

## ***Supportive social interaction as a concept for describing the situation of persons experiencing an infertility crisis***

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### **Abstract**

**Objective:** This article presents the definitions and justification of the necessity to introduce the original concept of *supportive social interaction* into scholarly discourse. *Supportive social interaction* is understood as a group interaction encompassing speaking or listening in an informal and judgement-free environment, which is connected with the necessity – and also provides an opportunity – to reciprocally disclose the experiences, needs and personal convictions of the persons participating in the said interaction and leads to a reduction of stress. The differences between traditional approaches to support and supportive social interactions and their significance in the treatment of infertility have been outlined in this article.

**Theses:** Supportive social interactions, a precondition of which is the occurrence of disclosure, vary in terms of quality and function from support in the traditional sense of the word. They are also a source of stress reduction in the process of treating infertility using assisted reproductive technologies.

**Conclusion:** Supportive social interactions are increasingly important in the context of infertility treatment. The proposed concept is an essential element describing the functioning of persons experiencing an infertility crisis.

**Keywords:** *Supportive social interactions*, social support, infertility, disclosure

### **Infertility as a Source of Stress**

Infertility poses an immense challenge for a growing family. The diagnosis itself is preceded by a period of anxiety, doubt, and a lengthening out period of

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anticipation of successfully achieving pregnancy. A diagnosis of infertility belongs to one of the most stressful life events and should be examined in the context of a life crisis. Crises can be triggered by: the suspicion of having trouble conceiving, subsequent stages of the diagnosis, each of the types of treatment undertaken, every menstrual cycle that does not end with the longed-for pregnancy, as well as the decision to end ineffective treatment (Dembińska, 2018). The decision to undertake infertility treatment using assisted reproductive technologies is often also linked to a fear of losing closeness and handing over control of one's own body (Dembińska, 2012).

The diagnostic and treatment process is long-term and difficult to endure, which is why chronic stress is attributed to it. The psychological condition of persons experiencing infertility and the emotions accompanying them, as well as the ability to cope with stress are all key to successful treatment (Chanduszko-Salska & Kossakowska, 2018). The risk of stress and its elevated intensity increases with time. Multiple reproductive failures may periodically increase and heighten stress that is already cascading, resulting in psychological and somatic changes reciprocally interacting with each other (Chanduszko-Salska & Kossakowska, 2018).

### **The Significance of Support for Persons with Infertility**

According to Cobb (1976), the quality of social relationships is connected with the level of stress that is felt which, in turn, is linked to somatic health. Social support reduces the level of experienced stress as well as its further negative effects (Cobb, 1976; Dudek & Koniarek, 2003; Giesbrecht, 2013; Koss et al., 2014; McNaughton-Cassill et al., 2000; Ying et al., 2015). Individuals who experience stress related to infertility treatment but are capable of harnessing the resources of support in social networks are capable of reducing the negative impact of stress on health (Bloom et al., 1991).

The carried-out analyses allowed the source of support available to infertile couples to be systematised, and they constituted the following:

- Partner-partner support – in a situation of infertility, support may be insufficient in many cases as both partners need support (Koss et al., 2014; Ying et al., 2015);
- Institutional support (individual or couple psychotherapy) – couples using the support report a higher life satisfaction, acceptance of their infertility, and lower anxiety (Boivin et al., 1999; Eugster & Vingerhoets, 1999; Martins et al., 2011);
- Informal support groups – couples state that they feel less stressed and point to the importance of social bonds when they are part of an informal support group (McNaughton-Cassill et al., 2002; McNaughton-Cassill et al., 2000). According to some researchers, advice and support groups may be the most effective psychosocial interventions in infertility (Wischmann, 2008).

According to research, despite the above-mentioned potential sources of support, couples undergoing infertility treatment feel they have shortcomings in this area and the support they do receive usually comes solely from their partner. The couples also admit that once they share their emotions and receive support, this improves their mood and well-being (Malina & Szmaus-Jackowska, 2021). In a situation of low availability of other sources of support, *supportive social interactions* – a precondition of which is the disclosure of one's procreative problems – become increasingly important.

### **Disclosure of Procreative Problems in the Polish Cultural Context**

Patients beginning infertility treatment usually feel lost and disoriented. This indicates the need to provide exhaustive information regarding the selected method of infertility treatment and greater involvement on the part of healthcare practitioners in fostering the welfare of the treated couple since this has a significant effect on the quality of their further treatment (Dembińska, 2012; Slade, 1997). Studies have shown that a sense of heightened anxiety may have a negative impact on the outcome of the treatment procedure (Hashemi et al., 2012; Smeenk et al., 2001; Zaig et al., 2012). The source of the negative experiences of a couple undergoing infertility treatment may also be contact with the close and more distant social environment. Bronfenbrenner (1979) argues that this is because families are rooted in many different environments and the impact of social attitudes and policy on the functioning of the family and its members is clearly evident.

Polish society is characterised by relatively traditional values and beliefs. The main function of the family is the upbringing of children. This points to the dominant role of the Catholic Church in influencing public opinion and shaping attitudes towards assisted reproductive technologies (Haidt & Kesebir, 2010; Jarmakowski-Kostrzanowski & Jarmakowska-Kostrzanowska, 2016). Thus, the Polish conditions constitute a very specific backdrop both for couples deciding to use assisted reproductive technologies and also deciding to reveal this fact and share it with others. On the one hand, the very experience of infertility carries with it a crisis and psychological costs of coping with it (Dembińska, 2014) while, on the other hand, it is so stigmatised in the public debate, supported by the voices of Catholic circles, that such a choice may become an additional psychological burden (Dembińska, 2018).

It turns out that both the representatives of the general population as well as healthcare practitioners worldwide disagree as to the validity of disclosing information about the way a child is conceived. The author's own research involving 52 infertile couples (focus groups) points to differences between women and men concerning the willingness to disclose information about starting treatment. The women indicate the compassion shown to them by other women. Men, on the other hand, mention the frequent belittling of the problem by other men in their milieu. Only four couples out of all the respondents declared that they had no bad experiences

relating to disclosing information about infertility. However, the majority did not disclose any information about the undertaken infertility treatment due to fear of their actions being judged or of being an “unhealthy sensation” (“If our parents knew, they would really start to worry and ask questions”, “Our family lives in the town where we go for treatment and we’re always worried of bumping into someone we know”) (Malina & Szmaus-Jackowska, 2021). The conclusions from the carried-out research are that couples are reluctant to reveal information about undergoing treatment using assisted reproductive technologies. This may be caused by a strong sense of social pressure and mismatch (Dembińska, 2018).

Failure to disclose information about the method of conception of a child takes away from persons suffering from infertility the chance to openly discuss their own infertility-related thoughts, feelings, and experiences (Dembińska & Malina, 2019; Malina et al., 2019). Withholding information about the undertaken treatment blocks the possibilities of obtaining support and may exacerbate the sense of isolation. Social isolation prevents people from using the available resources and affects even the most psychologically resistant individuals. Functioning in a situation of isolation often gives rise to feelings of anxiety and disorientation, where behaviour often becomes impulsive and irrational (Waligóra, 1974). A long-term and sustained state of social isolation is the cause of negative experiences: uncertainty, distrust, avoiding social contacts, as well as hypersensitivity and being excessively cautious in interpersonal contacts, as well as difficulties in controlling one’s emotions and even depression (Bielawska-Batorowicz, 2006). An essential condition to obtaining support from the broader social environment is sharing information in the sense of disclosing information about the attempts to conceive or the conception of a child using assisted reproductive technologies.

The author’s own research has shown that disclosure, understood as actions consisting of disclosing information to others about experienced difficulties and the emotional states related thereto (Dembińska & Malina, 2019), helps infertile couples reduce the negative effects of stress. Disclosure in this sense not only refers to revealing the very information concerning procreative difficulties and the method of treatment, but also constitutes a conscious and goal-oriented action consisting of sharing the experiences related with the treatment process. Readiness to disclose is also conducive to obtaining social support, helps to reduce the hormonal markers of procreative stress but also brings improvement in the scope of subjective well-being of the disclosing persons (Malina et al., 2019). Disclosure was investigated in the context of the involvement of infertile couples in supportive social interactions and is a precondition for involvement in supportive social interactions.

### **Supportive Social Interactions**

In order to understand what social support entails, reference must be made to knowledge about a person’s interactions with other people, to knowledge about the norms of their functioning in a social group, as well as the principles of their

functioning in difficult and problem situations (Sęk, 1986, pp. 791–799). In colloquial language, the word “support” means helping another person. The concept of “social support” first emerged in psychological literature in the 1970s. This term was developed through the practical actions of the self-help group movement, and the therapist and psychological support communities. The clinical research that was undertaken at the time concerning the calling to action of families facing a personal crisis have revealed that social support helps people cope with many kinds of stress (Caplan, 1974). The observations that were carried out revealed that persons surrounding themselves by their family, friends, and who belong to organisations or are connected with other people through ideologies or faith demonstrate that they find it easier to cope in difficult situations and are healthier and do not suffer such extensive negative consequences in stressful situations (Kmieciak-Baran, 1995).

The following ways of defining support can be found in psychological literature:

- Messages reaching a person that build in them the belief that they are cared for, esteemed, and function well in a social group (Cobb, 1976);
- Providing an individual or a group experiencing some kind of difficulties with information, emotional, or material resources from other people (McDowell & Newell, 1987);
- Interpersonal transactions that can involve both emotional concern and instrumental aid, information or appraisal (House, 1981);
- The degree to which a person’s basic social needs are gratified through interactions with others; the fulfilment of the basic social needs of an individual, such as, for instance, a sense of belonging and security (Thoits, 1983);
- Assistance resulting from interactions with the social environment (Bishop, 2000).
- Polish literature proposes further definitions of social support as:
  - A form of assistance based on the ability to instil belief in their own capabilities, encouraging the supported person to act in order to overcome their difficulties (Kawczyńska-Butrym, 1994);
  - A type of social interaction that has the following characteristics: a person giving the support and a receiver, it is undertaken in difficult or problem situations by one or both parties (participants of this interaction), during the course of which there is an exchange of information, exchange of emotions, and exchange of instruments for action or exchange of material goods; such an exchange may be unilateral or bilateral (Sęk, 1997);
  - The universal human need to create bonds, integrate, and belong to social networks (Cieślak, 2004).

The authors identify various types and sources of support depending on the situation an individual finds themselves in and what help and assistance they need. The following breakdown is suggested in foreign literature: *perceived social support*, and *received social support*. Perceived social support is defined as the available support in which the individual puts their hope that will be available to them at a time of need. This type of support concerns the subjective

convictions on the availability of social networks and results from a person's convictions about from whom and from where they can receive support. Received social support is measured using objective indicators and refers to the help and assistance that is actually received in a specific situation (Cohen & Wills, 1985). Received social support may take on the following forms of support: emotional, instrumental, informational, and integrating (Cohen et al., 1982).

The last of the proposed types of support is *social integration*, which is a measure of how firmly an individual is rooted in the social network. The social network makes an individual have a sense of belonging and, with it, commitment, numerous reciprocities, and responsibility (House, 1981). Social integration is sometimes replaced by the concept of social companionship, which consists of drawing support thanks to spending time with others, engaging in joint actions, and various forms of joint activities (Cohen & Wills, 1985). Understanding the essence of social integration is particularly important in the context of the author's own research which is underpinned by a focus on the social networks created by an individual.

Social support is also broken down in terms of its source into personal – stemming from friends, relatives, and acquaintances; and formal – related to the activities of the institutions providing the support and assistance, as well as clubs. The third type refers to psychotherapy and is termed professional support.

Each of the mentioned types of support separately or jointly can constitute assistance. The effectiveness of support depends mainly on the appropriateness of the support.

The mechanism of action of social support is based on two hypotheses. The main effect hypothesis treats support as a factor that is independent of other variables and a relatively long-standing type of relationship between a person and their environment that prevents the emergence of great stress. The main effect hypothesis assumes that support has a direct effect on a person's health and that it enhances well-being because – regardless of the level of stress – it makes a person stronger through a sense of belonging to social networks (Payne & Jones, 1987). The second hypothesis referred to as the buffering hypothesis treats support as an intervening variable between events encountered in life and their consequences for our health and well-being (Popiolek, 1996). The buffering hypothesis assumes that support is active only in a stressful situation and its role consists in creating a buffer reducing tension and increasing resourcefulness by changing the assessment of the situation and making it more bearable. The buffering hypothesis emphasises the role of interpersonal resources that protect them from the unfavourable effects of stress (Şek, 1997).

Supportive social interactions proposed by the author are defined as a group interaction involving talking or listening in an informal and non-judgemental environment that lead to the reduction of stress. The function of supportive social interactions refers to the reduction of felt and objective stress, containing the crisis by accompaniment, and creating a sense of belonging, security, and hope. Supportive social interactions, in the author's understanding, are defined as support that is not structured or institutional in nature, thus, this may be a conversation with a friend or even a stranger who affords the speaker with

attention and understanding. They give them a sense of protection from feeling isolated even if their support is of a silent nature. Supportive social interactions, even if they are unintended, will fulfil their function if the persons taking part in them feel the beneficial nature of participating in them. In line with the proposed conceptual categories thus far, supportive social interactions create a personal support that is being received and is integrative, and its impact relates both to the main effect and the buffering effect. The existing definitions of support proposed so far and its types analysed in the studies are, therefore, not the only types of support that may be available to couples going through an infertility crisis. This is because the concept of supporting social interactions is strictly related to the problem of disclosure. Its introduction into scientific literature allows attention to be directed to the significance of disclosure in the infertility treatment process and indicates that the very fact of opening up to others may lead to the emergence of supportive social interactions. Couples, provided that they disclose information about struggling with procreative problems, can experience supportive social interactions the presence of which may significantly improve the quality of their functioning and exert positive effects on their well-being.

Contrary to support understood in a traditional sense, supportive social interactions occur without the participation of a mental health expert (as in the case of psychotherapy), as well as in non-formalised circumstances (as in the case of support groups). They are a free exchange of thoughts, feelings, and needs of the persons taking part in them. The precondition for supportive social interactions to take place is disclosure and a non-judgemental environment giving a sense of security and belonging. One cannot exclude that supportive social interactions can constitute help and assistance for persons in crises other than struggling with fertility problems. The uniqueness of the situation of persons with infertility in Poland is connected with the commonplace concealment of procreative problems. It can be assumed that supportive social interactions will fulfil their function also in relation to persons finding themselves in other difficult situations, especially crises triggered by socially marginalised and concealed problems (e.g., concerning sexual identity).

### **Significance of Supportive Social Interactions in the Infertility Treatment Process**

The significance of supportive social interactions in the infertility treatment process using assisted reproductive technologies has been demonstrated in the author's own research. The impact of non-institutionalised support in the form of supportive social interactions on stress hormone levels was investigated within the completed project<sup>2</sup>. Cortisol was selected as the biomarker related to the body's response to a stressful situation.

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<sup>2</sup> National Science Centre "Miniatura" Scheme, Project No. 2017/01/X/HS6/01896.

An elevated level of cortisol linked to prolonged stress may lead to erectile dysfunction or ovulation and menstrual cycle disorders. Furthermore, androgen sex hormones are produced in the same glands as cortisol, which is why excessive cortisol production may hinder the optimal production of these sex hormones (Weinstein, 2004). A stressful experience and elevated cortisol levels contribute to the overall deterioration of psychological functioning and may have a negative impact on somatic health (Richman, 2005), thereby reducing the chances of achieving pregnancy (Galst, 2017). This results from the fact that immunological processes are sensitive to the action of emotions (Knapp, 1992).

The experimental study was carried out in two independent groups. The study included 51 heterosexual couples who were qualified for the in-vitro fertilisation procedure. The first stage of the research procedure, which was carried out with the participation of couples from both groups (experimental and control groups), included the collection of saliva samples, in compliance with a standardised procedure, to obtain information about the stress levels (cortisol concentration analysis). Information on the subjectively felt stress was also collected. At the second stage of the experiment (immediately after the collection of samples from all the participants), the couples from the control group watched a 150-minute film about human embryology (a non-emotional factor). At the same time, the persons from the experimental group took part in a supportive social interaction. The interaction was always carried out in a group of 5–6 couples. The psychologist who moderated the discussion did not get involved in the discussion itself. The participants were encouraged but not forced to take the floor. They spoke spontaneously, one by one. The interaction was in line with the needs of the participating group members. Its duration and the topic undertaken were dictated by the needs of the couples taking part therein. Once the experimental and control conditions were introduced, another saliva sample was collected from all the respondents (stage three). Information on the history of infertility treatment was also collected. The samples were transported to a laboratory. The cortisol concentration in the samples was determined using enzyme-linked immunosorbent assay (ELISA) kits (Demeditec Diagnostics GmbH)<sup>3</sup>, with a detection limit of 0.1 ng/ml.

The obtained results showed that the drop in cortisol levels in the saliva was higher in the experimental group than in the control group, both in women and in men. The average drop observed in women was slightly greater ( $-2.26 \pm 0.32$  ng/ml in the experimental group compared to  $-1.27 \pm 0.3$  ng/ml in the control group;  $p = 0.044$ ) than in men ( $-2.26 \pm 0.29$  ng/ml in the experimental group compared to  $-1.36 \pm 0.28$  ng/ml in the control group;  $p = 0.048$ ) (Malina et al., 2019).

The study proved the significance of supportive social interactions in the process of infertility treatment using assisted reproductive technologies. The use of biomarkers has ensured greater objectivity than the study using self-descriptive questionnaires. This has allowed for an analysis of the significance of supportive social interactions for the somatic health (reducing the level of the hormone negatively affecting procreative capacity) and procreative success (chances of

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<sup>3</sup> Kiel, Germany; Cat. No. DES6611.



conceiving) of a participating couple, since—as mentioned earlier—an elevated level of the stress hormone reduces the chances of getting pregnant (Galst, 2017). The research has also pointed out the problem of disclosure of procreative problems, which—as pointed out earlier—many Polish couples are facing, and is also a precondition of receiving support. This is because the ability to get involved in supportive social interactions gives the couples the chance of a broader disclosure.

## Conclusions

*Supportive social interaction* is understood as a group interaction encompassing speaking or listening in an informal and judgement-free environment, which is connected with the necessity – and also provides an opportunity – to reciprocally disclose the experiences, needs and personal convictions of the persons participating in the said interaction and leads to a reduction of stress. Supportive social interactions are also a source of stress reduction in the process of treating infertility using assisted reproductive technologies. The proposed concept is an element that is used to describe the functioning of persons experiencing an infertility crisis. It also helps to explain why some couples experiencing infertility function better than others. Support does not occur in a social void and the very presence of another person may bring relief in a stressful situation. Research concerning supportive social interactions has shown that even a one-off engagement in contact with supporting persons may bring about significant changes in the endocrine system of persons suffering from infertility (Malina et al., 2019). It can, therefore, be concluded that the disclosure of procreative problems that determines obtaining at least the simplest, non-formalised, free-of-charge and – as it turns out –effective support in the form of supportive social interactions is highly significant for the functioning of persons with infertility.

It would be worth focusing in further research on the long-term effects of supportive social interactions on the health and well-being of the respondents as well as their procreative capacity. It is also worth analysing in greater detail the relationship between the objective indicators and subjectively felt stress or anxiety in the group of persons struggling with fertility problems. Furthermore, the significance of supportive social interactions for the functioning of persons going through a crisis concerning matters that are socially controversial is another interesting issue that the author considers is worth further investigation.

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