help to build stronger emotional bonds between the partners. It shall be stressed that the research carried out in this field so far has provided contradictory results concerning the correlation between texting and the satisfaction with a romantic relationship (Pollmann, Norman and Crockett, 2021).

It is believed that although both text messages and other forms of digital communication are helpful in the communication process in romantic relationships, they shall not replace traditional face-to-face communication. They are also connected with the occurrence of specific threats. While texting with your romantic partner, there is often a chance of disagreement resulting from the wrong interpretation of messages. Communication problems are often caused by using abbreviations, punctuation mistakes as well as the lack of non-verbal communication. The incorrect interpretation of text messages can also result from the fact that it is difficult to interpret emotions when accompanying vocalization is missing (Kelly and Miller-Ott, 2018).

Digital communication is also referred to as hyper-personal, since it accelerates the strengthening of a relationship and facilitates discussing personal issues in a conversation. The interlocutors take up issues connected with feelings, beliefs or experiences (Jiang, Bazarova and Hancock, 2011) faster than in a face-to-face conversation. Another feature of this type of communication is asynchronicity. In a direct contact, the talking parties do not have so much time to give a response and correct it before entering it. Asynchronicity also allows the interlocutors to make a choice whether to reply to a message or not. There is a low level of control over the recipient of a message in the aspect of responding to it or giving a reply. Digital communication is also described as

permanent. That is because, the contents of conversations are processed, i.e. typed, recorded, stored or transferred. Such a situation has both advantages and disadvantages. That will certainly make the users be more careful while participating in the communication process with other people. One of the difficulties resulting from the permanence of communication is the phenomenon of *disinhibition*. It means a tendency to spread information regardless of consequences. It has been observed that it takes place more frequently in mediated communication than direct one, just like the phenomenon of *flaming* (the act of sending angry or insulting e-mail) (Adler et al., 2018).

According to Hobbs, Owen and Gerber (2017), new communication technologies in the first place change the way we can meet other people. In many situations popularity may increase opportunities for establishing and maintaining interpersonal relationships. However, it has been stressed that the researchers point to a weaker satisfaction with these relationships as well as smaller attention and mindfulness towards a relationship with another person (Onyeator and Okpara, 2019).

Currently we can indicate the occurrence of social media paradox (Kalsens, 2016). On the one hand, we can observe an increase in the number of tools for communicating with other people, and on the other hand, in numerous scientific findings it has been shown that deteriorating mental well-being and loneliness are becoming a growing problem of modern societies (Akhtar and Khan, 2019). The 21st century is the age of loneliness. People more and more often live next to each other, not with each other. That was confirmed by the results of the study conducted by CBOS, which was presented in the report of 2022, entitled "The feeling of loneliness in adult Poles". It was found out that the majority of the respondents felt lonely (54%). However, this feeling was more frequent in young men in the age range 25-34 years, in people who were not in a romantic relationship, those who have been raised in a family with one parent, people who have no children, those who are unemployed or are looking for a job, who assess their household situation as very difficult and live in big cities.²

2 https://instytutpokolenia.pl/pdf/SAMOTNOSC_14.11.pdf

2. Models and dimensions of communication in a romantic relationship

A romantic relationship is a specific type of interpersonal relationship. In the literature of the subject it is referred to as a relationship between two people characterized by intimacy, passion and commitment. *Intimacy* is the feeling of closeness, unity and bond in a love relationship. *Passion* means drives leading to a romance, physical attraction, sexual fulfilment. *Commitment* is a conviction that we love the other person and wish to keep this love forever (Sternberg and Weis, 2007).

Psychologists believe that a romantic relationship can be established and developed thanks to, for example, sincere and open communication (Ryś, 1999). The quality of communication to a great extent affects the success of a relationship between two people and the satisfaction with it (Wałęcka-Matyja and Szkudlarek, 2019). According to D. Suwalska-Barancewicz and A. Malina (2018), it is essential for the partners who are in a romantic relationship to establish a communication pattern that will enable them to perform everyday duties as well as understand each other on the intimacy level. An effective communication in a dyad consists in solving problems in a way that will encourage mutual understanding and maintaining a close relationship. On the other hand, ineffective strategies are related to hostility, lack of empathy and chaotic problem solving. Proper communication is deemed to be indispensable for each stage of a close relationship. This is because it is an important element of love and commitment. Proper communication is considered to be an effective way to prevent and solve conflicts (Suwalska-Barancewicz and Malina, 2018).

In the related literature there are usually mentioned three basic interpersonal communication models: one-sided, two-sided and three-sided (relational) ones (Adler et al., 2018; Harwas-Napierała, 2014). In the first of them communication is done only from the sender to the recipient. The sender does not care whether the message is received or not, i.e. whether there is any feedback. This is a one-way action, which does not take into account the sphere “between” the people, but only takes place “inside”

the communicating party and is determined by their choices. The two-sided communication model takes into consideration the feedback between the sender and the recipient. It consists in sending and receiving messages. In this sense, communication is understood as a series of causes and effects. In this model there is a distortion of communication in the sphere of assigning responsibility and blame for mistakes in the communication process. It is usually the partner who is blamed for them. Communication in these two models is focused on individual persons and individual behaviours. It looks different in the relational communication model, in which the sender and the recipient focus more on the subject of communication than on each other. It is important what they are doing or can do together. In the three-sided communication model it is essential to create new behaviours which can develop the partners. In this model, the communication responsibility means an ability to respond, not a blame, a mistake or a merit. An individual person can make the matters go in the positive direction. It is noted that these models are not to be found in their pure form (Harwas-Napierała, 2014).

A key factor for proper communication in a romantic relationship is an ability to send clear and comprehensible messages, consistent with the sender's intention (Cutrona and Suhr, 1994). It is also important to be able to communicate in a way close to the assumptions of the relational interpersonal communication model. Adopting the three-sided model shall not imply the need to look for the party who is guilty for the communication problems. Moreover, it shall create better conditions for behaviour modification (Harwas-Napierała, 2014).

M. Plopa (2006) distinguished three significant dimensions of communication in a dyad – support, commitment and depreciation. *Support* means providing each other with positive reinforcements. It includes interest in the partner's everyday activities, accompanying them in difficult situations, providing help with solving problems. Support also means respect and acceptance for the behaviours of the other person. Additionally, it is important for this communication dimension to appreciate the efforts which the partner is taking in order to develop the

relationship as well as the fulfilment of their obligations. *Commitment* is an affiliation of the partner, showing them warm feelings, paying attention to their uniqueness and importance. It is present not only in verbal communication but also in non-verbal one, expressed by such gestures as: hugging, petting, kissing. Commitment in the communication in a relationship also means spicing free time, looking for mutual interests, active listening, meeting the partner's expectations and preventing conflicts. Another important element is gradual discovering information about each other, which helps to better know each other's needs, expectations, moods and emotions. Additionally, Plopa (2017) emphasizes that this aspect of communication in a close relationship is positively influenced by satisfying sexual life. On the other hand, the dimension of *Deprivation* is demonstrated by showing each other hostility. This attitude can include verbal violence, outbursts of anger, insulting, shouting. It is connected with the lack of respect for the right of the partner to remain silent, to refuse to respond, to have different views or to protest. Deprivation in communication also means a desire to dominate the partner, to take control over them and use manipulation. Depreciating of the other person consists in ignoring them, teasing them and lowering their self-esteem (Plopa, 2006). In the study of M. Ryś and others (2020) it was proved that there was a significant correlation between using communication depreciating a person and their belief that they were not loved (Ryś, Greszta and Śledź, 2020).

Numerous psychologists point to a special importance of affective communication in a romantic relationship (Floyd, Pauley and Hesse, 2010; Walęcka-Matyja and Szkudlarek, 2019; Ryś et al., 2020). It is expressed in a verbal and non-verbal way. In the first case, it is done through giving information that you like and love the partner, providing support to the partner as well as complimenting them. Non-verbal signals include touching, displaying affection, care, holding the partner's hand, hugging, petting or kissing. In this way people initiate close interpersonal relationships and accelerate their development. Affective communication contributes to experiencing higher satisfaction with a relationship with another person. Researchers have identified a lot of effects beneficial

for the functioning of a human being, related to using affective communication. K. Floyd (2002) indicates that the people characterized by a high intensity of this type of communication are generally happier, socially more active and mentally healthier. On the other hand, the people with a low level of affective communication more often experience stress, depression symptoms and social isolation. It has also been found out that an affective message, which lowers the stress level, influences a human being not only when they receive it but also when they pass it on. It has been proved that there is a significant correlation between emotional communication received from a close person and one's hormone management (Floyd and Riforgiate, 2008).

3. Role of communication in a romantic relationship

The results of numerous studies confirm that proper communication is one of the most important factors determining the feeling of satisfaction with close relationships. In the study of M. Jitaru (2020), the author checked the correlation between satisfaction with a romantic relationship and communication patterns. In order to do that, 121 young women from Romania were tested, using the shortened version of Communication Patterns Questionnaire (Christensen and Heavey, 1990). It was shown that there was a significant correlation between communication patterns and satisfaction with a romantic relationship. Communication patterns also appeared to be a predictor of satisfaction with a close relationship. The findings from the study of Jitaru (2020) are congruent with the previously obtained results, which verified the same correlations (Heavey, Layne and Christensen, 1993; Heavey, Christensen and Malamuth, 1995; Gottman and Krokoff, 1989; Madahi, Samadzadeh and Javidi, 2013). In the study of S. Jolin and others (2022) conducted on 311 Canadian pairs in the period of 1 year, it was found out that the negative communication quality in both the partners was a significant predictor of their satisfaction with the relationship over time (Jolin, Lafontaine, Brassard and Lussier, 2022).

Furthermore, it is believed that an important component of close partner relationships is open communication in the area of sexuality. It is one of the key factors ensuring the maintenance of sexual health and fulfilment of needs (Liberacka-Dwojak and Izdebski, 2021). A multi-level meta-analysis conducted by A. B. Mallory (2022) showed a positive correlation between communication concerning sexuality and satisfaction with a romantic relationship as well as sexual satisfaction (Mallory, 2022).

Psychologists agree that the quality of communication in a romantic relationship plays an important part in the mental health of the partners. In the study of M.G. Pereira and others (2022) some correlations were discovered between communication in romantic relationships and mental and physical health. The surveyed group consisted of 298 students living in the USA who were engaged in a romantic relationship in the time of the research. The results of the analysis showed a positive correlation between the communication pattern in a dyad and their mental and physical health as well as a negative correlation between a destructive way of communication and the state of health, both mental and physical. It was also proved that the partners who used more destructive communication patterns were less willing to forgive and forget. The authors emphasize the importance of therapeutic measures designed for improving communication skills. First of all, it is essential to strive to reduce the use of destructive communication patterns in a dyad and develop the capacity to forgive (Pereira et al., 2022).

In the last twenty years, the development of digital media has caused significant changes in many spheres of everyday life, including partner relationships. The Internet is not only a virtual place of partners' meetings, but it also affects the existing relationships in a significant way, e.g. helping to maintain long-distance relationships. However, new technologies are also connected with some threats, which can lead to the breakup of a relationship. In the further part of this study we analysed the issue of the influence of communication technologies on the psychological aspects of romantic relationships – from its initial stages to some behaviours after the breakup.

4. Psychological aspects of online communication at the stage of establishing a romantic relationship

Currently we are observing an increase in the use of smartphones. According to F.C. Yam (2023), these devices have a lot of functions which enable individuals to satisfy their needs. Thanks to their phones, people can join social networks, play favourite games, do shopping, look up information and learn, using the Internet for all the activities (Soni, Upadhyay and Jain, 2017). One of the consequences of this phenomenon is addiction to technologies (Davey et al., 2018).

Until recently the Internet users needed a special environment consisting, for example, of a desktop or a laptop, to be able to make a bank transfer or order some food online. At the moment, thanks to smartphones, barriers of this kind have been eliminated. Due to this fact, people can be continuously occupied with their phones even if they communicate face-to-face with another person (Al-Saggaf et al., 2018).

In 2020 there were 3.8 billion of active social media users, which accounts for 49% of the whole world population. They spent approximately 2 hours and 24 minutes a day on these platforms (We Are Social & Hootsuite, 2020).

Due to the widespread availability of the Internet, there have appeared quite new solutions for dating, which has significantly changed its face. In 2019 30% of the American population declared using dating platforms online, 23% of whom met with the potential partners offline. What is more, 12% of the users had serious relationships or got married with the persons they had met online (Bernard, Vintila and Tudorel, 2020).

The Internet is an unlimited space, where an individual can find a lot of potential partners. In the digital world, the number of candidates as well as related interaction opportunities is much bigger than in the offline reality where direct interactions take place. We can meet new people not only through dedicated applications, like Tinder, but also on different social platforms, such as Facebook or Instagram. They are willingly chosen by the users to create romantic inter-

actions. That affects the candidate selection process (Finkel, Eastwick, Karney, Reis and Sprecher, 2012; Hobbs et al., 2017; Ward, 2017).

Online dates are a social media service, which focuses on providing the users with opportunities of entering into romantic relationships, including long-term ones (Breward, Hassanein and Head, 2017). Some researchers checked people's motivation for using this type of services. The main reasons include: sex, friendship, romantic relationship, travelling together, willingness to improve self-esteem and entertainment (Ranzini and Lutz, 2017; Ward, 2017).

According to R. Buhas (2014), a key factor which can make a relationship established online develop and turn into a romantic one is communication. What is important is an open, sincere dialogue and providing true information about yourself. Thanks to communication continuity and sincerity, the people who met online build trust to each other and increase the likelihood of success of their romantic relationship. The respondents who took part in the study of Buhas (2014) emphasized the role of emotional support. Good communication helps the users to make a decision to transfer the relationship to everyday life and meet offline. An important factor for meeting offline is also a geographical distance. Except the quality of communication and the distance, other motivators for making a decision to continue the relationship in the real world appeared to be: trust, intimacy and the feeling of mutual love (Buhas, 2014).

The results of the research conducted by B. Nayar and S. Koul (2021) confirm the fact that the success of online dating depends on the trust between the users and the degree of intimacy that they have managed to create during the online communication. Therefore, it is important to be open for the interlocutor, reveal some information about yourself and build communication based on mutual trust. The greater the trust to the interlocutor, the bigger the chance for the success of the new relationship (Nayar and Koul, 2021).

Some interesting research findings were obtained by T. van der Zanden with others (2022), showing a positive impact of the originality of a text posted on a dating portal on the impression it made on the

users. The messages considered original were characterized by an interesting style, unusual metaphors and revealing some personal information. It appeared that this kind of text originality was positively correlated with the assessment of the intelligence and the sense of humour of its authors. Also, an important thing for making a positive impression in the Internet is to use a flawless language in online messages. Linguistic errors visible on a dating profile have a clearly negative influence on how attractive a potential partner may seem to another person (van der Zanden, Schouten, Mos and Krahmer, 2020).

A barrier for the creation of new romantic relationships on the Internet can be the fact that the young adults looking for love online can become victims of cybercrime and abuse connected with cyber-dating (Deans and Bhogal, 2019). It happens that some people fabricate information about themselves or hide some inconvenient facts (Chen, Yuan, Feng and Archer, 2021). It has been proved that people sometimes create an image of the ideal self. Men usually tend to falsify the information about their income, the purpose why they want to enter into contact and their stature. Women, on the other hand, more often provide untrue information about their weight. Moreover, they often post photos in which they look more attractive than in reality. In order to achieve this effect, they retouch the photos (Prieler and Kohlbacher, 2017).

Interesting results were obtained in the study carried out on a group of 309 Chinese users of dating portals (Peng, 2020). It was proved that as many as 83% of the respondents entered false information to their profiles. For example, a man who was 173 cm tall ticked the stature of 175 cm in his profile. That shows how the users may try to increase their attractiveness using little lies in order to encourage potential partners to enter in contact with them. The most frequent manipulation used by the respondents was posting an inauthentic profile photo. In their profiles the examined daters more often used lies and ambiguities than evasion and omission. Interpreting this behaviour, we may think that withholding information probably does not allow us to draw other people's attention effectively. For example, the answer "I do not know" or leaving an empty box

while answering the question about your stature will give the impression of insincerity. On the other hand, giving a false answer enhancing the attractiveness of the profile user can be encouraging for making a contact (Peng, 2020).

It is stressed that the people who use dating services are characterized by a lower level of self-esteem than the ones who do not do that (Bernad et al., 2020).

The researchers also checked whether there were correlations between personality traits and using dating services and applications. The studies carried out by E. Timmermans and E. de Caluwé (2017) proved that the single people who used Tinder were more extravert and open to new experiences than the singles who did not use it. On the other hand, the single people who did not use Tinder obtained higher scores for the trait of conscientiousness than the single users of Tinder. No statistically significant differences were found between the compared groups of examined people in the area of agreeableness and neuroticism (Timmermans and de Caluwé, 2017).

From the application point of view, it is important for the developers of dating services to plan and implement effective solutions which will help to take care of the safety of the users (Mosley and Lancaster, 2019).

5. Psychological aspects of online communication at the stage of an ongoing romantic relationship

Currently, with technological progress and increasing digitization of the society we can observe some changes that take place in the realization of social roles, in the area of establishing interpersonal relationships and in communication (Przywara and Leonowicz-Bukala, 2020). The researchers particularly draw our attention to increasing problems in interpersonal communication (Davey et al., 2018). Since, people seem to be continuously occupied using their phones, even in the situation when they are communicating with another person face-to-face (Al-Saggaf et al., 2018). We observe a gradual increase of this phenomena as well as a decrease of commitment in a direct interaction when compared with the time spent with the

smartphone (Luk et al., 2018; Yam and Kumcagiz, 2020). To distinguish such behaviours from the problematic use of the smartphone, the researchers have introduced a new term – *phubbing* (Yam and Ilhan, 2020). It is a combination of the words “phone” and “snubbing”. This state is described as focusing attention on the smartphone during a face-to-face interaction and characterized by a decreased interest in the surroundings. It is more about spending time following the contents on the phone than communicating directly with the people who are next to you (Luk et al., 2018; Youarti and Hidayah, 2018). It is believed that phubbing has a negative influence on interpersonal communication (Chotpitayasunondh and Douglas, 2018). Behaviours of this type can also cause problems in romantic relationships (Krasnova, Abramova, Notter and Baumann, 2016; Carvajal, 2017; Roberts and David, 2016; Vanden Abeele, 2020; Wang, Xie, Wang, Wang and Lei, 2017), as they make people feel ignored and worthless. There has been found a correlation between phubbing and marital satisfaction (Carvajal, 2017). Moreover, it is worth paying attention to the fact that the people who are characterized by a high intensity of phubbing also show a high level of the feeling of loneliness (Błachnio and Przepiórka, 2019).

The researchers of this phenomenon also suggested a term which refers to the degree in which individuals are distracted by their smartphones during a direct communication with their romantic partners – *partner phubbing* (Roberts and David, 2016). That includes situations in which the partner often breaks up communication to check messages in their smartphone and refocuses attention on this content. Partner phubbing makes the partners feel psychologically neglected (Wang et al., 2017). Research shows that this kind of behaviours has a negative impact on romantic relationships (González-Rivera et al., 2018; Krasnova et al., 2016; Roberts and David, 2016). Phubbing is a serious problem and a more and more common risk factor for the durability of interpersonal relationships, including the romantic ones (Yam, 2023).

Some interesting results concerning the understanding of the effects of texting in romantic relationships were presented in the study of D. Halpern and J. E. Katz (2017). The results of the two-wave, repre-

sentative panel study, carried out a year apart, were formulated in three main conclusions. First, it was proved that compulsive or intensive text messaging might lead to the worsening of the quality of a close romantic relationship. On the one hand, a contact by a mobile phone is a symbol of commitment for the couples (Juhasz and Bradford, 2016). With the use of digital communication they can support and be emotionally available for each other even if they are physically absent. Smartphones can also play a positive part at the stage of building a romantic relationship when the partners are physically apart from each other. On the other hand, the study showed that the negative impact of text messaging on the quality of a relationship prevailed, especially if this activity was done frequently and in the presence of an important person. Text messaging can make individual persons become less sensitive to the needs of other people, which leads to conflicts and decreases the level of intimacy. The second conclusion from this study referred to a negative influence of texting in the presence of the partner on intimacy in the relationship. Intimacy, according to Halpern and Katz (2017), is an interactive process initiated by the fact that a person reveals their important matters, needs and emotions. Their partner responds to that and this interaction leads to a greater understanding, the sense of being appreciated and taken care of during the relationship. A necessary condition for the development of a close relationship is demonstrating mindfulness by the partner. Although text messaging takes only a small part of a day, the user is forced to share their attention between the phone screen and a face-to-face interaction with the close person. As a result of such a competition you will have to break up the direct conversation in order to send a message. The researchers formulated the hypothesis that considering the upper limits of cognitive resources engaged in social behaviours, using electronic devices in the presence of the partner may have a harmful influence on the intimacy level in the relationship. The study results indicate a cognitive withdrawal of the partner from the face-to-face interaction during text messaging, which decreases mutual openness since it is read as a lack of empathy. There are two clear differences between text messaging and using other media, for

example television. Firstly, smartphones are more adjusted to individual needs, which significantly affects the inclinations developed by the people. Secondly, the interaction with other users is more cognitively involving than other kinds of media. People show a tendency to respond to communication initiatives and feel obliged to reply to what the other person is writing/saying. Therefore, it is more difficult to regulate our own behaviour in this respect than in case of using other media, especially those of a one-way nature. Thirdly, the results of the study allow us to find a causation between text messaging and a lower assessment of the quality of a romantic relationship (Halpern and Katz, 2017).

Another cause of conflicts in romantic relationships can be the way in which the partners use social media. Especially, if they differ in respect of the needs related to expressing themselves online and sharing private information. There can appear a disagreement about the relationship status shared on Facebook. If the partner describes their status as “single” and does not post any photos with their partner, that can be interpreted as the will to attract potential admirers.

Another behaviour which can cause tension in romantic relationships is monitoring the partner in social media. Some people create false profiles to check the activity of their partner on the Internet. It sometimes happens that a wrong interpretation of messages, comments, posted photos and likes inevitably leads to conflict (Arikewuyo, Abdulbaqi, Omoloso, Lasisi and Arikewuyo, 2020).

The study of Hammond and Chou (2015) proved that the Facebook users who often update their statuses and profiles are more strongly concentrated on the activity online than on their partners. They can be more interested in sharing their experiences with their friends from the Internet than communication and building the relationship with the romantic partner. The people who often think about interaction on Facebook become less inclined to make efforts in order to maintain a good quality of a romantic relationship than those who do that less often (Hammond and Chou, 2015).

Another threat related to new communication technologies is online betrayal. Social media make it possible to communicate online with alternative

partners, which can lead to problems in a relationship, separation or even a divorce (McDaniel and Drouin, 2017). In the study of G. M. Lazarescu and M. Vintila (2021), the authors identified some variables which allow us to predict with high probability some behaviours that can indicate someone's infidelity committed in the online environment. The first of them is the time spent in social media. The more time a person spends in social media, the more likely it is for them to enter into a romance. The second factor is the degree in which technology intervenes in our everyday lives. The more the partners use the opportunities created by the Internet, instead, for example, spending this time talking with the romantic partner, the more likely it is, at least for one of them, to engage in a competitive interpersonal relationship on the Internet (Lazarescu and Vintila, 2021).

6. Psychological aspects of online communication at the stage of ending a romantic relationship

The Internet plays an important role also at the stage of ending a romantic relationship. It has been proved that parting with the partner translates to behaviours demonstrated by social media users. L. Fejes-Vékássy, A. Ujhelyi and L. Faragó (2022) examined how the activity of Instagram users changed depending on the phase of a relationship. It was noticed that a new romantic relationship diverted their attention from the online space, which translated to a decreased activity on Instagram. The users in the first phase of the relationship were inclined to post more significant and private contents. At this stage only the acquaintances perceived as very important were shared on the platform. On the other hand, the role of Instagram increased at the stage of parting with the partner. After breaking up the relationship, the users usually used the social media platform to follow the activity of their ex-partners and their new other halves. The users could send direct messages to their ex-partners and the frequency of this activity grew. In this way, for example, some photos important for the recipient were sent. Apart from that, the motives of the shared contents and photos changed. The users

tried to post materials in which they looked attractive and wanted to show their best side. Their motivation was to show their ex-partners how attractive they were and how many likes and positive comments they got. After parting, the majority of the respondents removed the photos connected with their previous relationship, only few of them decided to keep them longer (Fejes-Vékássy et al., 2022).

A negative phenomenon which is getting particularly stronger on the Internet is *ghosting*. It means a practice of breaking up a romantic relationship without any explanations and communication. The person who chooses this form of ending a relationship without notice disappears from the life of their partner just like a ghost (LeFebvre, 2017; LeFebvre et al., 2019). This kind of parting is facilitated by new technologies. It is easier to notice some signs indicating a threat of being rejected by the romantic partner in a face-to-face contact. People communicate in different ways that their need of a close relationship is unfulfilled, which makes them want to enter into contacts with new partners. In case of ghosting, the partners end their relationship by sending a text message or gradually reducing online interaction until it completely disappears. Ghosting seems easier than breaking up face-to-face. It has been noticed that young people use such a method of ending a relationship, especially at its early stage (Pancani, Aureli and Riva, 2022). Ghosting is also a popular practice of withdrawing from friendships on dating portals and applications. This behaviour is not necessarily connected with bad intentions. But for the people affected by ghosting, it is a particularly unpleasant experience and connected with a decrease in self-esteem and well-being (Timmermans, Hermans i Oprea, 2021). The research on the correlation between attachment styles and ghosting shows that the victims of ghosting are usually persons with the anxious ambivalent attachment style whereas the ones who prefer ghosting as the form of ending a relationship are people characterized by the avoidant attachment style (Powell, Freedman, Williams and Green, 2021).

Another disadvantageous activity that appears in social media connected with ending a close relationship is *orbiting*. It is stressed that this phenomenon takes place in the online world. It means that after

parting the orbiting persons are still active in the online community of their ex-partners. They view the history of their entries, post comments, likes, share their posts. Such behaviours are difficult to interpret for the ex-partner and they increase their confusion. The recipients may think that this is an attempt to fix the relationship. But orbiting is only a temporary activity of following, controlling the ex-partner without any will to enter into direct communication. That has a negative impact on the affected person's well-being (Pancani et al., 2022).

A very serious threat that affects the ex-partners in the virtual reality is *cyberstalking*. It is a form of stalking by means of digital technologies. It can include such activities as: threatening messages, buying and selling goods online under the name of the victim, creating fake accounts on social media and internet sites under the name of the victim, posing as someone else in order to win the victim's trust and obtain some information about them, posting online adverts on behalf of the victim and sharing their contact data on the Internet (Eichenberg, Huss and Küsel, 2017).

The persons for whom the romantic parting is a traumatic experience will probably follow the online activity of their ex-partners. This kind of activity may delay emotional recovery. The people who experience a high level of suffering caused by breaking up the relationship should consider giving up their habit of following the ex-partners on social media temporarily or for ever (Fox and Tokunaga, 2015).

In some countries it is possible to apply for an online divorce if it is uncontested. New technologies are also used in family mediations. In 2009 in the Netherlands, there was a pilot project which consisted in conducting mediations in divorce cases by means of online tools. This project was assessed by the participants. Only a small number of the couples used of the help of a legal adviser during the online mediation. The majority of the surveyed couples (79%) declared that they had managed to work out an agreement acceptable for both the parties. The very form of online mediation got a positive assessment from the respondents. An online meeting can help couples to focus on the most important things. Emotional aspects of the conflict have a weaker influence

on the developed solutions than in case of offline meetings. If it is too painful for one of the partners to face the other one, this form enables carrying out a conversation without vision. When you know the other person well, a lack of non-verbal communication shall not make it difficult to read the other party's intentions (Eichenberg et al., 2017).

Conclusion

In modern times a person needs to be able to adapt to social functioning in two parallel, interpenetrating worlds, i.e. the real offline one, where direct interpersonal interactions are taking place, and the online one with mediated interactions which are typical of this kind of reality. That brings about the need to continuously improve and update the skill of using new media in everyday life. Considering the impact of modern communication technologies on the quality of interpersonal relationships, the researchers take two completely different stands. Cyberpessimists think that the magic of internet contacts has a destructive influence on the sense of community. Moreover, unlimited availability of communication devices during meetings lowers the quality of contact and suppresses conversation in the same way as continuous availability of people contributes to establishing artificial relationships (Onyeator and Okpara, 2019). On the other hand, cyberoptimists assume that the relationships initiated online can be equally deep and satisfying as the ones established in the real world (Grieve, Indian, Witteveen, Tolan and Marrington, 2013). They believe that it is not so important to replace the real world relationships with the Internet ones but rather to extend and strengthen them.

Psychologists emphasize the role and importance of interpersonal relationships developed on the basis of the proper communication process. It is believed that although the way of communicating and maintaining romantic relationships is being modified, their essence remains unchanged. The values resulting from close interpersonal relationships are of a timeless and universal nature, regardless of the fact whether they are established in the online or offline

world. Since they contribute to better health, greater satisfaction with life as well as reduce the feeling of loneliness and anxiety (Ansari, 2021; Grieve et al., 2013; Wałęcka-Matyja and Janicka, 2021).

Establishing a close interpersonal relationship is a fundamental need of a human being, their self-esteem being an indicator of how it is fulfilled. The sense of being accepted, appreciated and included in a wider network of interpersonal relationships is indispensable to feel satisfaction with life. In romantic relationships people are able to satisfy the needs which are important for their proper development, such as the need of love, security, belonging, intimacy, affirmation, acceptance, close contact, emotional support and meaning (Parol, 2013). It has been found out that the persons who assess their relationships as satisfying more often put their partner's needs above their own ones. In compatible romantic relationships based on attachment and intimacy, the partners demonstrate respect for the different needs of the

parties (Dakowicz, 2011). The level of meeting the needs indirectly reflects the intensity of the partner's empathy. The higher it is, the greater the satisfaction with the relationship. That is because empathy affects the quality of the communication process, conflict solving as well as the readiness to take up actions which lead to satisfying the needs of a close person. Since, communication based on feelings and emotions includes an element of active listening connected with attention focused on the feelings and attitudes of the interlocutor. Its aim is to take the perspective of the close person and offer support (Floyd, 2002).

The problem matter of online and offline communication in romantic relationships taken up in the possibly multifaceted way in this article does not exhaust the wide range of related issues. However, it makes us reflect upon its modern form and some effects resulting from it and it also indicates some possible activity directions in the area of providing psychological support.

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The role of the need for cognition in coping with difficulties – research review

Rola potrzeby poznania w radzeniu sobie z trudnościami – przegląd badań¹

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Agnieszka Żmuda^a

^a Agnieszka Żmuda, PhD, <https://orcid.org/0000-0001-8767-9375>, Institute of Psychology, The John Paul II Catholic University of Lublin

Abstract: The need for cognition is associated primarily with the functioning of the cognitive sphere, motivation to engage in intellectual tasks, inquisitiveness and curiosity. Meanwhile, researchers indicate that it can also affect human life in other areas. The need for cognition transpires to be a tendency to cognitive effort not only in terms of intellectual tasks, but also in interpersonal situations and emotionally demanding situations. The article presents a description of this variable, its correlates as well as the specificity of the functioning of people with a high need for cognition. Studies showing the importance of the need for cognition for the functioning of an individual in interpersonal relationships and for coping with difficult situations have been compiled. The relationship between the need for cognition and human emotionality and its importance as a resource in human life have been emphasized.

Keywords: coping, emotional intelligence, need for cognition, self-regulation

Abstrakt: Potrzeba poznania kojarzy się przede wszystkim z funkcjonowaniem sfery poznawczej, motywacją do angażowania się w zadania intelektualne, dociekliwością i ciekawością. Tymczasem badacze wskazują, że może ona mieć wpływ na życie człowieka także w innych obszarach. Potrzeba poznania okazuje się być tendencją do wysiłku poznawczego nie tylko w zakresie zadań intelektualnych, ale również w sytuacjach interpersonalnych i sytuacjach wymagających emocjonalnie. Artykuł przedstawia opis tej zmiennej, jej korelaty a także specyfikę funkcjonowania osób o wysokiej potrzebie poznania. Zestawiono badania ukazujące znaczenie potrzeby poznania dla funkcjonowania jednostki w relacjach interpersonalnych oraz jej radzenia sobie w sytuacjach trudnych. Podkreślony został związek potrzeby poznania z emocjonalnością człowieka oraz jej znaczenie jako zasobu w życiu człowieka.

Słowa kluczowe: inteligencja emocjonalna, potrzeba poznania, radzenie sobie, samoregulacja

Introduction

The concept of the need for cognitions was introduced in literature by Cohen et al. (Cohen, Stootland, Wolfe, 1955). The researchers studied cognitive motivation and defined the need for cognition in reference to reduction of tension that is created in situations of intolerance of ambiguity. Authors (Cohen et al., 1955, p. 291) defined the need for cognition as “an individual need for organization of one’s experience in a meaningful way, the need to structure important situations in a meaningful, integrated way, and the need to understand and make sense of the world”.

Less than 30 years later, during their studies on motivation for cognitive effort, the psycholo-

gists Cacioppo and Petty (1982) showed that the tendency to engage in cognitive tasks is different in cognitive misers than in cognitively generous individuals.

The authors determined that in a group of people with similar cognitive capacity, some individuals have the tendency to avoid intellectual effort, while others are willing to engage in it and enjoy it. The same authors define the need for cognition (NFC) as a motivational disposition that develops on the basis of an individual’s experience of one’s own competence which constitutes the individual’s readiness to engage in cognitive effort.

¹ Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2023-2Zmud.pdf>

The interest of researchers in this variable is usually connected with its relationship with learning and the functioning of the cognitive sphere (Luong et al., 2017; Maloney, Retanal, 2020; Oh, 2022) as well as education achievements (e.g., Colling, Wollschläger, Keller, Preckel, Fischbach, 2022; Grass, Strobel, Strobel, 2017; Strobel, Behnke, Gärtner, Strobel, 2019; von Stumm, Ackerman, 2013). As indicated by research (Petty, Briñol, Loersch, McCaslin, 2009), the need for cognition is not only the tendency to engage in cognitive activities, but also in social situations that are intellectually and emotionally demanding. The readiness to accept cognitive challenges facilitates the individual's coping skills (e.g. Bye, Pushkar, 2009) and constitutes a resource in interpersonal relationships (e.g. Shestowsky, Horowitz, 2004; after: Petty et al., 2009).

1. What is the need for cognition?

Cacioppo and Petty (1982, p. 116) define NFC as “the tendency towards engagement in and enjoyment of cognitively demanding activities”. They interpret it as the individual's tendency to display increased effort during reasoning or solving problems as well as when the individual seeks information which can be useful to cope with various difficulties. The need for cognition is one of the dimensions of cognitive motivation, connected with the individual's focus on cognitive effort specifically due to the enjoyment that they derive from it. The researchers proposed that the most important element of the need for cognition is the cognitive activity itself, and the individual's engagement in it, rather than its outcome. Later studies (Steinhart, Wyer, 2009) have proven, however, that individuals with a high need for cognition are also motivated by external factors connected with the anticipated positive result of their activity.

The need for cognition described a stable, independent motivation for intellectually demanding tasks. It is categorized as an investment trait which determines “when, where, and how people invest time and effort in their intellect” (von Stumm, Ackermann, 2013, p. 841). NFC is a predictor of behaviours connected with realization of goals and allocation of resources (Fleischhauer et al., 2010), as well as self-regulation (Strobel et al., 2021).

The need for cognition is shaped with time, as a result of changes in one's life, participation in various situations, experiencing success, competence, and efficient coping (Petty et al., 2009; Strobel, Anacker, Strobel, 2017). NFC develops on the basis of the individual's own activity (Żmuda, Sękowski, 2021a) that supports the shaping of the individual's skills and expansion of their knowledge, and thus positively contributes to the sense of agency. The authors connect the need for cognition primarily with intellectual activity and the individual's sense of intellectual competence (Cacioppo, Petty, 1982; Fleischhauer et al., 2010), although research shows that its predictors also include emotional intelligence (Żmuda et al., 2021), temperamental resilience, and low emotional reactivity (Żmuda, Sękowski, 2021a), openness to experiences, or emotional stability (Soubelet, Salthouse, 2017). According to the authors (Cacioppo, Petty, 1982; Soubelet, Salthouse, 2017) the need for cognition is a relatively stable trait, but it can be developed. Research (Bruinsma, Crutzen, 2018) shows the need for cognition develops more intensely in young adults than in older individuals. It is most likely connected with young people's increased activity. Interestingly, research shows that NFC develops regardless of the perceived parental attitudes in the mother and the father (Żmuda, Sękowski, 2021b), which suggests that the role of the individual's activity in the development of NFC is significant.

Numerous studies were conducted to explore the relationships between the need for cognition with other variables. The researchers were interested in discovering how NFC is connected both with the cognitive sphere and with personality traits or emotions.

The studies proved positive relationships between NFC and the objectivity of the performed assessment and the individual's engagement in formulating the assessment, as well as the negative relationship between NFC with close-mindedness (Cacioppo, Petty, Feinstein, Jarvis, 1996).

Regarding personality traits, studies have shown a negative correlation between NFC and neuroticism (Matusz, Traczyk, Gąsiorowska, 2011), a positive correlation with openness to experience, diligence, extroversion, striving for achievements, and traits that

suggest focus on the goal (Fleischhauer et al., 2010; Russo, Masegosa, Stol, 2022; von Stumm, Ackerman, 2013). A positive, albeit weak correlation has also been observed between the need for cognition and the internal locus of control (Cacioppo et al., 1996). Research to date has also indicated that the higher the need for cognition, the bigger the individual's investment in activity (von Stumm, Ackerman, 2013) and the bigger their precision in decision-making (Kardash, Noel, 2000). Researchers (Cacioppo, Petty, 1982; Matusz et al., 2011) indicate the lack of differences in NFC in women and men.

Although NFC is described as a need, it is, to a larger extent, actually treated as a tendency towards intellectual effort or a personality trait, and the individual's experience based on their activity are believed to be its source (Cacioppo, Petty, 1982; Matusz et al., 2011).

2. The functioning of individuals with a high NFC

Individuals with a high need for cognition see intellectual effort as desirable. Engaging in cognitively demanding tasks, they expect those activities to be accompanied by enjoyment and satisfaction. Individuals with a high NFC display the tendency to choose the central way of processing information, which means that they focus on, and carefully process, the data that is of particular importance for the given problem. Individuals with a low need for cognition, however, choose the peripheral way, processing information of lesser significance and doing it less carefully (Cacioppo, Petty, 1982).

The need for cognition manifests in the effort to study in detail various fields of knowledge, simultaneously explore multiple ideas, and analyze one's way of thinking, in a process also known as metacognition (Petty et al., 2009). Individuals with a high need for cognition are willing to explore various topics deeper because they possess the readiness to understand information on a deeper level. Moreover, they tend to more actively seek data in various sources of knowledge. Seeking and analyzing information is connected with

the motivation to make sense of reality and efficiently cope with difficult situations. The individual does not rely solely on fragments of information or singular opinions, but seeks more extensive data (Cacioppo, Petty, 1982; Cacioppo et al., 1996).

Individuals with a high need for cognition memorize information quickly and frequently without conscious effort; they prefer tasks with a higher level of difficulty and generate more solutions to problems. They are also able to assess situations more accurately and make superior choices in comparison with individuals with a low NFC. They are, additionally, characterized by a more analytical approach to solving problems (Petty et al., 2009, Rudolph, Greiff, Strobel, Preckel, 2018). Due to the tendency to reflect more deeply on the obtained information, individuals with a high need for cognition are more willing to clarify inaccuracies in the data or communication that they receive (Cacioppo et al., 1996), as well as reflect on their own and other people's emotions and behaviour (Petty et al., 2009).

3. The need for cognition and coping in difficult situations

The problem of coping in difficult situations is connected with stress and emotions. In order to cope with and manage emotions and stress, the individual needs to be aware of and able to control and understand them. There is no doubt that this requires intellectual resources that participate in self-regulation and the management of emotions (Mayer Caruso, Salovey, 2016; Śmieja, 2018). In this context, the individual's motivation for engaging in cognitive effort, involving the individual's reflection on the situation in which they participate as well as its emotional aspect, becomes particularly important.

The need for cognition is also positively connected with self-control (Nishiguchi, Takano, Tanno, 2016; Sandra, Otto, 2018). Grass, Scherbaum, and Strobel (2022) have additionally indicated that the higher the need for cognition, the higher is the individual's faith in unlimited resources of self-control. Interestingly, the aforementioned researchers indicate

that NFC and self-control depend on individual differences in the way one uses one's resources, rather than on the amount of those resources.

Executive functions are the basis for efficient coping in problematic situations. They are a complex construct connected with the ability to direct one's thoughts and behaviour in a conscious and purposeful way, and they play an important role in the learning process. Executive functions include processes of self-regulation, updating information, planning, working memory, maintaining concentration, cognitive flexibility, and inhibitory control, that is, the ability to deliberately inhibit one's impulses and reactions (Miyake et al., 2000, after: Hofmann, Schmeichel, Baddeley, 2012)

The level of executive functions depends on the extent to which an individual is willing to invest their cognitive effort (Cohen-Zimerman, Hassin, 2018). Individuals with a high need for cognition display an increased readiness to invest their cognitive effort and self-control thanks to the motivational processes.

Individuals characterized by a high level of executive functions are able to react more flexibly and to adjust their behaviour and emotions to particular situations. The ability to reinterpret a situation results in the ability to change one's emotional reaction to that situation, which is considered an adaptational strategy. Researchers (Hui, Yao, Huang, You, 2022; Nishiguchi et al., 2016) indicate that the risk of cognitive dysfunctions is higher in individuals with a low need for cognition. Those dysfunctions may manifest, among others, as imbalances in inhibitory control of negative thoughts or the inability to reassess situations, which may lead to depression (Gao, Chen, Biswal, Lei, Yuan, 2018; Hui et al., 2022).

The need for cognition, as a factor in cognitive motivation, impacts emotional regulation through the individual's readiness to reassess events or their own reactions. The individual's ability to pay attention to significant information and the quality of arguments allows them to reinterpret the situation which provoked an emotional reaction (Petty et al., 2009; Rudolph et al., 2018). Reassessment of an experience and of one's own reaction requires deliberate, controlled processing of information, which is facilitated by the need for cognition. This applies

also to interpersonal situations which are frequently complex and a change of perspective is necessary for the individual to understand them better.

The skills described above are particularly significant in the context of coping with difficulties. In comparison with individuals with a low need for cognition, those with a high NFC have at their disposal bigger resources for allocation of cognitive effort (Pessoa, 2009; Strobel et al., 2021). They are able to more frequently display adaptational behaviours connected with self-regulation and distance themselves (through reinterpretation of the situation) from negative stimuli.

Emotional intelligence and its positive relationship with the need for cognition is another factor of particular significance in the process of coping (Žmuda et al., 2021). Applying one's cognitive and emotional skills facilitates accurate assessment of the situation and contributes to building one's sense of competence as well as to coping with failures and negative experiences in general (Matczak, Knopp, 2013; Petty et al., 2009). Understanding and controlling emotions and the willingness to perform significant effort connected with analyzing the situation allow the individual to be aware of their own affective state and actions. Moreover, abstract thinking is more developed in individuals with a high NFC (Cacioppo et al., 1996), which facilitates the ability to understand emotions.

Authors indicate that NFC is a significant resource in the context of psychological wellbeing and the individual's emotional balance. It has been shown, too, that the need for cognition is positively connected with good mood (Bye, Pushkar, 2009; Strobel et al., 2017) and mediates between the individual's intellectual sphere and all aspects of their wellbeing (Yazdani, Siedlecki, 2021).

Research conducted by Strobel, Anacker, and Strobel (2017) has shown that the more positive experiences in life the participants have indicated, the higher became their need for cognition, which, in turn, was connected with their positive emotionality. The results obtained by the researchers suggest that NFC is a significant variable facilitating psychological wellbeing through its mediating function between the number of positive experiences and the positive affect. The authors emphasize that life experiences

alone are an important factor in shaping the individual's emotionality. Including the need for cognition as a mediator in this relationship has shown that it participates significantly in the development of positive affect in a human being.

The relationship between NFC and negative emotions is unclear. Some studies (Strobel et al., 2017) have shown that the need for cognition correlates negatively with traits connected with negative emotions; this result, however, has not been confirmed by other research (Fleischhauer et al., 2010).

The need for cognition constitutes a resource also in the context of coping at work and prevention of potential burnout. It has been proven that the higher NFC, the higher subjective efficiency, which protects individuals from professional and academic burnout (Fleischhauer et al., 2019; Naderi, Bakhtiari, Momennasab, Abootalebi, Mirzaei, 2018).

NFC has a positive impact on satisfaction with life (Yazdani, Siedlecki, 2021), with work (Grass et al., 2022), and education (Grass et al., 2017).

Studies (Strobel et al., 2021) have shown that a high need for cognition is connected with a lower level of depression. Authors emphasize that the need for cognition allows the individual to adopt various points of view, change their perspective on events they experience in life, including difficulties, and apply active coping mechanisms. Individuals with a high need for cognition most likely do not feel a smaller amount of negative emotions, but are able to experience an increased amount of positive affect, which might be the result of applying a more adaptational perspective. These individuals display a more positive perception of complex situations in everyday life. Research (Marchetti, Shumake, Grahek, Koster, 2018) indicates that an inverse correlation exists between the tendency towards intellectual effort and symptoms of depression. What is more, a decreased cognitive activity of the individual is connected with the occurrence of psychological disorders (Salamone et al. 2016, after: Hui et al., 2022). To conclude, the need for cognition is a particularly important factor that has influence on the symptoms of depression (Hui et al., 2022). Nishiguchi et al. (2016) claim that NFC might alleviate the negative impact of depression on processes connected with attention.

It is worth noting that NFC is not the only factor that has a beneficial impact on the ability to cope with difficulties. Difficult experiences also facilitate the increase of the need for cognition through the individual's experience of their own competence, if the individual copes with the challenges in a task-oriented way (Strobel et al., 2017). As mentioned earlier in the present study, the need for cognition is connected with openness to experience, extroversion, and motivation, which, in turn, facilitate the perception of difficulties that one experiences in life as challenges, positive assessment of various events, as well as engaged and task-oriented coping mechanisms (Fleischhauer et al., 2010).

Individuals with a high need for cognition tend to avoid excessive negative generalisation, but do not display the tendency towards unrealistic optimism, either. They engage in efficient activities oriented towards solving the problem that they face. Research (Bye, Pushkar, 2009; Strobel et al., 2017) indicates that NFC is connected with an active, problem-focused coping style. What is more, the tendency to reassess situations means that individuals with a high need for cognition are to a higher degree willing to reinterpret situations and their significations, which may result in a change in the experienced affect (McRae, Jacobs, Ray, John, Gross, 2012), as well as protect them from increased stress level (Troy et al., 2010, after: Hui et al., 2022).

Thanks to the willingness to reassess the situation, individuals with a high NFC apply efficient strategies of emotional regulation (Strobel et al., 2017). All these factors facilitate positive emotionality and appropriate affective adaptation.

To summarize the significance of the need for cognition for the ability to cope with difficulties, it must be emphasized that individuals with a high NFC are willing, in emotionally difficult situations, to actively cope and reassess complex issues, as well as to consider various options (Strobel et al., 2017). The need for cognition facilitates the accuracy of assessment or adjusting one's behaviour to a specific situation, which increases efficiency of one's activities and coping, thus allowing the individual to experience their own competence and build faith in oneself. Positive emotionality and satisfaction with various

fields of life connected with the need for cognition support the individual's emotional balance. There is no doubt that the need for cognition is an important resource in the context of coping with difficulties, which is also stressed by researchers (Bye, Pushkar, 2009, Grass et al., 2022)

4. The need for cognition and coping in interpersonal relationships

As mentioned above, the need for cognition does not refer only to strictly intellectual tasks. It is also connected with the willingness to engage in analyzing and solving interpersonal problems (Petty et al., 2009). Individuals with a high NFC perceive all types of situations that encourage reflection and consideration as attractive. An important role in this process is played by the relationship between the need for cognition and emotional intelligence and its capacity for accepting and understanding emotions, managing them, and emotional knowledge (Żmuda, Sękowski, Szymczak, 2021). They connect with NFC primarily due to the aforementioned willingness of an individual to analyze their emotional states and develop their emotional awareness, which facilitates self-cognition. Research (Woo, Harms, Kuncel, 2007) proves that, in comparison with individuals with a low need for cognition, self-cognition is higher in individuals with a high NFC. Self-cognition is a factor that plays an important role in social interactions, as it concerns the awareness of one's own thoughts, intentions, or experiences (Juszczyk-Rygałło, 2018), which allow the individual to build deeper relationships and communicate in a more aware and transparent way.

The positive signification of the need for cognition for the development of emotional intelligence is expressed both in the deep processing of information, which translates to the accuracy of the individual's assessment of situations, in willingness to reinterpret behaviours, and in inhibiting impulsive reactions.

Individuals with different levels of the need for cognition display different behaviours in interpersonal situations. Research (Shestowsky, Horowitz, 2004, after: Petty et al., 2009) proves that individuals with

a high NFC display increased engagement in the role they fulfill in a dyad or a small group. They are also more likely to participate in discussions and have a tendency to speak longer in comparison with those with a low NFC.

Individuals with a high NFC are more aware of the basis on which they have generated their opinion, which allows them to have more confidence and stronger faith in their convictions. Simultaneously, however, they display a willingness to adjust their own judgment (Petty et al., 2009), which without doubt facilitates efficient and open communication with others.

Studies by Barlett (2022), conducted on a sample of adults, have shown that a higher need for cognition co-occurred with a lower level of aggression. Other research (Salguero, García-Sancho, Ramos-Cejudo, Kannis-Dymand, 2020), conducted on a group of international students from Spain and Australia has proven that the level of anger and aggression was connected with the metacognitive beliefs in the participants. Individuals who believed in ideas such as "I am unable to control my thoughts" were more prone to activating and maintaining their anger and aggressive behaviours. As mentioned earlier in the present article, the need for cognition is connected with engagement in metacognition, that is, observation of one's own thoughts (Petty et al., 2009) as well as with self-control (Nishiguchi et al., 2016; Sandra, Otto, 2018). The ability to inhibit impulsive reactions and the willingness to reassess situations and one's own emotional reactions allows individuals with a high NFC to display an increased self-control (Strobel et al., 2021), and thus, be less likely to react with anger and aggression. There is no doubt that this ability has a beneficial impact on their social interactions. Due to their complexity and the fact that we seek them in order to satisfy numerous needs, relationships provoke in participants emotional reactions to what happens within their bounds. The ability to engage in intellectual effort and the willingness to analyze what has occurred facilitates constructive behaviours and emotional responses that are adequate to the situation.

Sargent (2004) has proven that individuals with a high need for cognition are less supportive of punishment for criminals than those with a low NFC.

The author explains that individuals with a high need for cognition approve of penal measures to a smaller extent due to the fact that they are able to acknowledge more complex motivations behind other people's actions than those with a low NFC. It is without doubt connected with empathy and the awareness of complexity of root causes of human behaviour.

Research indicates that a positive relationship exists between the need for cognition and empathy (Żmuda et al., 2021). Empathy is not only the ability to share other people's emotions, but also the capacity to perceive social situations and the actions of others in a specific way. Empathic perception occurs on two levels: emotional and cognitive. Empathy refers, to a large extent, to intellectual skills such as reasoning, analyzing, and the perception of one's relationship with another person as well as processes that occur with one's self. A person characterized by a high need for cognition displays an increased tendency to adopt another person's perspective when they analyze the situation, and in this way, is likely to be more empathetic.

Empathy supports the development of one's self-image, as well as interpersonal communication, and has a positive relationship with reasoning about both emotional and cognitive experiences, and even about the morality of one's actions (Bonino, 1993, after: Kliś, 2012). Strobel, Grass, Pohling, and Strobel (2017) conducted studies on the relationship between the need for cognition and moral behaviour. The results showed that individuals with a high need for cognition, characterized by the tendency to process data more deeply and a more complex decision-making process, frequently display more morally appropriate behaviours and reason on a higher level of moral cognition. Researchers propose that the need for cognition is an important factor in moral development.

To conclude, the need for cognition—as a tendency to engage in cognitive effort in various situations, including interpersonal situations and those connected with experiencing emotions—supports the individual's constructive behaviour. NFC is connected with self-control and self-regulation, which has a positive influence on emotional management, both in solving tasks and in interpersonal situations. Thanks to the cognitive flexibility, individuals with

a high NFC are able to adjust their behaviour according to specific circumstances and possess the ability to change their own perspective, which facilitates understanding others and adapting to changes, also in relationships.

Conclusions

The need for cognition is a variable that differentiates individuals primarily regarding the depth of information processing, ways of using their cognitive resources, and general willingness to engage in intellectual effort. The tendency to process data carefully when confronted with challenges results in effectively coping with the problems (Strobel et al., 2017). Individuals with a high need for cognition have a more positive attitude towards difficult situations than those with a lower NFC. Although the need for cognition is mainly associated with strictly intellectual activities and cognitive motivation, researchers (Petty et al., 2009) indicate that individuals with a high NFC are eager to engage also in emotionally demanding interpersonal situations, and they manage them well.

The need for cognition may also be considered an important factor for the individual's mental wellbeing, satisfaction with life, and positive affect (Yazdani, Siedlecki, 2021). What is important, NFC is a significant resource in confrontation with difficult experiences in life (Bye, Pushkar, 2009, Grass et al., 2022).

The present article focused on an overview of studies that provide information on the relationship between the need for cognition and other variables that are significant in the individual's life in the context of functioning in interpersonal relationships, coping with difficulties, and cognitive as well as emotional functioning. There is no doubt that the need for cognition is an important factor and it is worthy of further exploration, for example in the context of family life, communication within family, or shaping parental attitudes. Those areas play a particularly significant role in the individual's life, their development, and mental wellbeing. It would be worthwhile to analyze the impact of the need for cognition on shaping mental resilience of the individual.

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Polish adaptation of The Love Attitudes Scale: Short Form

Polska adaptacja The Love Attitudes Scale: Short Form – Skróconej Skali Postaw Wobec Miłości¹

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Piotr Janeczek^a

^a *Piotr Janeczek*, <https://orcid.org/0000-0003-3780-6983>,

Faculty of Pedagogy and Psychology, Department of Psychology, Jan Kochanowski University in Kielce

Abstract: The present study was conducted to determine the psychometric properties of the Polish version of The Love Attitudes Scale: Short Form (Hendrick et al., 1998). The scale is used to measure the love styles Eros, Ludus, Storge, Pragma, Mania, Agape based on John Lee's theory. The mean age of the subjects was 23 years (SD = 4.09). To determine the psychometric properties of the scale, an exploratory factor analysis and confirmatory factor analysis (RMSEA = 0.0425; CFI = 0.938; TLI = 0.928) were performed. The reliability of the Polish version of The Love Attitudes Scale: Short Form was measured using Cronbach's Alpha (0.67 for the total tool, for subscales 0.61 to 0.81) and McDonald's Omega (0.69 for the total tool, for subscales 0.66 to 0.82). An external validity analysis was also conducted using the Attachment Styles Questionnaire, the Sexual Satisfaction Questionnaire, Rosenberg Self-Esteem Scale and the Well-being Questionnaire. Based on the results, the Polish version of The Love Attitudes Scale: Short Form can be considered a tool with good psychometric properties recommended for use in scientific research.

Keywords: love, Polish adaptation, love styles, The Love Attitudes Scale: Short Form

Abstrakt: Niniejsze badanie zostało przeprowadzone w celu określenia właściwości psychometrycznych polskiej wersji The Love Attitudes Scale: Short Form (Hendrick i in., 1998) – Skróconej Skali Postaw Wobec Miłości. Skala służy do pomiaru stylów miłości Eros, Ludus, Storge, Pragma, Mania, Agape w oparciu o teorię Johna Lee. W badaniu wzięły udział 403 osoby (354 kobiety, 49 mężczyzn). Średnia wieku osób badanych wyniosła 23 lata (SD = 4,09). Aby określić właściwości psychometryczne wykonano eksploracyjną analizę czynnikową, konfirmacyjną analizę czynnikową (RMSEA = 0,0425; CFI = 0,938; TLI = 0,928). Rzetelność polskiej wersji The Love Attitudes Scale: Short Form zmierzono przy wykorzystaniu Alfę Cronbacha (0,67 dla całości narzędzia, dla podskal od 0,61 do 0,81) oraz Omęgi McDonalda (0,69 dla całości narzędzia, dla podskal od 0,66 do 0,82). Przeprowadzono także analizę trafności zewnętrznej za pomocą Kwestionariusza Stylów Przywiązaniowych, Kwestionariusza Satysfakcji Seksualnej, Skali Samooceny SES M. Rosenberga oraz Kwestionariusza Dobrostanu. Na podstawie uzyskanych wyników można uznać Skróconą Skalę Postaw Wobec Miłości jako narzędzie posiadające dobre właściwości psychometryczne rekomendowane do użycia w badaniach naukowych.

Słowa kluczowe: miłość, polska adaptacja, style miłości, Skrócona Skala Postaw Wobec Miłości

Introduction

Love accompanies a person throughout the whole life. It can be commonly understood as an affection shown to another person with whom a romantic relationship is formed. It can also be understood as a fondness for a specific object of interest, or as a strong bond connecting people close to each other. According to that the first relationship in a people's life, i.e. the relationship with their parents, is important for the development, their social skills

and their mental health (Matysiak-Błaszczyk et al., 2020). Significant correlations between the age and attitudes toward love among those from either a full or single-parent family (those from a full family may tend to have a more grounded view of love, which is characterized by low dynamics of change over time), have also been noticed as well as the important role of love styles in maintaining family stability and sustainability (Janeczek and Lesiewicz, 2020, Shaho-

¹ Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2023-2Jane.pdf>

visi, 2019). The important role of love relationships for a person's health and well-being should also be mentioned (Soares et al., 2020, Oravec et al., 2020, Gómez-López et al., 2019). Among the studies, the perception of love as an important element of the relationship, which strengthens the quality of the marriage and the feeling of satisfaction with it was also confirmed (Yoo and Joo, 2022, Salayani et al., 2020, Bakhtiari et al., 2019). Although love has a universal character, approximating its nature is a challenge for representatives of many fields. Not only poets, philosophers but also psychologists have been grappling with the diversity and a kind of elusiveness of love for many years (Xia et al, 2023, Kozakiewicz et al, 2022, Tenhouten, 2021, Jaworska et al, 2019). Love can be considered both in the context of feelings toward the world, objects and in the context of romantic relationships with others. By synthesizing both philosophical and psychological theories, love can be understood as one of the basic needs or as a drive for action (Hendrick and Hendrick, 2019, Jankowska, 2010). Wojciszke (1994) however willingness to study love can be compared to impossibility of studying a hurricane by catching a small part of it in a jar – after all, love as an emotion can be shown in many ways, and the very definition of love can differ depending on how a person perceives it. For example, Fromm (2004) considered love as a characteristic that defines a person's attitude toward the world and distinguished five types of love, while Sternberg (1997), favoured three factors of love (passion, intimacy, commitment) and described six types of love. Moreover, the motives leading to love may have different backgrounds and may consist of many assumptions.

1. The concept of love and ways of perceiving it – the expanded conceptualization

Love in everyday life or as well as popular culture is able to take various forms – there is selflove, for one's neighbour, for one's homeland or for nature or the world per se. Love, regardless of the direction adopted by a person, is able to take many forms of showing it, that are activated in situations and conditions individually defined for that person. The aforementioned Fromm (2004), recognizing love as an attitude towards the world, distinguished: brotherly love, maternal love, erotic love, love for oneself and love for God. He also included love as an important component of human personality (From, 2004, Yoshino, 2020).

To illustrate the diversity of the characterization of love, it is also worth recalling the history of literature. The view of love and the way it was characterized varied and depended on the literary era occurring in each period. For example, for the Romantics, love was a goal that could bring both happiness and torment at the same time (example: "Forefathers' Eve, Part IV", Adam Mickiewicz) while the poets of the Renaissance focused on love as a pleasure driven by the biological needs of a man (example: "Ballade de la grosse Margot", François Villon).

As already mentioned, love is also attempted to be understood on philosophical grounds. Starting with ancient thinkers who tried to define the meaning of love in human life. An example is Plato's attempts to characterize love – these include the considerations in the "Symposium" and the "Phaedrus" (Clausen, 2022, Tenhouten, 2021, Domagala, 2009).²

2 "Symposium" by Plato is a cultural asset that is so important for attempts to present the essence of love, because it shows the multiplicity of possibilities for perceiving it. This is because this work presents the dialogue of six sages – Phaedrus, Pausanias, Erichimachos, Aristophanes, Agathon and Socrates. The first of these, Phaedrus, regarded love as a force capable of determining a person's well-being and happiness. Pausanias saw love as the existence of two Eroses – a Common Eros (love centered on carnality, imperfect) and a Heavenly Eros (feeling without blemish). Love as something heterogeneous was also presented by Erichimachos, saying that love can take two forms – good and bad. According to Erichimachos, each of them is capable of projecting itself onto a person in a specific and attributed way (Domagala, 2009). Aristophanes observed that love is capable of being a kind of bonding agent, while Agathon recognized love as a source of happiness. The last-mentioned speaker, Socrates, made an ordering and rationalization of all and pointed out the necessity of "proper praise" of Eros, an attitude that exposes falsity and excessive sublimity (Domagala, 2009).

The German philosopher Arthur Schopenhauer described love as a feeling of very great power that can bring very sudden and drastic changes in a person's life. He distinguished two mutually exclusive types of love – erotic love and agape (altruistic) love (Ellis, 2017, 2021). Erotic love is described by him as selfish, connected with lust (carnality as the driving force) and hence determining selfishness and wickedness. According to Schopenhauer, this type of love is the root of all suffering. Agape, on the other hand, is a type of love that can bring salvation – it is characterized by sympathy, the ability to sacrifice for the other person, and sincere compassion (Ellis, 2017).

Maria Ryś (2016) emphasizes that love has been increasingly perceived as not only a feeling, but also a relationship and attitude. Attitude consists of three elements: a cognitive element which is knowledge about the other person, an emotional element as a feeling, and a behavioural element as a disposition to take certain actions. Love is seen as “an active, positive attitude toward the other person” (Ryś, 2016, p. 58). There is also a desire to affirm the existence of the person one loves and his or her development. The spiritual nature of love is also emphasized due to the penetration of love into the interior of a person thus enabling one to see the richness and beauty of a person.

2. John Lee's model of love – the concept of six types of loves

The evocation in the previous paragraph of various concepts and ways of perceiving love, as well as ways of showing it, was not accidental. This is because cultural resources and the state of knowledge have significantly translated into the development of the theory that forms the basis of the Love Attitudes Scale: Short Form, which is the concept of six types of love developed by John Alan Lee. His theory was not so much an attempt to define love, but to identify the different types of love and ways of showing them (Lee, 1977). Lee, in order to distinguish the types of love and characterise them in the most reliable way, analysed many cultural sources from all periods (as he said: from Plato and Ovid to the authors who were creating at the time of his formation of the styles of

love) (Lee, 1997). The next step was for competent judges to analyse his prepared descriptions of love constructed in mutually exclusive ways. As a result, six types of love were distinguished – Eros, Ludus and Storge constituting primary styles of love, and Mania, Pragma and Agape constituting secondary styles of love (i.e., styles of love formed from a combination of primary styles) (Michalska et al., 2023, Cassepp-Borges, 2021, Meskó et al., 2021, Raffagnino and Puddu, 2018, Lee, 1973). Eros is a style of love characterized by a person's search for a partner who will respond to a desired type of beauty. Mutual sexual attraction and the willingness to provide pleasure (not only sexual) to each other plays an important role here, and falling in love at first sight is even a dreamlike way to fall in love (Lee, 1977; Jankowska, 2010). The Ludus style of love is associated with capturing love as something like play (Michalska et al., 2023). The length of the relationship in the case of this style of love is described as short, and it is mostly focused on the sexual relationship. There is no jealousy, while the Ludus style is distinguished by the desire to dominate the partner and prove superiority over him or her (Lee, 1977, Karandashev, 2022). For the Storge style of love, a feeling that develops in a gradual, slow manner is characteristic. This is because the partners care about getting to know each other thoroughly, creating a friendly atmosphere and relationship, and making a long-term commitment to each other. The sexual aspect of love is relegated to be the background of empathy, friendship and the aforementioned commitment (Lee, 1977). A very emotional, intense, jealousy-filled style of love is Mania. Love takes the form of obsessive interest in the other person as the partner is the object of total focus (Lee, 1977, Karandashev, 2022). In the case of the Mania style of love, attempts to hold the partner close at all costs are characteristic – it is concluded that these behaviours may stem from the fear of losing the partner (Jankowska, 2010). Agape is a style of love at which a person treats showing love as his duty without expecting reciprocity. It is dominated by altruism and the need to do good, to help one's partner selflessly (Lee, 1997). Pragma captures love for another person and a relationship with him or her, as a decision made on the account of consciously

analysed factors such as the economic, demographic and other (among which may be education or faith) that value a partner as a person with whom it pays to enter into a relationship (Lee, 1977). It is viewed as an investment in the future considered in terms of gains and losses.

3. Author's studies

3.1. Aim of the study

The research presented in this article was conducted to determine the psychometric properties of the Polish version of The Love Attitudes Scale: Short Form. The original version of the scale shows satisfactory psychometric properties (Hendrick et al., 1998). It contains six subscales defining a particular type of love: Eros, Ludus, Storge, Pragma, Mania, Agape (Hendrick et al., 1998).

3.2. Method

3.2.1. Participants

The sample included 403 subjects (354 women, 49 men). The average age of the respondents was 23 years (SD = 4.09). The youngest person surveyed was 18 years old, while the oldest was 50 years old. The survey was individual, and respondents answered using a form designed on the Google Forms website - a link to it was posted on social networks on a number of groups designed for this purpose. The subjects were briefed at the outset on the purpose of the survey, its planned course, its anonymity and the possibility to stop taking part at any time.

3.2.2. Measures

Five questionnaires were used to determine the psychometric properties of the Polish version of The Love Attitudes Scale: Short Form.

The Love Attitudes Scale: Short Form (Hendrick et al., 1998) was translated into Polish with the cooperation of three independent bilinguals: a psychologist, a psychology student and one English

philologist. The questionnaire contains six subscales defining a given style of love: Eros, Ludus, Storge, Pragma, Mania, Agape. The subscales in the Polish version analogously to the original contain four questions, which are answered using a five-point scale, in which: 1 – *strongly agree*, while 5 – *strongly disagree*.

The Attachment Styles Questionnaire (Plopa, 2005) is a measure constructed of three subscales measuring the following attachment styles: secure attachment style, anxious-ambivalent attachment style and avoidant attachment style. Each subscale contains eight questions, which respondents answered using a seven-point scale, where 1 means – *strongly disagree* and 7 means – *strongly agree*.

The Sexual Satisfaction Questionnaire (Plopa, 2017) is a 10-item measure aiming sexual satisfaction consisting of three subscales (intimacy, fondling, sex) and an overall scale that is the sum of the three subscales mentioned above. The answers that respondents marked were assigned values from 0 to 5, with 0 meaning – *none*, and 5 meaning *maximum satisfaction*.

Rosenberg Self-Esteem Scale in its Polish adaptation (Dzwonkowska, Lachowicz-Tabaczek, Laguna, 2007) is a tool that measures the general level of self-assessment of the subject. It consists of 10 items to which respondents answer using a four-point scale, with 1 – *strongly agree*, and 4 – *strongly disagree*.

The Psychological Well-Being Scales questionnaire in its Polish adaptation (Karaś, Ciecuch, 2017) has a general scale and six subscales to measure six dimensions of well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. A shortened version containing 18-items was used in this study. Responses were given on a six-point scale, in which 1 means – *strongly disagree*, while 6 means – *strongly agree*.

3.2.3. Statistical analysis

To determine the psychometric properties of the Polish version of The Love Attitudes Scale: Short Form questionnaire, Jamovi software (counting reliability, exploratory factor analysis, confirmatory factor analysis) and IBM SPSS (r-Pearson correlations) was used.

3.3. Results

3.3.1. Reliability analysis

The reliability of the Polish version of The Love Attitudes Scale: Short Form and its six subscales was measured using Cronbach's Alpha and McDonald's Omega.

Cronbach's alpha was 0.67 for the overall instrument, 0.8 for the Eros subscale, 0.61 for the Ludus subscale, 0.78 for the Storge subscale, 0.73 for the Pragma subscale, 0.65 for the Mania subscale, and 0.81 for the Agape subscale, respectively.

McDonald's Omega was 0.69 for the overall instrument, 0.81 for the Eros subscale, 0.66 for the Ludus subscale, 0.8 for the Storge subscale, 0.74 for the Pragma subscale, 0.65 for the Mania subscale, and 0.82 for the Agape subscale.

3.3.2. Factor structure of the Love Attitude Scale: Short Form

In order to determine the psychometric values of the Polish version of the LAS: Short Scale, a factor structure analysis was conducted. Based on the assumption of not performing a large number of calculations on the same samples, the subjects were divided into two groups, to which they were randomly assigned (van Prooijen, van der Kloot, 2001). According to the obtained results of the exploratory factor analysis (EFA) conducted on the first group, and after confronting them with the assumptions of the Kaiser criterion, as well as with the scree plot, six factors overlapping with the theoretical background of the LAS: Short Scale were extracted. The following types of love were distinguished: Eros (1), Ludus (2), Storge (3), Pragma (4), Mania (5), Agape (6) (Hendrick et al., 1998) (Table 1). Confirmatory factor analysis (CFA) was conducted based on the results obtained in the second group ($X^2 = 324$; $df = 237$; $p < .001$), and goodness-of-fit indices showed a good fit to the data (RMSEA = 0.0425; CFI = 0.938; TLI = 0.928) (Figure 1) (Xia and Yang, 2019).

3.3.3. External consistency

To assess the external validity of the Polish version of The Love Attitudes Scale: Short Form questionnaire the Attachment Styles Questionnaire (Plopa, 2005), the Sexual Satisfaction Questionnaire (Plopa, 2017), the Rosenberg Self-Esteem Scale (Dzwonkowska et al., 2007) and the Psychological Well-Being Scales (Karaś and Ciecuch, 2017) were used. The results confirm the external validity of the questionnaire (Table 2, 3, 4).

The results of correlation analysis between love styles and attachment styles presented in Table 2 show a positive and statistically significant relationship between: love style Eros and secure attachment style, love style Ludus and avoidant attachment style, love style Mania and avoidant attachment style, love style Mania and anxious-ambivalent attachment style, love style Agape and secure attachment style, and love style Agape and anxious-ambivalent attachment style. The results of the correlation analysis between love styles and attachment styles presented in Table 2 show a negative and statistically significant relationship between: the Eros love style and anxious-ambivalent attachment style, the Eros love style and avoidant attachment style, the Ludus love style and secure attachment style, and the Agape love style and avoidant attachment style.

The results of the correlation analysis between love styles and the overall self-esteem level score, and between love styles and the overall well-being level score, presented in Table 3, show a positive and statistically significant relationship between: the Eros love style and the overall self-esteem level score, the Eros love style and the overall well-being level score, and the Pragma love style and the overall well-being level score. The results of the correlation analysis between love styles and the overall self-esteem level score and between love styles and the overall well-being level score show a negative and statistically significant relationship between love style Mania and the overall self-esteem level score, love style Mania and the overall well-being level score, love style Agape and the overall self-esteem level score, and love style Agape and the overall well-being level score.

The results of the correlation analysis between love styles and the subscales of the Sexual Satisfaction Questionnaire presented in Table 4 show a positive and statistically significant relationship between: the Eros

Table 1. Exploratory factor analysis

Item		1	2	3	4	5	6
Eros							
1	My partner and I have the right physical “chemistry” between us	0.67					
2	I feel that my lover and I were meant for each other	0.90					
3	My partner and I really understand each other	0.64					
4	My partner fits my ideal standards of physical beauty/handsomeness	0.44					
Ludus							
5	I believe that what my partner doesn't know about me won't hurt him/her		0.14				
6	I have sometimes had to keep my partner from finding out about other lovers		0.95				
7	My partner would get upset if he/she knew of some of the things I've done with other people		0.52				
8	I enjoy playing the “game of love” with my partner and a number of other partners		0.47				
Storge							
9	Our love is the best kind because it grew out of a long friendship			0.59			
10	Our friendship merged gradually into love over time			0.83			
11	Our love is really a deep friendship, not a mysterious, mystical emotion			0.42			
12	Our love relationship is the most satisfying because it developed from a good friendship			0.96			
Pragma							
13	A main consideration in choosing my partner was how he/she would reflect on my family				0.59		
14	An important factor in choosing my partner was whether or not he/she would be a good parent				0.81		
15	One consideration in choosing my partner was how he/she would reflect on my career				0.44		
16	Before getting very involved with my partner, I tried to figure out how compatible his/her hereditary background would be with mine in case we ever had children				0.68		
Mania							
17	When my partner doesn't pay attention to me, I feel sick all over					0.57	
18	Since I've been in love with my partner I've had trouble concentrating on anything else					0.52	
19	I cannot relax if I suspect that my partner is with someone else					0.50	
20	If my partner ignores me for a while, I sometimes do stupid things to try to get his/her attention back					0.62	
Agape							
21	I would rather suffer myself than let my partner suffer						0.66
22	I cannot be happy unless I place my partner's happiness before my own						0.85
23	I am usually willing to sacrifice my own wishes to let my partner achieve his/hers						0.60
24	I would endure all things for the sake of my partner						0.68

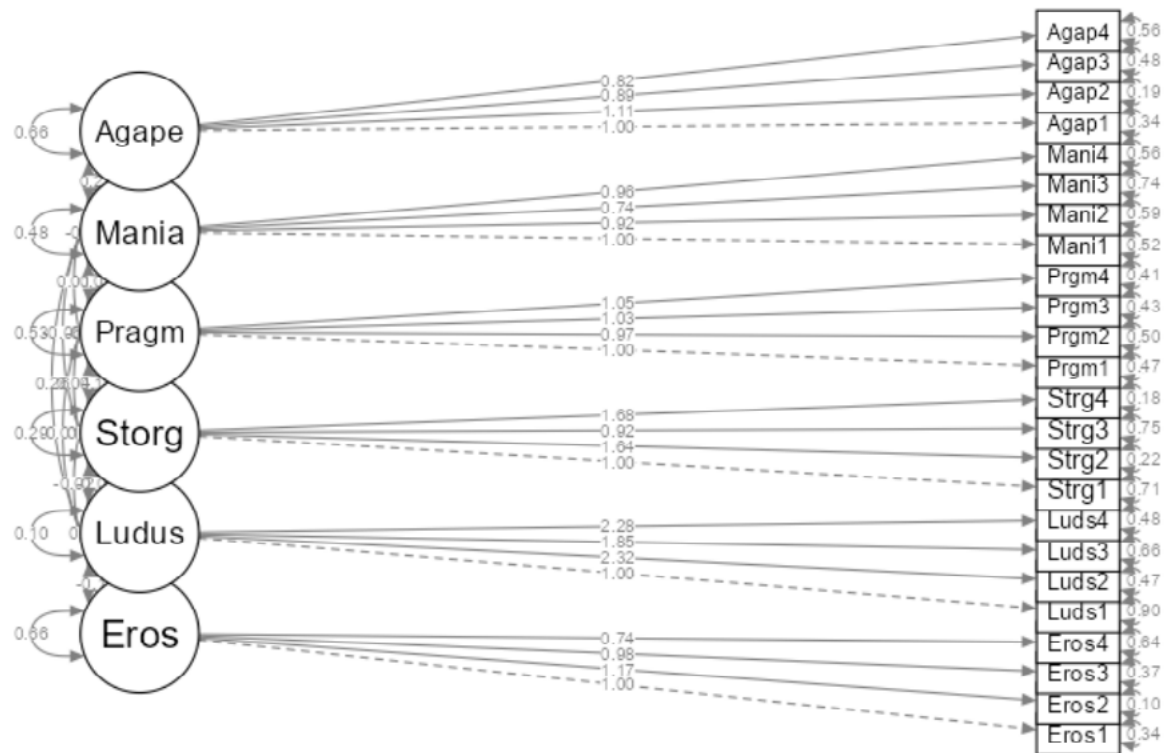


Figure 1. Results of confirmatory factor analysis of Love Attitudes Scale: Short Form

Table 2. Correlations between the Love Attitudes Scale: Short Form and the Attachment Styles Questionnaire

	1	2	3	4	5	6	7	8	9
1 Secure attachment style	1	-.295**	-.769**	.626**	-.268**	.071	.032	-.062	.276**
2 Anxious-ambivalent attachment style		1	.450**	-.224**	.078	-.021	-.008	.620**	.153**
3 Avoidant attachment style			1	-.554**	.341**	.055	.072	.230**	-.145**
4 Eros				1	-.363**	.127*	.028	-.016	.333**
5 Ludus					1	-.027	.083	.086	-.215**
6 Storge						1	.191**	-.018	.051
7 Pragma							1	.106*	-.020
8 Mania								1	.295**
9 Agape									1

** Correlation significant at the 0.01 level (two-tailed)

* Correlation significant at the 0.05 level (two-tailed)

love style and the level of overall sexual satisfaction, the Eros love style and the level of sexual satisfaction resulting from intimacy, the Eros love style and the level of sexual satisfaction resulting from fondling, and the Eros love style and the level of sexual satisfaction resulting from sex. The results of the correlation analysis

between the love styles and the subscales of the Sexual Satisfaction Questionnaire, presented in Table 4, show a negative and statistically significant relationship between: the Ludus love style and the level of overall sexual satisfaction, and the Ludus love style and the level of sexual satisfaction resulting from intimacy.

Table 3. Correlations between the Love Attitudes Scale: Short Form and the Rosenberg Self-Esteem Scale total score and the Psychological Well-Being Scales total score

	1	2	3	4	5	6	7	8
1 Total Rosenberg Self-Esteem Scale	1	.548**	.170**	-.027	-.001	.063	-.201**	-.178**
2 Total Psychological Well-Being Scales		1	.195**	-.120*	.078	.160**	-.295**	-.148**
3 Eros			1	-.363**	.127*	.028	-.016	.333**
4 Ludus				1	-.027	.083	.086	-.215**
5 Storge					1	.191**	-.018	.051
6 Pragma						1	.106*	-.020
7 Mania							1	.295**
8 Agape								1

** Correlation significant at the 0.01 level (two-tailed)

* Correlation significant at the 0.05 level (two-tailed)

Table 4. Correlations between the Love Attitudes Scale: Short Form and the Sexual Satisfaction Questionnaire

	1	2	3	4	5	6	7	8	9	10
1 Total SSQ	1	.93**	.82**	.85**	.50**	-.14**	-.03	.02	-.03	.09
2 SSQ (proximity)		1	.63**	.64**	.49**	-.17**	-.02	.07	.01	.12*
3 SSQ (fondling)			1	.71**	.40**	-.06	-.05	-.06	-.051	.049
4 SSQ (sex)				1	.38**	-.07	-.03	-.02	-.065	.018
5 Eros					1	-.36**	.13*	.03	-.016	.333**
6 Ludus						1	-.03	.08	.086	-.215**
7 Storge							1	.19**	-.018	.051
8 Pragma								1	.106*	-.020
9 Mania									1	.295**
10 Agape										1

** Correlation significant at the 0.01 level (two-tailed)

* Correlation significant at the 0.05 level (two-tailed)

4. Discussion and Summary

The purpose of this study was to verify the psychometric properties of the Polish adaptation of the Love Attitudes Scale: Short Scale questionnaire used to measure the following six love styles: Eros, Ludus, Storge, Pragma, Mania, Agape (Hendrick et al., 1998). Evaluation of the psychometric properties was carried out through several steps. The first step was to conduct the translation with the cooperation of three independent, fluent in Polish and English

people, that is, a psychologist, a psychology student and an English scholar. The next step was to perform an exploratory factor analysis. It showed that, like the original version, the Polish adaptation contains six subscales – Eros, Ludus, Storge, Pragma, Mania, Agape. The next step was to conduct a confirmatory factor analysis, which confirmed the structure obtained in the exploratory factor analysis. In conclusion, the obtained results of the exploratory factor analysis and the confirmatory factor analysis of the Polish adaptation of the Love Attitudes Scale: Short

Scale questionnaire reaffirmed compliance with the psychometric values of the original version of the questionnaire.

The Polish version of the Love Attitudes Scale: Short Scale is a reliable tool that can be used in scientific research. This is evidenced by the obtained results of reliability measures, that is, Cronbach's Alpha and McDonald's Omega (Nunally and Bernstein, 1994; Hulin et al., 2001 after: Ursachi et al, 2015; Daud et al, 2018).

Satisfactory results were also obtained in the case of assessing external validity by carrying out correlations using the r-Pearson method between the subscales of The Love Attitudes Scale: Short Form and the subscales contained in the Attachment Styles Questionnaire, the Sexual Satisfaction Questionnaire, the Rosenberg Self-Esteem Scale and the Psychological Well-Being Scales Questionnaire. The results obtained corroborate the external validity of the Polish version of The Love Attitudes Scale: Short Form questionnaire while showing consistency with previous research taking into account the above variables (Levy and Davis, 1988; Hill et al, 2015; Mallandain and Davies, 1994; Kanemasa et al, 2004; Özer and Tezer, 2008).

Polish psychological literature has so far devoted relatively little space to love related research based on questionnaires that are created or adapted to the current state of knowledge in psychometrics. The adaptation of the Love Attitudes Scale: Short Scale is undoubtedly an important step to fill the mentioned space, thus enabling a deeper understanding of the essence of love and the ways of showing it at the same time, it becomes possible to gain a more accurate understanding of the traits that can condition certain attitudes and behaviours manifested in love.

5. Limitations

The study presented above has some limitations. Attention should be paid to the aspect of the respondents age. Along the year in which the original version of the questionnaire was developed, the age of the respondents (young adults) could have translated into the way they understood and interpreted the content of the questions. The age of the subjects may also have translated into the obtained result of reliability indicators – Cronbach's alpha is capable of taking different values in different age groups (Taber, 2018). Among the limitations of the survey, it should also be noted that responses were obtained online. However, this method of data collection allows a large number of responses to be collected limiting the possibility of analysis based on random responses. It is also worth noticing that this form is becoming an increasingly popular way of conducting surveys. Another of the limitations of the study may be the state of psychology's knowledge of love. Despite many years of attempts to characterise love and study it, love in psychological terms is still a kind of - though known - indefinable feeling in terms of definition. That results in small number of psychological tools for measuring love adapted to Polish cultural conditions – this is not conducive to the possibility of studying it in an exhaustively reliable way. Significantly, also outside Poland, the psychometric way of studying love is just developing.

Despite the limitations outlined above, the Love Attitudes Scale: Short Form can be considered a tool that can be used in scientific research, as well as a good basis for working on further development of how love is viewed in psychology as well as a good basis for working on new psychometric ways to measure love.

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Determinants of forgiveness after experiencing infidelity in a marital relationship

Czynniki warunkujące przebaczenie po doświadczeniu zdrady w związku małżeńskim¹
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Monika Dacka^a, Agnieszka Kulik^b, Katarzyna Nowak^c

^a Monika Dacka, PhD, <https://orcid.org/0000-0001-7029-7696>, Institute of Psychology, John Paul II Catholic University of Lublin

^b Agnieszka Kulik, PhD, <https://orcid.org/0000-0002-1643-4159>, Institute of Psychology, John Paul II Catholic University of Lublin

^c Katarzyna Nowak, MA, <https://orcid.org/0009-0000-8470-1602>, Psychological and Pedagogical Counselling Centre in Końskie

Abstrakt: Niewierność małżeńska, niezależnie od jej rodzaju, powoduje poważne konflikty w relacjach między małżonkami. Za ważny element poprawy relacji w związku uznawane jest przebaczenie. Wspomaga ono proces rozwiązania konfliktów oraz zwiększa zaangażowanie w związek. Celem realizowanych badań było ustalenie czynników warunkujących przebaczenie zdrady u osób pozostających w związku małżeńskim. Przebadano 373 osób (339 kobiet, 34 mężczyźni), w wieku od 22 do 64 lat. Badania zostały przeprowadzone w formie elektronicznej z zastosowaniem: Skali Przebaczenia Małżeńskiego (MOFS, Paleari, Regalia, Fincham, 2009; polska adaptacja Brudek, Steuden, 2015), Skali Orientacji Pozytywnej (Positivity Scale, Caprara i in., 2012; polska adaptacja Łaguna, Oles, Filipiuk, 2011), TIPI-PL (Ten Item Personality Inventory, polska adaptacja Sorokowska, Słotwińska, Zbieg, Sorokowski, 2014) oraz ankiety personalnej. Przeprowadzone analizy korelacyjne wykazały pozytywny związek pomiędzy zaangażowaniem w związek, spełnieniem w związku, orientacją pozytywną i stabilnością emocjonalną a przebaczeniem u osób badanych. Im wyższy poziom przebaczenia, tym wyższa orientacja pozytywna. Częściowo potwierdzony został związek pomiędzy cechami osobowości a przebaczeniem u osób doświadczających zdrady. Wykazano dodatni związek na słabym poziomie między życzliwością a ugodowością oraz ujemny z sumiennością. Wykazano, że spełnienie i zaangażowanie są istotnymi predyktorami przebaczenia. Związek zaangażowania z przebaczeniem jest moderowany przez cechę sumienności. Przyjęty układ zmiennych wyjaśnia odpowiednio 17% zmienności wyników zmiennej przebaczenie.

Słowa kluczowe: zdrada, przebaczenie, małżeństwo, doświadczenie

Abstract: Marital infidelity, of whatever kind, causes serious conflicts in the relationship between spouses. Forgiveness is recognised as an important part of improving relationships in a relationship. It aids the conflict resolution process and increases commitment to the relationship. The aim of this study was to determine the determinants of forgiveness of infidelity in married people. A total of 373 people (339 women, 34 men), aged between 22 and 64 years, were studied. The study was conducted electronically using: Marital Forgiveness Scale (MOFS, Paleari, Regalia, Fincham, 2009; Polish adaptation Brudek, Steuden, 2015), Positivity Orientation Scale (Positivity Scale, Caprara et al., 2012; Polish adaptation Laguna, Oles, Filipiuk, 2011), TIPI-PL (Ten Item Personality Inventory, Polish adaptation Sorokowska, Słotwińska, Zbieg, Sorokowski, 2014) and a personal questionnaire. The correlational analyses conducted showed a positive relationship between relationship commitment, relationship fulfilment, positive orientation and emotional stability and forgiveness in the subjects. The higher the level of forgiveness, the higher the positive orientation. The relationship between personality traits and forgiveness in people experiencing betrayal was partially confirmed. A positive relationship was shown at a weak level between benevolence and agreeableness and a negative one with conscientiousness. Fulfilment and commitment were shown to be significant predictors of forgiveness. The relationship between commitment and forgiveness is moderated by the trait conscientiousness. The adopted pattern of variables explains respectively 17% of the variation in the results of the forgiveness variable.

Keywords: betrayal, forgiveness, marriage, experience

Introduction

Infidelity in a marital relationship is becoming an increasingly common phenomenon. It represents a significant source of strong emotions and

threatens the stability of relationships. Research by the Institute for the Study of Social Change (2020) found that 12.3% of married people had

¹ Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2023-2Dack.pdf>

committed infidelity. Data from the Central Statistical Office (2022) shows that in 2021 infidelity was the cause of divorce in 19.15% of cases and marital separation in 10.79% of cases. The most represented age group of divorcees are those aged 20 to 29. Over the last 40 years, there has been a 52.4% increase in divorces and a 45.2% decrease in marriages. These trends reflect the situation existing in Europe, as confirmed by Eurostat data (2022). In 2020, a slight reduction in the divorce rate from 1.9 to 1.6 per 1,000 existing marriages can be observed, compared to 2015. In relation to the number of marriages during the same period, the rate is 4.2 to 3.2 per 1,000 existing marriages.

Married couples experience various difficulties in the course of their lives that contribute to the disruption of mutual communication. Significant hindrances to the communication process include blaming each other, criticising, ridiculing, and downplaying problems that arise. Among the most worrying types of hurt in close relationships is infidelity. It violates trust and previous sexual and emotional intimacy (Fife, Weeks, Weeks, 2013). Partners of cheaters typically experience shame, anger, feelings of powerlessness (Chi et al., 2019), sadness, suffering, grief, and rage towards their spouse (Piątek, 2011).

For the quality of the marital relationship, *forgiveness* is important. It is described as a process (of strengthening, healing; Bacioğlu, 2020), a state of one's own choice (Sakız, Sariçam, 2015), a necessity for the survival of the relationship (Sharma, Das, 2017), and a virtue to control anger (Boleyn-Fitzgerald, 2002). In a marital relationship, the ability to forgive is a key ability leading to a happy life and marriage (Çelik et al., 2022). The ability to forgive is the foundation of a successful marriage and an important part of improving relationships after harm or hurt (Behrang et al., 2022). The most difficulties betrayed people experience with forgiveness is with the felt-harm related to the lack of fidelity and love, and trust is undermined in a sexual relationship (Piątek, 2011). Women most often fear being hurt again, whereas men fear being shown-up as weak. The motives for forgiveness for most betrayed

people are concern for the marriage and children. In the forgiveness process, women are more likely than men to place conditions on their partner. Research on forgiveness in intimate relationships has shown that it has a positive impact on partners' level of interest, stability, relationship satisfaction, and physical and mental health (Quenstedt-Moe, Popkess, 2014). Religiosity, quality of the partner relationship, empathy, perceived remorse, and stress management play an important role in the forgiveness process (Fehr et al., 2010; Fitness, Peterson, 2008).

The main goal of forgiveness is to maintain the relationship and improve it (Aalgaard et al., 2016). Forgiveness is undoubtedly an important part of maintaining a vibrant, strong relationship, and it determines the stability and satisfaction of a marriage. It helps to sustain the quality of the relationship, provides greater closeness and commitment, helps to resolve conflicts, increases the partners' level of commitment to each other, and enables the relationship to be rebuilt (Osei-Tutu et al., 2021). The highest propensity for forgiveness is demonstrated by those who are married (35.3%; Institute for Research on Social Change, 2020) and who show higher levels of relationship commitment and marital satisfaction (Fincham, Beach, 2007).

According to interdependence theory, when faced with unfavourable events – infidelity, for example – partners who are committed to the relationship and satisfied with the relationship tend to be more motivated to maintain it because of the many resources they have invested in the relationship (Rusbult, Hannon, Stocker, Finkel, 2005, pp. 185-206). Research by Brose et al. (2005) on young people showed that forgiveness is positively correlated with agreeableness and negatively correlated with neuroticism. A study by Saffarian et al. (2018) found that a sense of duty, hope, and forgiveness play mediating roles in marital satisfaction in couples on the verge of divorce. Personality traits, hope, and forgiveness may contribute to increased feelings of satisfaction in a relationship. Overall, the aim of this study was to identify the determinants of forgiveness in married individuals after experiencing infidelity in their marriage.

1. Theoretical introduction to the research

1.1. Characteristics of marriage as a relationship between two people

Marriage has different legal dimensions (Kozyra, 2021, p. 17). Article 18 of the Constitution of the Republic of Poland defines *marriage* as a union between a man and a woman, which is under the protection and guardianship of the Republic of Poland. In Poland, monogamous unions (with one partner) concluded in the form of a declaration in front of the head of the Registry Office (the so-called *civil wedding*) or in the form of a denomination (the so-called *church wedding*, concordat wedding) are recognised as legal. Both forms define marriage as permanent. Canon law further defines it as indissoluble.

According to Rostowski (2009), “marriage is a complex affair, with individual characteristics and social and individual contexts influencing its functioning, ensuring its more or less likely success” (p. 17). Marriage is sometimes considered to be a unique intimate relationship, providing a sense of being needed, respected, and noticed by another person. Marriage in modern times has increasingly been seen as “a legally recognised social contract between two people, traditionally based on a sexual relationship and implying permanence of the relationship” (Chadda, Kumar, Sarkar, 2019, p. 160). Marriage is also sometimes defined as a relationship between two people that is emotional, romantic, and sexual in nature. By living together, individuals identify themselves as a couple (Constantin, 2004). Ghiurca, Vintila (2019) described two different perspectives on marriage: a positive one (a source of happiness, satisfaction) and a negative one (an element of frustration, limitations). Marriage undoubtedly provides an important foundation for family building, satisfaction, and relationship quality (Fahimdanesh, Noferești, Tavakol, 2020, p. 222). Recent research indicates that mutual respect, love, willingness to forgive, and generosity ensure marital relationship satisfaction, thereby reducing the likelihood of marital breakdown (Dew, Wilcox, 2013, pp. 1225-1226).

Mature marital love is characterised by sensitivity to the needs of the other person (Rostowski, Rostowska, 2014, p. 33). Marital satisfaction is determined by both the personality traits and mutual communication of the spouses. Marital satisfaction is fostered by empathy, reflexivity, emotionality, conscientiousness, and low neuroticism. Interpersonal communication is an essential part of maintaining good relationships and experiencing happiness. Precise, unambiguous, and understandable communication, both verbal and non-verbal, is essential for this to work. The ability to listen and responsibility and openness become important in the mutual contact between spouses. Communication in close relationships manifests either as supportive communication, deprecating communication, or committed communication between partners (Biel, 2013, pp. 39-40). *Support* is associated with the manifestation of interest in one’s partner’s needs, problems, and joint problem-solving. *Commitment* is related to creating an atmosphere of mutual understanding and closeness in the relationship by showing affection and emphasising one’s partner’s unique qualities. *Deprecation* of a partner is related to the manifestation of domination and aggression towards one’s partner, and a lack of respect demonstrated for one’s partner’s dignity. Compatibility of beliefs, values, and views affects the mutual attractiveness of partners (Bakiera, 2013, pp. 69-70). McKay, Davis, Fanning. (2019, pp. 9-10) pointed out that effective communication becomes the foundation for both life skills and building and maintaining relationships. Communication is important in the spouses’ relationship because success and marital success contribute to the longevity of the relationship, depending in some ways on it (Adamczyk, 2013, pp. 84-85). Most close relationships are characterised by at least some degree of caring or positive interaction (Salmon, 2017, pp. 122-123). Among the most distressing types of hurt in close relationships is infidelity. It contributes to the violation of trust, closeness, and intimacy between partners (Fife et al., 2017).

1.2. Infidelity in a marriage

The ever-increasing media coverage of marital infidelity clearly accentuates the prevalence of this phenomenon in our society. Marital infidelity is considered the

most serious and threatening injury to the stability of a marriage, leading to a breach of trust with the offending partner (Beltrán-Morillas, Valor-Segura, Expósito, 2015, pp. 76-77).

Infidelity is sometimes defined as “engagements in romantic relationships outside of an active, committed relationship that result in a sense of relational betrayal” (Thornton, Nagurney, 2011, p. 51). It has also been described as a feeling or behaviour during which a relationship expectation is broken (Octaviana, Abraham, 2018, p. 3158). It is also sometimes described as an emotional or sexual act that is outside the primary relationship; it is a breach of trust and boundaries of the existing relationship (Blow, Hartnett, 2005, pp. 183-184). Guitart et al. (2017) defined *sexual infidelity* as the breaking of a vow to remain sexually exclusive. Emotional and sexual infidelity often occur together. Interpersonal and contextual factors, education level, religiosity, career, and place of residence are often cited as risk indicators for marital infidelity (Hook, Worthington, Utsey, Davis, Burnette, 2015). Infidelity is one of the most common causes of divorce (Apostolou, Panayiotou, 2019, pp. 34-35; Buss, 2018, p. 157).

Infidelity can negatively impact the psychological well-being of the betrayed person. Sometimes betrayed spouses experience bouts of depression, anxiety, and a sense of loss (Fincham, May, 2017, p. 70). Infidelity can be physical or emotional. The former is considered an act of engaging in sexual relations with someone other than one's spouse. *Emotional infidelity* is considered to be falling in love with or sharing a deep emotional connection with someone other than one's spouse (Buss, 2018, pp. 158-159). Infidelity is associated with feelings of shame and embarrassment, as it leads to a broken promise of fidelity. The negative consequences of a detected affair often involve a degradation of trust and support, an experience of anxiety, anger, sadness, and lowered self-esteem of the personal and sexual sphere (Couch, Baughman, Derow, 2017, p. 504).

1.3. Forgiveness in a relationship

The issue of forgiveness has been addressed by thinkers and scholars representing different fields of knowledge. The French philosopher Jacques Derrida (1977, p. 34) defined forgiveness as “unconditional, gracious,

infinite, anonymous forgiveness granted to the guilty as guilty, without counterpart, even to those who neither repent nor ask for forgiveness” (p. 34). Forgiveness is an individual process of replacing feelings of revenge with a sense of empathy and tolerance. It is also a way of cancelling a debt to the person who has hurt or wronged one (Exline, Baumeister, 2000, p. 133). Forgiveness thus involves a willingness to abandon one's right to resentment, negative judgement and indifferent behaviour towards the one who has wrongly hurt us, while developing the undeserved qualities of compassion, generosity and even love. (Enright, The Human Development Study Group, 1996, p. 113)

The ability to forgive contributes to reduced anger (Thompson et al., 2005, p. 313), depression, anxiety, and higher self-esteem (Reed, Enright, 2006, p. 920).

Forgiveness on a psychological level is sometimes described as “an intrapersonal prosocial change towards the abuser that takes place within a specific interpersonal context” (Brudek, Steuden, 2015, p. 165). It is associated with personality traits and is sometimes considered a multidimensional construct that is an important element of physical, mental, and spiritual health (Matuszewski, 2018, p. 2). The elements of forgiveness understood in this way include an intensity of benevolence (lack of regret, readiness to forgive) and an intensity of resentment-avoidance (a desire for revenge or holding a grudge).

Forgiveness has been conceptualised in terms of two constructs: negative forgiveness and positive forgiveness. *Negative forgiveness* is associated with regret, withdrawal, avoidance of punishment, and revenge against the offending partner. *Positive forgiveness* is associated with a willingness to forgive and greater empathy and trust and less anger towards the offending partner.

Marital forgiveness is sometimes defined as “the forgiveness of a single, specific hurtful event in a specific interpersonal context” (Palcari, Regalia, Fincham, 2009, p. 194). Marital forgiveness is accompanied by both positive and negative motivational factors. The former are related to feelings, thoughts, and behaviours in which there is empathy for and acceptance of the partner's wrongdoing. Conversely, negative motivations are related to reducing negative feelings (anger), thoughts (developing resentment),

or behaviours (e.g., avoiding the partner). Forgiveness in a marriage aims to maintain the relationship. Interdependence theory (Kelly, Thibault, 1978) describes relationships in terms of punishments and rewards. It can help one understand forgiveness in romantic relationships by revealing the experienced quality of relationships and a certain commitment to make decisions. Forgiving others is the tendency to decrease negative and increase positive thoughts, feelings, and actions directed at the person who has erred (Toussaint, Shields, Dorn, Slavich, 2016, p. 2).

The process of forgiveness can create an environment for the potential development of better and more positive attitudes and feelings towards the betraying spouse. It contributes to reduced anger, higher self-esteem, and increases in the quality, satisfaction, and stability of marital relationships (Fincham, Hall, Bech, 2007). Forgiveness interrupts destructive patterns of revenge and promotes closeness (Bono, McCullough, Root, 2008, pp. 182-183), trust, and constructive communication between spouses (Wieselquist, 2009, p. 531). Understanding forgiveness is important because it can result in relational harmony and a range of physiological and psychological benefits (Rusbult, Hannon, Stocker, Finkel, 2005; see pp. 185-187). Forgiveness is also positively associated with quality of life (Offenbacher et al., 2017, pp. 528-529), better anger control (Mefford, Thomas, Callen, 2014, pp. 283-284),

increased productivity and work performance, and fewer mental and physical health problems (Toussaint et al., 2018, pp. 2-3). Forgiveness is also associated with seeking support (Flanagan et al., 2012, pp. 1215-1216) and a greater use of positive forms of general coping, such as acceptance, positive refocusing, and reassessment of situations (Malinovic, Finka, Lewis, Unterrainera, 2016, pp. 43-44; Rey, Extremera, 2016, pp. 2944-2945). It is a skill that can be mentally and emotionally improved (Nussbaum, 2016).

1.4. Determinants of forgiveness

A person prone to forgiveness has an overall adaptive personality profile. This is characterised by both low rates of depression, hostility, and anxiety and a tendency to ruminate on one's own thoughts, with

no tendency to take advantage of others. Individuals inclined to forgiveness enact various pro-social traits and are more optimistic about maintaining positive relationships (Ajmal, Amin, Bajwa, 2016, p. 91). A person is more likely to be willing to forgive if the relationship between them and the betrayer was meaningful, satisfying, and engaging for them (Zarzycka, 2016, p. 167). Individuals with narcissistic traits show less willingness to forgive. This is presumably due to an exaggerated belief in their own superiority (Szczęśniak, Król, Szałachowski, Kaliczyńska, Tabosa, 2017). The inability to forgive is associated with anxiety, impulsivity, coldness, aggression, and guilt. Some researchers view forgiveness as a disposition, a reaction to a situation, or a relationship characteristic (Carlisle, Tsang, 2013, pp. 423-437). According to Balliet (2010, pp. 260-261) and Mullet, Neto, Rivire, (2005, pp. 159-182), two characteristics/traits from the Big Five model of personality are considered the main correlates of forgiveness: agreeableness and neuroticism. Individuals who are prone to forgiveness tend to feel less anger and are less likely to seek revenge. They are characterised by lower scores on neuroticism and higher scores on agreeableness. *Conscientiousness* (being conscientious, considerate) has shown a positive relationship with the tendency to forgive (Shepherd, Belicki, 2008, p. 389). Research by Hill, Allemand (2012, p. 497) indicated that conscientious individuals are more effective at self-regulation, and that this promotes forbearance and the promotion of forgiveness (Hill, Allemand, Heffernan, 2013, p. 274). The ability to take the other person's perspective is a mediating factor in forgiveness (McCullough, 2000, pp. 446-455).

Traits conducive to forgiveness also include *extraversion* (sociability, friendliness, assertiveness) (Szczęśniak et al., 2017), as well as religious commitment. A study conducted with students at the University of Jordan found a relationship between personality traits, mental health, and the tendency to forgive. High correlations occurred between agreeableness and forgiveness and low correlations between neuroticism and forgiveness. The results also showed a positive relationship between forgiveness and mental health (Al-Sabeelah, Alraggad, Ameerth, 2014, pp. 224-225).

Finally, analysing previous research, a strong correlation between chronological age and the understanding of forgiveness has been observed (Hill et al., 2013). Research findings confirm that as people get older, they become more willing to forgive (e.g., McCullough, Witvliet, 2002, pp. 446-455).

1.5. The theory of positive disintegration

According to the assumptions of the theory of positive disintegration, the formation of identity and personality requires the transgression of certain biological and genetic boundaries, as well as conditioning in the development of certain social and cultural patterns (Tylkowska, 2000, p. 231). In Polish psychologist Kazimierz Dąbrowski's view, an individual's developmental potential is associated with inner transformation and deliberate, conscious work on one's character. Internal transformation is associated with an individual's high moral values, respect, compassion, and service to others. *Level*, in Dąbrowski's (1975) theory, refers to the characteristic intra-psychic arrangement of mental-emotional dynamisms. The first level is *primary integration*, which is characterised by a rigid psychic structure that is subordinate to biological needs (Dąbrowski, 1975, p. 51). While the person at this level is able to adapt to the environment and changing conditions, they do not show empathy or sensitivity in relationships with others. They do not experience internal conflict, reflexivity, or guilt (Limont, 2011, p. 97).

Level 2, referred to as *single-level disintegration*, is characterised by ambivalence, ambivalencies, volatility, and a predominance of sadness and despondency. Personal characteristics include jealousy, value relativism, dependence on others, and a sense of inferiority (Kędrzyński, 2019, p. 53; Limont, 2011, p. 97).

Level 3 is characterised by *spontaneous multilevel disintegration*. Here, individuals experience strong internal conflicts and crises affecting the transformation of their internal psychic structure. A characteristic feature of this period is bewilderment about the relationship to oneself and the external world and dissatisfaction with oneself, including feelings of inferiority and guilt. Differences in conflicts within levels are thought to cause a state of high psychological tension (Tylkowska,

2000, p. 245). There is an internal hierarchy of goals and values, reflexivity, strong moral conflicts, and existential anxiety. Breakdowns are noticeable, mental resilience increases, and the ability to solve complex problems improves (Dąbrowski, 1979).

The fourth level in positive disintegration theory is referred to as *organised multilevel disintegration*, characterised by a relatively higher level of development of value hierarchies and goals (Limont, 2011, p. 99). The person experiences more conflict and tension. The person is capable of self-reflection. Also characteristic of individuals at this level is conscious personality development and synthesis, and a readiness to help others is noticeable. Striving for excellence, responsibility, self-awareness, intra-psychic transformations, and empathy are visible.

Secondary integration, Level 5, is characterised by the highest levels of autonomy, empathy, authenticity, and responsibility. At Level 5, two kinds of essences are formed: individual and social. These constitute the most "essential" sets of qualities of a person. A person's *essence* is characterised by their strong abilities, interests, and lasting relationships and a conscious sense of identity with the history of their own development. It is associated with an individual's felt-responsibility – the need to take on unique, important tasks. A person's social essence is associated with empathy, responsibility, autonomy, authenticity, and social awareness (Tylkowska, 2000, p. 248).

2. Research methodology

The object of this research was to find out the determinants of forgiveness following infidelity in a marriage. The research problem was: What factors determine the forgiveness of betrayal in a marital relationship? Two groups of factors were considered: the personality characteristics of the respondents and the characteristics of their marriage.

2.1. Characteristics of the study group

A total of 373 people (339 women, 34 men) aged 22 to 64 participated in the study ($M = 39.65$; $SD = 8.38$). Those aged 31 to 40 years (39.7%) and

41 to 50 years (36.5%) were the most represented, followed by those aged 20 to 30 years (15.0%) and over 50 years (8.8%). Most respondents had a tertiary (52.3%) or secondary (36.5%) education, with the remainder of the study group reporting vocational (9.1%), lower secondary (1.6%), or primary (0.5%) education. Of the participants, 75.8% were from a city (of which 44.2% were from a city of more than 100,000 inhabitants), and 24.2% were from a village.

The majority of those participating in the study (85.8%) had children. The average fertility rate was 1.65 +/- 1.076 (range 0–8). The mean marital tenure of the respondents was 14.15 +/- 9.18 years (range 1–46). The largest number of respondents experiencing infidelity in their marriage had not used specialist help (49.3%). Of the participants, 27.6% declared attending 1 to 2 professional consultations, 12.9% revealed that they had used help 3 to 5 times, and 10.2% indicated that they had consulted a specialist more than 6, or very many, times. Most respondents (84.2%) stated that they were involved in their marriage, including 57.4% “completely.” The majority (71.3%) also felt fulfilled in the relationship, either “completely” (35.1%) or “somewhat” (36.2%).

2.2. Research tools

This study used Polish versions of the Marital Offence-Specific Forgiveness Scale, the Positive (orientation) Scale, the Ten-Item Personality Inventory, and a questionnaire. The questionnaire was divided into two parts: “metrics,” which included questions regarding the subjects’ gender, age, education, and place of residence, and “relationship characteristics,” regarding marital tenure, having children, the use of professional help after a difficult relationship situation, the degree of subjective assessment of relationship commitment, and marital fulfilment.

The Marital Offence-Specific Forgiveness Scale (MOFS; Paleari et al., 2009; [Polish adaptation by] Brudek, Steuden, 2015) was used. The Polish version of MOFS, which contains 10 items, consists of two dimensions: Resentment-Avoidance and Kindness. The respondent provides answers on a 5-point scale, including “yes,” “rather yes,” “yes, no,” “rather no,” and “no.” The internal consistency coefficient

(Cronbach’s alpha) for each dimension was 0.87 for Resentment-Avoidance and 0.72 for Kindness. The confirmation analysis theoretical accuracy coefficients were 0.97 (Brudek, Steuden, 2015).

A positivity orientation scale – the Positivity Scale by Caprara et al. (2012; [Polish adaptation by] Łaguna et al., 2011) – was also used. The questionnaire consists of eight statements, one of which is reversible. Respondents provide answers on a 5-point scale, including 1 = “Strongly disagree,” 2 = “Disagree,” 3 = “Neither agree nor disagree,” 4 = “Agree,” and 5 = “Strongly agree.” The reliability of the scale (Cronbach’s alpha) is 0.84 (Łaguna et al., 2011).

Also used was the Ten-Item Personality Inventory (TIPI) by Gosling et al. (2003; [Polish adaptation – PL – by] Sorokowska et al., 2014). The TIPI-PL consists of 10 items. The respondent provides answers with a 7-point scale, including 1 = “Strongly disagree,” 2 = “Rather disagree,” 3 = “Slightly disagree,” 4 = “Neither agree nor disagree,” 5 = “Slightly agree,” 6 = “Rather agree,” and 7 = “Strongly agree.” The calculation of scores results in an assessment of the intensity of the following traits: extraversion, conscientiousness, emotional stability, openness to experience, and agreeableness. The Scale has satisfactory psychometric parameters, so that an accurate picture of the subject’s personality can be obtained; the reliability of the scale is 0.77 to 0.83 (Sorokowska et al., 2014). The TIPI-PL consists of five subscales: Openness to Experience, Emotional Stability, Conscientiousness, Agreeableness, and Extraversion.

2.3. Procedure

The research was conducted electronically on webanketa.co.uk. The address of the research page was posted on a Facebook group called “Betrayed, betrayed, heartbroken.” Participation in the study was voluntary. The subjects were assured of anonymity and the scientific purpose of the study. The prerequisites for participation in the study were being married and being up to 55 years of age. The study lasted from 15 to 30 October 2020. A total of 924 people started completing the measures, but only 390 continued until the very end. The responses of 17 people were excluded from the survey due to exceeding the set age limit. Results from 373 people qualified for statistical analysis.

2.4. Statistics

Statistical analyses were performed using R software (version 4.0.4). A preliminary exploration of the data revealed missing data, which were replaced by mean (variables: Age, Marital Tenure, Extraversion, Agreeableness, Conscientiousness, Positive Orientation) or median (variables: Number of Children, Number of Specialist Consultations) values. To create a Forgiveness Index, the variables Kindness and Resentment were standardised, and the difference between Kindness and Resentment was calculated. The data were then normalised, with the exception of the qualitative (Gender, Children) and ordinal (Commitment and Fulfilment) variables. Different methods were used to normalise the variables. One analysis showed that the centre scale technique was most appropriate for the following variables: Age, Number of Specialist Consultations, Emotional Stability, and Positive Orientation. The orderNorm technique was used for the variables Marital Seniority, Kindness, and Forgiveness. The arcsinh x technique was used for the variables Number of Children, Conscientiousness, and Openness. The Box-Cox technique was used for the variables Extraversion and Agreeableness. Finally, the Yeo-Johnson technique was used for the variable Resentment.

The following descriptive statistics were used to characterise the results: mean, standard deviation, median, range of scores, skewness, kurtosis, and percentage. Pearson's r correlation was used to determine the relationship between variables. The level of collinearity coefficient (VIF) for the individual predictors of the variable Forgiveness was in the range 1.04 to 5.54, so there was no collinearity. A series of explorations was then performed to identify significant moderators. A confidence level of $p < 0.05$ was assumed.

3. Results

The presentation of the results has three stages: characterisation of the results of the variables, interpretation of the correlations, and exploration to identify moderating variables.

Analysing the data in Table 1, it can be seen that:

1. the results of the variable Resentment are significantly elevated and the variable Benevolence significantly decreased, compared to the results of the adaptation sample (Brudek, Steuden, 2015);
2. the results of the variables Extraversion, Agreeableness, and Conscientiousness are comparable to the results of the adaptation sample, while the results of the variables Emotional Stability and Openness are significantly lower than the results of the adaptation sample (Sorokowska et al., 2014);
3. the results of the Positive Orientation variable are average, slightly lower than in the normalization group (Łaguna et al., 2011);
4. the results of the Commitment variable show that the subjects who are married after betrayal rated their commitment to the relationship highly, while the results of the Fulfilment variable show that they felt fulfilled in the relationship to a lesser extent.

It was found (Table 2) that an increase in the level of the variable Forgiveness occurred with an increase in the scores of the following variables: Commitment ($r = 0.39$; $p < 0.001$), Fulfilment ($r = 0.43$; $p < 0.001$), Emotional Stability ($r = 0.12$; $p < 0.05$), and Positive Orientation ($r = 0.17$; $p < 0.001$). These results are presented in Table 2.

In our exploratory phase, regression analyses with a moderator were performed, using Forgiveness as the dependent variable, with the most strongly correlated variables (i.e., Commitment and Fulfilment) as predictors, and the remaining variables as moderators. One significant moderation model was obtained.

Conscientiousness was shown to be a significant moderator of the relationship between Commitment and Forgiveness: $F(3, 369) = 25.68$; $p < 0.001$. The regression model of the included independent variables (Conscientiousness, Commitment, and Conscientiousness * Commitment) explained approximately 17% ($R^2 = 0.17$, $R^2_{\text{corrected}} = 0.17$) of the variation in the scores on the variable Forgiveness. An increase in the scores on the Commitment variable was statistically significant ($\beta = 0.40$; $p <$

Table 1. Descriptive Characteristics of Variable Scores

Variables	M	SD	Me	Min	Max	Skośność	Kurtoza
Commitment	1.42	0.75	2	0	2	-0.85	-0.72
Fulfillment	1.06	0.80	1	0	2	-0.12	-1.42
Extraversion	5.08	1.27	5	1	7	-0.45	-0.37
Agreeableness	5.60	1.01	6	2	7	-0.85	0.54
Conscientiousness	5.58	1.10	6	2	7	-1.02	0.74
Emotional stability	3.80	1.42	4	1	7	0.16	-0.54
Openness	4.55	1.03	4.5	2	7	0.13	0.04
Positive orientation	27.70	4.90	28	14	40	-0.27	-0.20
Resentfulness	21.52	5.47	22	6	30	-0.56	-0.35
Kindness	10.33	4.04	10	4	20	0.31	-0.56

Kindness > Resentfulness 2,3%;
Resentfulness > Kindness 87,7%

Table 2. Results of Pearson Correlation Analysis Between Explanatory Variables and Forgiveness

Variables	Przebaczenie	Variables	Przebaczenie
Age	0.02	Extraversion	0.08
Marital seniority	0.04	Agreeableness	0.08
Number of children	0.00	Conscientiousness	-0.08
Number of specialist consultations	0.02	Emotional stability	0.12*
Involvement	0.39***	Openness	0.00
Fulfillment	0.43***	Positive orientation	0.17***

Note: * p < 0.05, ** p < 0.01, *** p < 0.001

Table 3 Forgiveness Effect of the Variables Conscientiousness, Commitment, and Conscientiousness * Commitment on the Scores of the Variable Forgiveness

Variables in the model	B	s.e.	t	p	β	DPU	GPU
Constant	-0.74	0.10	-7.36	< 0.001			
Conscientiousness	0.09	0.10	0.93	> 0.05	0.10	-0.10	0.29
Commitment	0.53	0.06	8.37	< 0.001	0.40	0.27	0.52
Conscientiousness*Commitment	-0.13	0.06	-2.09	< 0.05	-0.21	-0.34	-0.09

Note: B = unstandardized regression coefficient; s.e. = standard error for B; t = student t statistic; DPU = lower confidence interval; GPU = upper confidence interval; p= statistical significance; β = standardized regression coefficient

0.001), associated with an increase in the scores on Forgiveness. A significant interaction effect was also found ($\beta = -0.21; p < 0.05$). The results of the regression coefficients for the described model are presented in Table 3.

In order to clarify the significance of the interaction effect Commitment * Conscientiousness, a regression analysis was conducted at two levels of the moderator Conscientiousness. The median ($Mdn = 12$) was taken as the dividing point

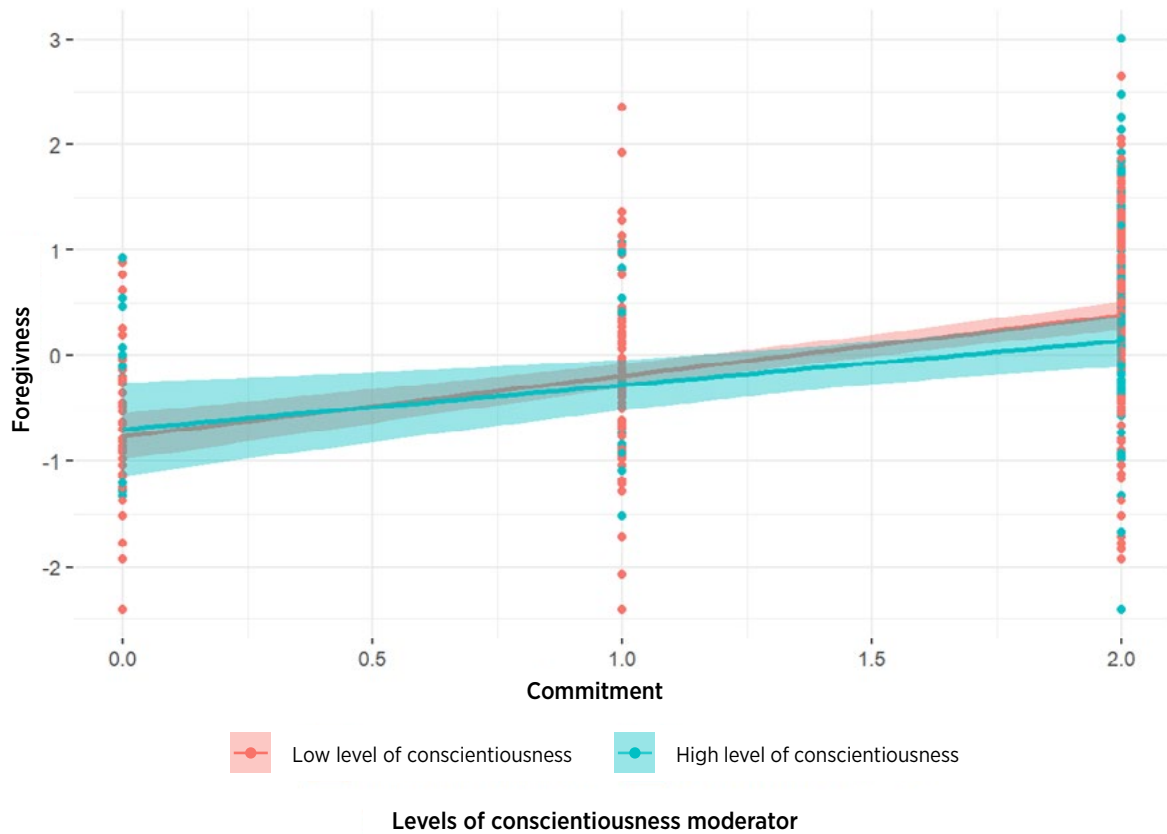


Figure 1: Effect of Commitment on the variable Forgiveness across levels of moderator Conscientiousness

for low and high scores on the Conscientiousness variable. The analysis found that for a low level of the Conscientiousness variable, an increase in the score on Commitment was statistically significant ($\beta = 0.44; p < 0.001$), associated with an increase in scores on Forgiveness. In the case of a high level of Conscientiousness, we also found that an increase in scores on Commitment was statistically significant ($\beta = 0.30; p < 0.01$), associated with an increase in scores on Forgiveness. The interaction effect for low Conscientiousness was stronger than for high Conscientiousness. Graphically, the relationships are depicted in Figure 1. The results of the other moderation analyses were not significant.

Discussion

The aim of the present research was to attempt to identify factors important in the process of forgiveness for marital infidelity. Attention was paid to selected intrinsic factors of the betrayed person (personality,

positive orientation) and relationship characteristics (seniority, number of children, use of specialist help, commitment, and fulfilment in the relationship).

The severity of the forgiveness indicators suggested that married respondents experienced resentment more than kindness towards the perpetrator of infidelity. A positive balance of kindness and resentment was achieved in 12.3% of respondents. People in relationships are similar to others in terms of personality traits such as extraversion, agreeableness, and conscientiousness, although they differ in reduced intensity of the traits emotional stability and openness. These individuals cope less well with stress, are more likely to react with anxiety and tension, and have a greater tendency to worry. They are more likely to prefer socially recognised ways of doing things, stemming from a traditional value system. Disruption of emotional stability after experiencing infidelity may be the result of the impact of chronic stress after infidelity. Their behaviour more closely resembles that of those experiencing chronic stress, and being with the perpetrator of the stress on a daily basis exposes

them to constant, at least internal, confrontation. So why do victims stay? The reason for the decision to stay in a relationship post-infidelity may be from adherence to a traditional value system. So-called *legal forgiveness* – that based on religious principles – may be involved here (Piątek, 2011). In addition, “for religious people, a significant factor facilitating the forgiveness process is the experience of receiving forgiveness from God” (Jaworski, 2016, p. 154). It can also be assumed that they strive for a certain internal harmony, in line with Level 3 of the theory of positive disintegration. They experience conflicts, internal crises, and tension, often of a moral nature. In people at this level, a new hierarchy of values and ideals is established. There are attempts to control behaviour and experiences. Strong at this level is the need to both experience harmony and cope with resulting tensions and certain contradictions experienced in everyday functioning. Porter and Schumann’s (2017) research showed that being aware of the limitations of one’s own knowledge and appreciating the efforts of the other party are good predictors of openness during disagreements and attempts to resolve difficult situations.

In additional analyses, it was revealed that people with a positive and negative forgiveness balance differed significantly in the intensity of extraversion and emotional stability traits – with “forgivers” reporting a higher intensity. A similar result was obtained for endorsing a positive orientation, fulfilment, and commitment. Forgiving individuals appeared more committed to their relationships and reported greater fulfilment in them. They may also be more prone to self-reflection and perceive the need to shift their own focus to recognising the needs of others. According to positive disintegration theory, people can become aware of their own faults and bad habits they want to change in order to improve their relationships with others and the environment (Dabrowski, 1994). At Level 3 of one’s psychic life, a positive maladaptive dynamism oriented towards pro-developmental values is at work. Here individuals start to become aware of important values, and towards them they begin to move (Kobierzycki, 1989, p. 181).

Although a positive balance of forgiveness was revealed by only 12.3% of respondents in our study, commitment to the relationship at various levels was

declared by 84.2%, and fulfilment in the relationship by 71.3% of the sample. All those with a positive balance of Kindness-Forgiveness reported relationship commitment. Regarding fulfilment in the relationship in the forgiveness group, the results shifted to the right, meaning that the majority felt fulfilled. In the negative balance group, the results shifted to the left, meaning that the majority did not report feeling fulfilled, or only felt a little fulfilled. Referring to interdependence theory in the context of marriage infidelity, those involved in the relationship post-discovered infidelity experienced satisfaction with the relationship and showed greater motivation to maintain it due to the investment of numerous resources in the relationship (Rusbult et al., 2005, pp. 185-206). According to McCullough et al. (2000), the reactions of forgivers towards the betrayer become more prosocial over time. These researchers pointed to an important chronological factor for mitigating the emotional connotations associated with marital betrayal. Piątek’s (2011) research confirmed that most people, especially women, require time to make the decision to both forgive and initiate the process of working through difficult emotions.

The propensity to forgive was greater the more emotionally adjusted our subjects were, the more they revealed the ability to cope with stress without experiencing tension, and the more positive they felt about themselves, life, and their future. Referring to Dąbrowski’s theory (1979), it might be said that despite the tensions, crises, and conflicts experienced, forgivers strive to achieve inner harmony. The anxiety that arises is existential in nature, contributing to a change in the way the forgiver looks at themselves and their surroundings.

The relationship between the variables Commitment and Forgiveness was moderated by Conscientiousness in this study, and the interaction effect for low Conscientiousness was stronger than for high Conscientiousness. Forgiveness as an outcome of Commitment to the relationship was accompanied by goal-oriented, action-motivated behaviour (Conscientiousness). It appeared, however, that a more favourable situation occurred when the subjects showed flexibility in the pursuit of goals, which, moreover, were not very specific. According to Van Tongeren

et al. (2014), in long-term relationships, awareness of one's own limitations and respect for the opinions of others are protective factors against unforgiveness. Humility makes it possible to reduce both the impact of negative life events on life satisfaction and the severity of negative emotions (Krause et al., 2016).

However, the present research has several limitations. Future researchers might include as significant determinants of forgiveness not only personality

traits, but also the length of the relationship, attachment styles in the relationship, or the time since the experienced betrayal. Forgiveness is associated with the possibility of improved physical and mental health. When planning further research, it would be worthwhile to both analyse the quality of the relationship after the betrayal experience and to identify differences in the determinants of forgiveness found in the male and female groups.

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Dysfunctions of family communication as an object of incrimination under the Criminal Code

Dysfunkcje komunikacji rodzinnej jako przedmiot inkryminacji na gruncie Kodeksu karnego¹

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Olga Pankalla^a, Andrzej Pankalla^b

^a *Olga Pankalla, MA, <https://orcid.org/0000-0001-7115-2296>,*

Adam Mickiewicz University, Poznań

^b *Associate Professor Andrzej Pankalla, PhD, <https://orcid.org/0000-0002-9138-6185>,*

Institute of Psychology, Cardinal Stefan Wyszyński University in Warsaw

Abstract: Communication—as the transmission of information (message) between people, is an essential element of family life. The interpersonality—the relationality of family communication and the systemicity—the functioning of the individual within the subsystems husband-wife, parent-child and child-child should be emphasized. The realities of everyday life, including the cohabitation of family members, imply the frequency, intensity and regularity of communication processes. Abnormal communication implies disruptions in the functioning of the family. An extreme manifestation of such disruptions will be the committing of criminal offences. The aim of the article is to identify and characterize the most important criminal-law aspects of family communication—from the perspective of substantive criminal law. Family communication may be an element of the causative activity of crimes under the Criminal Code. In particular, it is necessary to mention crimes against the family and custody: bigamy (article 206 of the Criminal Code), domestic violence (article 207 of the Criminal Code) and debauching a minor (article 208 of the Criminal Code), as well as a crime against life and health—euthanasia (article 150 of the Criminal Code). The subjects of proceedings will be: declarations of intent by people entering into a marriage (the crime of bigamy); threats, bullying and insults carried out by perpetrators of domestic violence; incitement of minors to consume alcohol (by parents or legal guardians), as well as demands and requests whose object is the will to end life (in the case of euthanasia). Criminally relevant is the context and the relationship of the communication participants—especially the husband (father) as sender in the husband-wife and parent-child communication process. The intensity, persistence and frequency of family communication processes, resulting from cohabitation and other life realities, affect the specificity of the incriminated actions. The analysis of family communication may influence the finding of the accused guilty or the legal qualification of the action. As an example, consider the problem of defining a communication as a request or demand when it is necessary to decide whether the crime of euthanasia has been committed.

Keywords: communication, criminal law, family

Abstrakt: Komunikacja – jako przekaz informacji (komunikatu) między ludźmi, jest istotnym elementem życia rodzinnego. Podkreślić należy interpersonalność – relacyjność komunikacji rodzinnej oraz systemowość – funkcjonowanie jednostki w ramach podsystemów: mąż – żona, rodzic – dziecko oraz dziecko – dziecko. Realia życia codziennego, w tym wspólne zamieszkiwanie członków rodziny, implikują częstotliwość, intensywność i regularność procesów komunikacyjnych. Komunikacja nieprawidłowa wiąże się z zakłóceniami funkcjonowania rodziny. Skrajnym przejawem takich zakłóceń – dysfunkcji, będzie popełnianie czynów zabronionych. Celem artykułu jest określenie i scharakteryzowanie najważniejszych prawno-karnych aspektów dysfunkcji komunikacji w rodzinie – z perspektywy prawa karnego materialnego. Komunikacja rodzinna może być elementem czynności sprawczej przestępstw na gruncie Kodeksu karnego. Wymienić należy w szczególności przestępstwa przeciwko rodzinie i opiece: bigamię (art. 206 k.k.), znęcanie się (art. 207 k.k.) i rozpijanie małoletniego (art. 208 k.k.), oraz przestępstwo przeciwko życiu i zdrowiu – zabójstwo eutanatyczne (art. 150 k.k.). Przedmiotem postępowań będą: oświadczenia woli osób wstępujących w związek małżeński (przestępstwo bigamii), groźby, zastraszanie i ubliżanie, realizowane przez sprawców znęcania się; naklanianie małoletnich do spożywania alkoholu (przez rodziców lub opiekunów prawnych), a także żądania i prośby, których przedmiotem jest wola zakończenia życia (w przypadku zabójstwa eutanatycznego). Istotny prawno-karnie jest kontekst oraz relacje nadawcy z odbiorcą – szczególnie mąż (ojciec) jako nadawca w procesie komunikacyjnym mąż – żona i rodzic – dziecko. Intensywność, trwałość i częstotliwość procesów komunikacji rodzinnej, wynikające ze wspólnego zamieszkiwania i innych realiów życiowych, wpływają na specyfikę inkryminowanych czynów. Analiza komunikacji rodzinnej może mieć wpływ na uznaniu oskarżonego za winnego lub na kwalifikację prawną czynu. Jako przykład należy wskazać problematykę określania komunikatu jako żądania lub prośby w przypadku konieczności rozstrzygnięcia czy popełnione zostało zabójstwo eutanatyczne.

Słowa kluczowe: komunikacja, prawo karne, rodzina

¹ Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2023-2Panka.pdf>

Introduction

Communication can be understood as the transfer of information (message) in a relationship between individuals (Bejma, 2014). There are six main elements of the communication process: context (conditions of the communication process), participants (sender and recipient of the message), message (message between the sender and the recipient of a two-level nature: content and relation), channel (transmission route), noise (sources of transmission interference) and finally, feedback (recipient's reaction to the message) (Bejma, 2014; Filipiak, 2004). What is the association of the family communication with it? It is indicated that communication is an important element of family life and allows for building relationships between spouses, parents and children, and siblings. It is the interpersonal nature—the relationship between the sender and the recipient—that is indicated as the basic feature of family communication (Matyjas, 2017).

Other characteristics of family communication will be the intensity, durability, and frequency of personal interactions, occurring due to the context—especially the cohabitation of family members and their dependencies or emotional ties (Matyjas, 2017). The systemic nature of communication also needs to be emphasized—the functioning of the individual is subordinated to various interactions with family members. Subsystems can be distinguished: marital (husband–wife), parental (parent–child) and siblings (child–child), influencing each other (Harwas-Napierała, 2006), creating a hierarchy of values (Komorowska-Pudło, Sameluk, 2022).

One of the basic points of reference of the text is the sub-discipline referred to as family psychology, which deals with the study of interpersonal relations of people in consensual relationships, however, outstanding familiologists (e.g. de Barbaro, 1999; Braun-Galkowska, 2018; Ryś, 2020) point to the mainstream research and special consideration and emphasis on formal relationships, i.e. research on the basic social group/cell on which society is based, built as a result of marriage.² Within this sub-discipline,

there are many conceptualizations of the family, one of the most important for many years and also used in this text is the systemic and communication approach, which emphasizes “the spiritual unification of a small group of people gathered in a common home by acts of mutual help and care, based on belief in real or alleged biological connection, family and social tradition” (Jakubiec, 2011, p. 7). This approach draws attention to the importance of understanding the family in functional and axiological categories, it also recognizes the family in its relational and interpersonal dimension.³ Particular consideration was given here to the communication aspect of these interpersonal relations. Open, clear communication, enabling the proper course of information processes, is, as Barbara Harwas-Napierała points out, a key factor distinguishing “healthy families from those that show a significant degree of dysfunction” (Harwas-Napierała, 2006, p. 221). In the text, we will treat dysfunctions, similarly to Harwas-Napierała, as disturbances in the functioning of the family—in the communication aspect.

Barriers that hinder family communication include: ordering, commanding, and managing or persuading and moralizing (Matyjas, 2017). If difficulties in family communication are related to disturbances in the functioning of the family, then they are also associated with their extreme manifestation, i.e. committing acts prohibited under Polish criminal law. Dysfunctional processes—devoid of openness, containing communication barriers, of a strongly persuasive nature, can be criminalized by law as causative acts of crimes committed by means of language or utterances.

If family communication can be an element of the causative act of the crime, then family members will take part in the criminal trial. The family can be both a participant and an object of communication in the process. Family members—participants in the process—play specific roles and formulate statements as witnesses, accused or aggrieved. Law executors (judge,

2 The family is a basic value in Polish culture due to strong Christian and even pre-Christian tradition, as the patterns of Slavic culture indicate that it was an ancestral culture (“rodzina” – etymologically from the Polish word “ród”) (Pankalla, Kośnik, 2018).

3 An important integration and communication function is also played by family myths (cf. Pankalla, 2000).

defense lawyers, prosecutors) also participate in this communication. They communicate with family – but also about family. They make (and present in the form of statements in the courtroom) factual findings about family relationships, and sometimes even narratives about family crime (e.g. Cotterill, 2003; Weare, 2017).

When examining family communication in criminal law, two perspectives can be adopted: substantive law and procedural law. The aim of the article is an attempt to define and characterize the most important criminal law aspects of dysfunction of family communication—taking the perspective of substantive law. Substantive criminal law, as Gardocki points out, is a field of law that defines, among others, acts that are crimes and the rules of criminal liability (including penalties, punitive measures, and security measures) (Gardocki, 2019). In the article, particular emphasis will be placed on the incrimination of family communication dysfunctions (especially in the subsystems: husband–wife and parent–child) on the basis of the Act of June 6, 1997 – the Criminal Code.⁴

1. Dysfunctions of family communication – offences against family and care

Family communication can be an element of the causative act of many crimes. The Criminal Code has a separate chapter XXVI – “Offences against the family and care”, subordinated to the family as a protected good. The chapter lists the following crimes: bigamy (Article 206 of the Criminal Code), maltreatment (Article 207 of the Criminal Code), inducing a minor to drink habitually (Article 208 of the Criminal Code), evading the duty of alimony (Article 209 of the Criminal Code), abandonment (Article 210 of the Criminal Code), abduction (Article 211 of the Criminal Code), unlawful adoption arrangement (Article 211a of the Criminal Code). Communication as an important element of causative act may occur in particular in the case of: bigamy, maltreatment, inducing a minor to drink habitually.

1.1. Bigamy

The crime of bigamy is defined in Article 206 of the Criminal Code: “Whoever enters into marriage despite being married is subject to a fine, restriction of liberty or imprisonment for up to 2 years.” The doctrine indicates that the purpose of the criminal law prohibition of bigamy is to protect the family: “Marriage (...) legally concluded between a man and a woman gives the basis (...) to initiate an independent, separate link of the social structure, which is the family. (...) the legislator, protecting the mere fact of the legality of entering into a marriage protects the initiation of a family unit” (Hypś, 2023a; Tobis, 1980). Bigamy is known as a crime committed by speech, consisting in making declarations of will to enter into marriage (Demenko, 2021).

The communication aspect of causative act is as follows. In the process of communication there are participants who are both senders and recipients of messages. These are two individuals who want to get married (a man and a woman), as well as a civil registrar or a clergyman. The individual nature of the crime implies the fact that at least one of the participants wishing to get married is, at the time of the communication process, in a valid marriage with another person (under Polish law). An element of the context may be, for example, the place of the communication process (registry office—in the case of a civil marriage, or a Catholic church or the seat of another religious association—in the case of a concordat marriage).

Two participants submit declarations of will to enter into marriage. The time of committing a crime is the moment of making declarations of will—that is, the transmission of messages with a causative (performative) function, causing a change in the legal status and at the same time a criminal effect—the conclusion of marriage. Bigamy is a one-time (one-second) crime (Hypś, 2023a) – the process of communication (transmission of messages—making declarations of will) is penalized, and not the ongoing state of marriage. A bigamous (second) marriage entails legal effects and functions until it is annulled (Hypś, 2023a).

4 Act of June 6, 1997 – the Criminal Code [Kodeks karny] (i.e. Journal of Laws of 2022, item 1138)—hereinafter the following will be used: abbreviated name – the Criminal Code.

1.2. Maltreatment

The crime of maltreatment, defined in Article 207 of the Criminal Code, is considered the basic instrument for combating domestic violence (Hypś, 2023b). The complex subject of protection includes the family, its proper functioning and upbringing of young people, and depending on the form of the act, also freedom and honor, as well as human life and health (Kosonoga, 2023). The Supreme Court emphasized that the crime affects the whole family, hindering or even preventing its development.⁵ Art. 207 § 1 of the Criminal Code specifies that: “Whoever physically or mentally maltreats the closest person or another person in a permanent or temporary relationship of dependence on the perpetrator, is subject to the penalty of imprisonment from 3 months to 5 years.” The specificity of the subject side of maltreatment means “usually a behavior consisting of single or multi-type single actions violating various goods and systematically repeated”.⁶

Family communication can be an element of the causative act of maltreatment in the mental dimension. The indicated basic features of family communication—intensity, durability, frequency of personal interactions—also characterize the subject matter of the crime. Cohabitation or close contact between the perpetrator and the victim are factors that enable frequent, multiple, cyclical communication processes. Participants in the communication process will be, in particular, spouses and children. Messages sent by the perpetrators to the victims (often—by the spouse (father) to the wife and children) contain many barriers that block proper communication and have a negative impact on the recipient. Communication barriers such as warnings, reprimands, and threats seem to be important (Matyjas, 2017). Messages sent by the perpetrators to the victims occur together with the following incriminated behaviors: repeatedly shouting at the victim, directing vulgar words and

calling names;⁷ insulting, ridiculing and insulting;⁸ threats of crime or abandonment, showing contempt, disregard, intimidation, brawling, arousing fear of death (Kosonoga, 2023); threatening to use a knife.⁹

As an example of the communication aspect in the crime of maltreatment, there is a case conducted by the District Court in Łódź. The judgment describes the regularity and multiple messages sent by the perpetrator to the victim—wife: “Being under the influence of alcohol, the accused did not control his actions at all, systematically initiating domestic fights, during which he insulted the victim, addressing her words commonly considered offensive. In the same tone, he accused her of marital infidelity, criticized her appearance using offensive and hurtful epithets, drove his wife out of the house, claiming that everything belonged to him. The above-mentioned forms of his incriminated actions, in an objective assessment, constituted a significant ailment for the victim, causing mental suffering, which the complainant did not deny.”¹⁰

1.3. Inducing a minor to drink habitually

Penalizing the crime of inducing a minor to drink habitually (Article 208 of the Criminal Code) is aimed at protecting the proper development of young people – which, as indicated in the literature on the subject, involves protecting the proper functioning of the family, especially its care and educational function (Hypś, 2023c). Minors remain under the care of their parents or legal guardians, who should follow certain standards during the upbringing process—e.g. ensure children are free from addictive substances. The offense is defined as follows in the Criminal Code: “Whoever makes a minor drunk by providing them with an alcoholic beverage, facilitating their consumption or persuading them to consume such a beverage, is subject to a fine, the penalty of restriction of liberty or imprisonment for up to 2 years.” The Supreme Court pointed out

5 Judgment of the Supreme Court of December 2, 1974, I KRN 33/74, OSNKW 1975, No. 3–4, item 38.

6 Judgment of the Supreme Court of October 24, 2000, WA 37/00, Legalis.

7 Judgment of the Court of Appeal in Katowice of October 25, 2019, II AKa 455/19, OSAKat 2020, No. 2, item 11.

8 Judgment of the District Court for Warszawa-Mokotów in Warsaw of October 30, 2019, III K 721/17 (non-final judgment).

9 Decision of the District Court in Oleśnica of May 19, 2014, Case No. I Ns 283/14.

10 Judgment of the District Court in Łódź of December 4, 2018, V Ka 1044/18.

that although it is possible to fulfill the hallmarks of an act by a single action by the perpetrator, it seems obvious that multiple actions will most often be required.¹¹ Therefore, the causative act of the crime of drunkenness of a minor will (usually) have a multi-act character.

The communication aspect of the causative act will concern in particular persuading a minor to consume alcohol. As in the case of the crime of maltreatment, the intensity, durability, and regularity of personal interactions in family communication favor the execution of this crime by the perpetrator. The crime is common in nature, i.e. it may be committed by any person who does not have to be a family member of the aggrieved minor. The context of the communication process (cohabitation, regular contacts) means that drinking is often done by the child's parent or guardian. Therefore, the participants in the communication process will be the perpetrator (e.g. a parent) and the aggrieved minor.

The message conveyed by the perpetrator (persuading as an element of the subject side) is intended to perform the persuasive function. Anna Demenko points out that: "the range of behaviors that can be considered as persuasion is extremely wide, because the form of persuasion can be any—it can be both a word and a gesture, or any other action, which, however, will be recognized as a certain message (...) the context and the relationship between the sender and the recipient are crucial" (Demenko, 2021). The doctrine also indicates that persuasion affects the will of a minor child: "towards breaking his mental resistance and persuading or inducing their conviction to drink alcohol" (Hypś, 2023c). It can take the form of "persuasion, request, encouragement, command, as well as coercion (...)" (Hypś, 2023c). Once again, the crime can be referred to the category of barriers in family communication. In the communication process of "persuading", there may be, for example, barriers: ordering, commanding, managing; persuading, preaching, moralizing; or dictating a solution, making suggestions, giving advice (see: Matyjas, 2017).

2. Dysfunctions of family communication – the crime of euthanatic homicide

An example of a code crime from another chapter, in the case of which family communication may be an important element of the causative act, will be a crime against life and health—euthanatic homicide (euthanasia) (Article 150 of the Criminal Code). It is indicated that the subject of protection in this case is primarily human life—which, as an inalienable value, it is independent even of the will of the holder (Kokot, 2023). Art. 151 §1 of the Criminal Code states: "Whoever kills an individual at their request and under the influence of sympathy for them, is punishable by imprisonment from 3 months to 5 years." Privileging euthanatic homicide over the crime of homicide under Art. 148 of the Criminal Code results from the situation in which the perpetrator found themselves. Compassion for the person who demands the act—for example, being in a state of serious illness—can cause the perpetrator to decide to fulfill their will—especially if it is a family member. This kind of conflict of values can occur especially when the perpetrator has a close relationship with the victim. It is indicated that the emergence of compassion (as a motive for murder) will be significantly influenced by the quality of the emotional bond resulting from the kinship relationship (Kokot, 2023).

Therefore, the interpersonality (relationality) of the family communication process may play a key role in making the decision to perform a causative act. The participants in the communication process will be: the victim (demanding to deprive them of life) and the perpetrator (driven by compassion). It is indicated that the victim's message should be verbal—oral or written (Kokot, 2023). The channel (method of communication) may be: direct or telephone conversation, written message, letter or e-mail.

In order for the hallmarks of the act to be fulfilled, the victim's message should be regarded as a demand, characterized by categorical and

¹¹ Judgment of the Supreme Court of 14 March 2007, IV KK 472/06, OSNwSK 2007, No. 1, item 621.

one-sidedness.¹² Therefore, the strongly persuasive function of the message will be implemented—“a demand, unlike consent or even a request of the aggrieved party, contains an element of pressure on the psyche of its addressee”,¹³ and is close to an order or command (Kokot, 2023). Categorizing the victim’s message as a demand or request has an impact on the legal classification of the act—for example, on recognizing the act not as euthanatic homicide, and as murder under Art. 148 of the Criminal Code, subject to a higher penalty. It seems that clearly defining the victim’s message as a demand or request is a difficult task and may require the appointment of a linguistic expert in many criminal cases.

A clear distinction between a request and a demand was made in the case conducted by the Court of Appeal in Białystok. The court found that the victim repeatedly expressed her will to die and sent a message to her husband—but “only” in the form of a request, not a demand: “The fact is that the victim was determined to take her life and asked the defendant with such a request. This does not mean, however, that every will to die expressed by the victim may be considered such a “demand” within the meaning of Art. 150 § 1 of the Criminal Code (...). The will of suicide was repeatedly expressed by the victim to the accused and was accepted by him. They agreed to commit suicide together. Together, they wrote farewell letters to A. G.’s son, the neighbors—the Ł. married couple, and to the police, and agreed on how to kill the aggrieved. However, it should be stated, and this results from the court’s findings, including the explanations of the accused (...), that these were only expressed “requests” of the victim to deprive her of her life, which, according to the Court of Appeal, were not “demands” referred to in Art. 150 § 1 of the Criminal Code (...).”¹⁴

Conclusions

Family communication is the subject of substantive criminal law. The Criminal Code contains crimes closely related to the specificity of dysfunctional communication in the family. The communication aspect is incriminated in the case of crimes against the family and guardianship, such as: bigamy (Article 206 of the Criminal Code), maltreatment (Article 207 of the Criminal Code) and inducing a minor to drink habitually (Article 208 of the Criminal Code). Family communication may also affect the causative act of crimes with a different subject of protection—for example, euthanatic homicide (euthanasia), affecting a person’s life. The subject of criminal proceedings is, in particular, declarations of will of persons entering into marriage and messages performing a persuasive function—threats, inducements, requests, demands.

It is worth noting that the key features of family communication—relationality, intensity, durability, and frequency of interactions—are also the features of causative acts of socially harmful crimes affecting the family: maltreatment and inducing a minor to drink habitually. Two important, criminal law aspects of dysfunctional family communication should be distinguished here: the context and the relationship between the sender and the recipient in the husband-wife and parent-child subsystems. It is the processes of communication between spouses and between parents and children, as well as cohabitation, close contact and the specificity of life and emotional ties that lead to the indicated prohibited acts in the family. The analysis of family communication in criminal proceedings may also determine whether the accused is found guilty or the legal qualification of the act. As an example, the issue of defining a message as a demand or a request should be pointed out. The court’s decision in such a case may affect the qualification of the act as homicide or euthanasia homicide, and thus the punishment.

12 Judgment of the Court of Appeal in Kraków of 13 May 2014, II AKa 72/14, KZS 2014, No. 9, item 41.

13 Judgment of the Court of Appeal in Wrocław of December 19, 2014, II AKa 267/14, KZS 2015, No. 6, item 89.

14 Judgment of the Court of Appeal in Białystok of March 21, 2018, II AKa 21/18, Legalis.

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The role of oxytocin in interpersonal communication of people with borderline personality disorder

Rola oksytocyny w komunikacji interpersonalnej osób z borderline¹

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Marlena Podlecka^a, Katarzyna Nowakowska-Domagala^b,
Tadeusz Pietras^c, Kasper Sipowicz^d

^a Marlena Podlecka, MA, <https://orcid.org/0000-0002-2213-374X>,

Department of Neuroses, Personality Disorders and Eating Disorders, Institute of Psychiatry and Neurology in Warsaw

^b Katarzyna Nowakowska-Domagala, MD, PhD, <https://orcid.org/0000-0002-3564-2818>,

Institute of Psychology, Faculty of Educational Sciences, University of Lodz

^c Prof. Tadeusz Pietras, MD, PhD, <https://orcid.org/0000-0003-1771-3819>,

The Second Department of Psychiatry, Institute of Psychiatry and Neurology in Warsaw

^d Kasper Sipowicz, PhD, <https://orcid.org/0000-0001-7384-2899>,

Department of Interdisciplinary Disability Studies, The Maria Grzegorzewska University in Warsaw

Abstract: The paper outlines the role of oxytocin in regulating interpersonal communication of patients with borderline personality disorder (BPD)². According to the neuropeptide model of borderline disorder, changes in the regulation of the oxytocin secretion system are indicated as a potential mechanism of interpersonal deficits, which are the core of that disorder. Numerous studies have confirmed the reduced level of oxytocin in this group of people. In view of that finding, in the last dozen or so years, there have been attempts at intranasal administration of oxytocin as a potential pharmacotherapy strategy dedicated to reducing the symptoms of BPD in the interpersonal area. However, the conclusions of the research in this field are not definitive to date.

Keywords: oxytocin, borderline, neuropeptide model, interpersonal disorders

Abstrakt: W niniejszym artykule opisano rolę oksytocyny w regulowaniu komunikacji interpersonalnej osób z borderline. Zgodnie z neuropeptydowym modelem zaburzenia osobowości borderline wskazuje się, iż zmiany w regulacji systemu wydzielania oksytocyny stanowią potencjalny mechanizm deficytów interpersonalnych, będących rdzeniem owego zaburzenia. Liczne badania potwierdzają, iż poziom oksytocyny w tej grupie osób jest obniżony. W związku z tym w przeciągu ostatnich kilkunastu lat pojawiły się próby donosowego podawania oksytocyny jako potencjalnej strategii farmakoterapii dedykowanej redukcji objawów zaburzenia osobowości z ograniczania w obszarze interpersonalnym. Wnioski płynące z dotychczasowych badań w tym obszarze nie są jednak w pełni konkluzywne.

Słowa kluczowe: oksytocyna, borderline, model neuropeptydowy, zaburzenia interpersonalne

Introduction

Oxytocin is a neurohormone produced by the hypothalamus, which is collected and released from the posterior pituitary gland. For many years, oxytocin was seen primarily as a regulator of reproductive, perinatal and maternal behavior, whereas this neuropeptide is an

extremely important mediator of regulating the level of anxiety and aggressive behavior, social cognition processes, as well as establishing and maintaining interpersonal relationships (Striepens et al., 2011; Schneiderman et al., 2014; Bosch et al., 2016; Rutig-

1 Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2023-2Sipo.pdf>

2 The term "borderline personality disorder" is consistent with the DSM 5 nomenclature. An analogous nosological entity in ICD-10 is emotionally unstable personality disorder with impulsive and borderline subtypes. In this paper, the term "borderline" is used to refer to both types of emotionally unstable personality.

liano et al., 2016; Marsh et al., 2021). The importance of oxytocin in the etiopathology of mental disorders is increasingly emphasized nowadays (Turan et al., 2013; Reiner et al., 2015; Afinogenova et al., 2016; Reijnen, Geuze and Vermetten, 2017), also including BPD (Stanley, Siever, 2010; Jobst et al., 2016).

The neuropeptide model of borderline personality disorder (Stanley and Siever, 2010) indicates that changes in the regulation of, among others, the oxytocin secretion system are a potential mechanism of interpersonal dysregulation, which is the core of BPD. The growing interest in the role of oxytocin in regulating processes related to interpersonal communication is an expression of the neurobiological approach to borderline personality, which is related to the ongoing discussion on the possibility of enriching the dedicated psychotherapeutic measures with intranasal administration of oxytocin (Ripoll, 2013; Vancova, 2021).

It is currently indicated that pharmacotherapy does not bring satisfactory results in the case of reduction of axial borderline symptoms in the dimension of interpersonal disorders such as a feeling of emptiness, disintegration of identity or fear of abandonment (Stoffers et al., 2010). On the other hand, the conclusions of the research on the use of oxytocin in the treatment of autism and schizophrenia seem promising (MacDonald, Feifel, 2012; Davis et al., 2014; Domes et al., 2014; Scheele et al., 2014). It turns out that this neuropeptide reduces some of the symptoms of both disorders by improving the processes of social cognition.

1. Disorganized pattern of interpersonal functioning in borderline personality disorder

Borderline personality disorder is one of the most widespread mental disorders today. It is estimated to be diagnosed among up to 22% of adults receiving psychiatric treatment (Ellison et al., 2018; Doering, 2019). Research indicates that BPD is associated with significantly reduced quality of life (Botter et al., 2021), frequent co-occurrence, among others, of affective diseases, anxiety disorders and addictions, as well as increased suicidal risk (Tomko et al., 2014; Shah, Zanarini, 2018), and the therapeutic process is fraught with many difficulties (Paris, 2010).

In the International Statistical Classification of Diseases and Related Health Problems (ICD-10), borderline personality disorder has been classified as an emotionally unstable personality disorder (F60.3) with two subtypes: impulsive (F60.30) and borderline (F60.31), which are diagnosed depending on the severity of symptoms and their impact on functioning.

In the latest revision of ICD-11, the typology of personality disorders was abandoned in favor of a differential diagnosis. The new classification is therefore based not on the recognition of the type but on the severity of personality disorders (6D10) through three levels: mild (6D10.0), moderate (6D10.1) and severe (6D10.2), for which significant personality traits or patterns are additionally determined, among which the borderline pattern has been specified.

Table 1. The diagnostic criteria of emotionally unstable personality (F60.3), impulsive subtype (F60.30) and borderline subtype (F60.31) according to ICD-10.

Impulsive subtype	Borderline subtype
<ol style="list-style-type: none"> 1. A noticeable tendency to act unexpectedly without considering the consequences. 2. A noticeable tendency to quarrelsome behavior and conflicts with others, especially when impulsive behavior is thwarted or criticized. 3. Tendency to outbursts of anger and violence, with an inability to control explosive reactions. 4. Difficulty in maintaining any course of action that does not bring immediate reward. 5. Unstable and capricious mood. 	<p><i>(the presence of at least three symptoms of the impulsive subtype)</i></p> <ol style="list-style-type: none"> 1. Distorted and uncertain image of oneself, goals and internal preferences (including sexual ones). 2. Tendency to engage in intense and unstable relationships, often leading to an emotional crisis. 3. Excessive efforts to avoid abandonment. 4. Repeated threats or acts of self-harming. 5. Chronic feeling of emptiness.

Borderline personality disorder is assumed to be the dominant pattern of behavior characterized by three dimensions of symptoms: (1) behavioral dysregulation (including impulsivity, auto-aggressive behavior and suicidal tendencies, substance abuse, recklessness, inadequate expression of anger), (2) affective dysregulation (including emotional lability, strong negative emotional reactions, dysphoria) and (3) abnormalities in interpersonal relationships (including instability of relationships, fear of real or anticipated abandonment/rejection, feeling of inner emptiness, diffusion of identity (Zanarini et al., 2007; Stanley, Siever, 2010; Gunderson, Links, 2014; Amad et al., 2015)).

Specifically, the symptoms associated with the last of the discussed dimensions are both inter- and intrapersonal (Siever, Weinstein, 2009). In the intrapersonal area, characteristic abnormalities regarding social cognition can be observed, among others, disturbed ability to mentalize (reading one's own and other people's mental states), selective concentration of attention on negative social stimuli, constant anticipation of rejection, oscillating between extreme idealization and devaluation of other people (Fonagy, Bateman, 2007; Lazarus et al., 2014; Berenson et al., 2018). On the other hand, in the interpersonal space, there will be directly observed effects of intrapersonal difficulties such as excessive dependence and instability of relationships (Gunderson and Links, 2014).

The optics of the disorganized pattern of interpersonal functioning is the foundation of one of the conceptualizing models of BPD. Many researchers emphasize that interpersonal dysfunction is a specific starting point for the broadly understood symptomatology of borderline (Fonagy, Bateman, 2007; Gunderson, Lyons-Ruth, 2008; Hopwood et al., 2014). Other symptoms such as emotional dysregulation or impulsivity are considered to be secondary (Stanley and Siever, 2010; Brüne, 2016), while also pointing to the potential nature of, for example, auto-aggressive (and even suicidal) behaviors as dysfunctional strategies for communicating or building closeness (Stanley, Siever, 2010; Gunderson, Links, 2014).

In accordance with psychodynamic literature, it is assumed that the pattern of interpersonal dysfunctions characteristic of borderline is a kind of

emanation of the earliest relationship between the child and the caregiver, which are consolidated, creating a psychological structure unique to each person, referred to as the attachment system. This system is formed on the basis of early childhood experiences and is generalized throughout life to all relationships with other people, creating a kind of patterns of experiencing oneself and other people in the context of mutual relationship. The basic elements of this system are internal operating systems consisting of mental representations about oneself, the person who is the figure of attachment and the relationships between them, which to a large extent explains the interdependence of the intra- and interpersonal area of irregularities characteristic of borderline personality disorder (Fonagy et al., 2013; Marszał, 2015).

As indicated by research results, up to 90% of borderline people exhibit an avoidant, anxious-ambivalent, or disorganized attachment style (Shorey and Snyder, 2006; Fonagy et al., 2011; Jobst et al., 2016). The unsatisfying, unstable and even traumatic nature of the child's and caregiver's early relationship results in the formation of a non-secure attachment style, which in turn leads to the development of interpersonal strategies typical of borderline people, which are a kind of conglomerate of the need for closeness and to be noticed and the fear of loneliness while moving away under the influence of fear of intimacy (Jobst et al., 2016).

2. The role of oxytocin in the interpersonal regulation of borderline persons

Oxytocin, as a neuropeptide consisting of 9 amino acids, is a neurohormone produced by the hypothalamus and collected and released from the posterior pituitary gland (Lee et al., 2009; Kumsta, Heinrichs, 2013). For many years, oxytocin was primarily seen as a regulator of reproductive, perinatal and maternal behaviors. However, this neuropeptide has also turned out to play a key role in the regulation of prosocial behavior (Schneiderman et al., 2014; Bosch et al., 2016; Rutigliano et al., 2016).

Oxytocin is crucial for affiliate behavior related not only to the formation and maintenance of attachment between parent and child, but also between romantic relationship partners. In addition, it is involved in the processes of social cognition and mentalization; regulation of the level of anxiety and stress; regulation of aggressive behavior, and even the process of forming memories (especially social and spatial memory) and developing attachment to specific places (Ross and Young, 2009; Schneiderman et al., 2014; Rutigliano et al., 2016; Keech et al., 2018).

The presence of oxytocin receptors is noted primarily in the areas of the brain which are involved in interpersonal behavior: the amygdala and hippocampus, the nucleus accumbens and the dorsal nucleus of the vagus nerve (Meyer-Lindenberg et al., 2011). At the neurobiological level, oxytocin regulates the reactivity of the amygdala to attenuate the action of stress hormones and modulate brain activity at the level of neural networks associated with social cognition (Heinrichs et al., 2003; Evans et al., 2010; Labuschagne et al., 2010; Lancaster et al., 2015).

Currently, it is indicated that dysregulation of the oxytocin system may be the main neurobiological mechanism of borderline personality disorder, explaining abnormalities in the interpersonal area. The assumptions of the neuropeptide model (Stanley and Siever, 2010) are a kind of neurobiological extension of psychodynamic concepts, which see the sources of borderline symptoms in experiences related to the early relationship between the child and the caregiver (Fonagy et al., 2013).

Both the level of oxytocin release and the concentration of oxytocin receptors are determined genetically. Presumably, however, epigenetic processes are crucial here. Negative early childhood experiences in the context of shaping the attachment style may affect the development of the neuropeptide system, as well as cause methylation of the OXTR gene encoding a protein acting as an oxytocin receptor, and thus affect the expression of this gene (Brüne, 2016; Ellis et al., 2021; Herpertz, Bertsch, 2015; Kumsta, Heinrichs, 2013; Reiner et al., 2015; Stanley, Siever, 2010).

Previous studies have demonstrated reduced oxytocin levels among people diagnosed with borderline personality disorder (Seltzer et al., 2014; Jobst et al.,

2016; Ebert et al., 2018; Carrasco et al., 2020; Kartal et al., 2022), with borderline people characterized by a disorganized attachment style exhibiting significantly lower levels of oxytocin than patients with the same diagnosis and secure attachment style (Jobst et al., 2016). Oxytocin levels in this population correlate negatively with the experience of early childhood trauma (in particular, emotional abuse and neglect) (Seltzer et al., 2014) and the severity of borderline symptoms (Bertsch et al., 2013).

A study conducted in the general population indicates that in people characterized by an anxious attachment style oxytocin levels do not have to be lowered, and may even be higher (Weisman et al., 2013), while the association of OXTR gene polymorphism with the attachment style remains insignificant (Roisman et al., 2013). It seems, therefore, that the neuropeptide model of the etiopathogenesis of borderline personality disorder may require further empirical verifications, and although the results of numerous studies indicate that the chosen direction of exploration is right, it may require some kind of expansion. A wider range of factors determining the deregulation of oxytocin, going beyond the framework of attachment style, should probably be considered.

In view of the modern tendency to perceive oxytocin as a neuropeptide of prosocial nature, the results of research on the intranasal administration of oxytocin in the general population may be confusing. Although numerous studies show that exogenous oxytocin stimulates the processes of empathy, mentalization, cooperation, trust and the experience of social reward (Kosfeld et al., 2005; Domes et al., 2007; De Dreu et al., 2010; Bakermans-Kranenburg, van IJzendoorn, 2013; Groppe et al., 2013), it also has the potential to reinforce the feelings of jealousy and envy and a readiness to defensive behaviors (Shamay-Tsoory et al., 2009; Striepens et al., 2012). It should therefore be emphasized that the role of oxytocin in shaping social behaviors is certainly complex and ambiguous.

Due to the attractiveness of the use of oxytocin as a potential pharmacotherapy strategy for BPD, a number of studies exploring the effect of intranasal neuropeptide on individual interpersonal difficulties characteristic of this disorder have been conducted. To the knowledge of

the authors of this paper, the research presented below fully reflects the state of the art in the exploration of this area. Due to the relatively small number of empirical studies, and at the same time the inconclusiveness of their findings, it seems reasonable to emphasize the need for further research in this area.

The use of intranasal oxytocin to treat borderline personality disorder was first attempted by Simeon et al. in 2011. The study demonstrated that exogenous oxytocin significantly reduced the dysphoric response to stress after the first administration, which would indicate a beneficial effect of oxytocin on the regulation of emotions in the group of borderline people. It also turned out that the difference between the response to oxytocin and placebo is conditioned by the experience of early childhood trauma.

A study conducted using eye-tracking and fMRI showed that intranasal administration of oxytocin to borderline individuals reduced the selective focus of attention on negative social stimuli. The reduction of speed and number of eye movements in response to observing a face expressing anger seems particularly important. In parallel, a decrease in the activity of the amygdala, i.e. the area hypersensitive to emotional stimulation, was also noted in this group (Bertsch et al., 2013).

Brüne et al. (2013) demonstrated that the administration of oxytocin to borderline subjects significantly reduces the avoidance response when exposed to facial expressions of anger, with the strength of this type of behavioral response correlated with the severity of early childhood trauma. Presumably, this effect is achieved by reducing the stress response as a result of the administration of oxytocin. A way to cope with the stress associated with interpersonal communication typical of people with BPD is to actively direct attention beyond the social stimulus perceived as threatening (e.g. avoidance reaction in response to the emotion of anger perceived when observing the face of the interlocutor). The administration of oxytocin therefore eliminates the emotional context in which these maladaptive social stress-coping strategies appear.

In turn, neuroeconomic studies have revealed a reduction in the level of trust and cooperation among borderline individuals with avoidant/ambivalent attachment style after intranasal administration

of oxytocin (Bartz et al., 2011), and, additionally, a negative correlation of the level of trust and emotional neglect during childhood (Ebert et al., 2013).

A study on the importance of exogenous oxytocin in the regulation of non-verbal communication of borderline persons has demonstrated that the administration of this neuropeptide does not increase the number of affiliative (prosocial) behaviors (Brüne et al., 2015a). Ramseyer et al. (2020) report that intranasal administration of oxytocin in this group of people may cause a decrease in the level of non-verbal synchrony, which is a mutual coordination of behavior between interaction partners.

Conclusion

This paper is an attempt to outline the results of all previous explorations concerning the role of oxytocin in non-verbal communication of borderline individuals, but it is not a systematic review, or a meta-analysis.

The conclusions of the research carried out so far do not seem to be conclusive. They do not clearly answer the question of the legitimacy of using nasal oxytocin in the treatment of borderline patients (Eckstein and Hurlemann, 2013; Brüne et al., 2015b; Vancova, 2021). A neuropeptide model of borderline personality disorder (Stanley and Siever, 2010) linking interpersonal dysfunction to deregulation of the oxytocin system seems to be extremely attractive due to its practical implications. The existing strategies of borderline pharmacotherapy remain insufficient in the case of symptoms associated, among others, with the fear of abandonment, the sense of inner emptiness or disturbed identity (Stoffers et al., 2010).

It would seem, therefore, that the administration of oxytocin may be an excellent psychopharmacological intervention aimed at reducing interpersonal relationship disorders. Although studies conducted in the general population, with few exceptions, indicate an increase in prosocial behavior after intranasal administration of oxytocin, the effect of this neuropeptide in the group of borderline people remains much more complex and requires in-depth research, while the direction of exploration determined by the neuropeptide model seems to be extremely promising.

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