© IMiD, Wydawnictwo Aluna

Karolina Sikora[1], Bernadetta Janusz[2]

MATERNAL BOND WITH CARDIOSURGICALLY TREATED INFANT. QUALITATIVE ANALYSIS OF MOTHERS' NARRATIVES

PRZEŻYWANIE WIĘZI Z NIEMOWLĘCIEM LECZONYM KARDIOCHIRURGICZNIE. JAKOŚCIOWA ANALIZA NARRACJI MATEK

[1]Department of Medical Psychology
[2]Department of Family Therapy
Chair of Psychiatry, Jagiellonian University Medical College, Cracow, Poland

Abstract

The aim of this work is to describe the experience of being a mother by women who together with their children stay on the ward after cardiac surgical correction of congenital heart defects. The research material consisted of the narratives of mothers whose children were born with a heart defect and surgically treated. Four women aged 21-30 years were participants of this study. The age of the subjects' children ranged from 5 weeks to 1 year and three months. The heart defects with which the children were born were hypoplastic left heart syndrome (HLHS) or atrioventricular canal defect. The research was carried out using the narrative interview. Qualitative analysis was carried out according to the rules of thematic analysis.

The results of the research confirm that cardiac treatment can have a significant impact on maternal care patterns and the mother-infant bonding process. Intermittent contact with an infant can lead to loss of control over what happens to the child and the loss of a sense of competence to care for him. Medical staff face the challenge of supporting the parents of hospitalized children in the process of building relationships with a sick infant. The actions of doctors and nurses to enable parents to care for a baby can help foster their sense of competence and responsibility.

Key words: Congenital Heart Defects, Bonding (Psychology), Maternal Care Patterns

Streszczenie

Celem prezentowanej pracy jest opisanie przeżywania siebie w roli matki przez kobiety przebywające razem ze swoimi dziećmi na oddziale kardiochirurgii po chirurgicznej korekcji wrodzonej wady serca. Materiał badawczy stanowiły narracje matek dzieci urodzonych z wadą serca i leczonych kardiochirurgicznie. W badaniu wzięły udział cztery kobiety w wieku od 21-30 lat. Wiek dzieci osób badanych wynosił od 5 tygodni do 1 roku i 3 miesięcy. Wady serca, z jakimi urodziły się dzieci osób badanych to: zespół niedorozwoju lewego serca (hypoplastic left heart syndrome – HLHS) lub kanał przedsionkowo-komorowy. Badania zostały przeprowadzone przy użyciu wywiadu narracyjnego. Analiza jakościowa została przeprowadzona zgodnie z regułami analizy tematycznej.

Wyniki przeprowadzonych badań potwierdzają, że leczenie kardiochirurgiczne może mieć istotny wpływ na zachowania opiekuńcze i przeżywanie więzi pomiędzy matką i niemowlęciem. Przerywany kontakt z niemowlęciem może prowadzić do utraty poczucia kontroli nad tym, co dzieje się z dzieckiem i do utraty poczucia kompetencji do opieki nad nim. Personel medyczny staje przed wyzwaniem wspierania rodziców hospitalizowanych dzieci w procesie budowania więzi z chorym dzieckiem. Działania lekarzy i pielęgniarek, mające na celu włączanie rodziców do opieki nad niemowlęciem mogą sprzyjać budowaniu ich poczucia kompetencji oraz odpowiedzialności.

Słowa kluczowe: wrodzone wady serca, przywiązanie, macierzyńskie wzorce opieki

INTRODUCTION

Attachment is a unique and strong relationship that develops between an infant and his/her caregiver during the first year of life (1). John Bowlby (2) emphasized that it is a biological, evolutionary necessity. Among mammals behaviour associated with the formation of a bond includes: the search for intimacy, touch and various forms of contact (3). The first relationships established by a small child are of particular importance for his/her further development. The relation with the caregiver - a parent or another person looking after the child – impacts the development of the child's personality and the way of building further relationships with people. Physical intimacy, face-to-face interactions and verbal contact in situations such as feeding, playing and caring for the infant are important in building a bond between mother and child (4).

Four patterns of attachment were distinguished: secure, avoiding, ambivalent and disorganized. Attachment characterized by the sense of security is the most beneficial for the development of a child. This attachment pattern develops in relationship with a mother who sees the signals sent by the child and responds to them. It is enhanced by such maternal behaviour characteristics as: sensitivity, acceptance, cooperation, and emotional availability (5).

The development of the bond between mother and infant may be influenced by factors related to the person of the mother, including such factors as: attachment style, the occurrence of postpartum depression or other mental disorders, available social support, and factors related to the infant, such as: prematurity, temperamental traits, malformations (6).

The impact of threat to the child's life on the development of the bond with the mother

The results of studies conducted among parents of premature infants and parents of children with congenital heart disease indicate that the risk of ill health and threats to the child's life, as well as separation accompanying hospital treatment, influence the formation of the bond and may interfere in building a secure attachment (7, 8). Short-term separation from the infant induces anxiety in the mother and causes greater preoccupation with thoughts and concerns about the child. When the separation with the infant continues, it leads to a decrease of maternal preoccupation with thoughts and concerns about the child – depressive behavior characteristic for experiencing loss appears. A depressive reaction is a threat to the developing bond. Factors that increase the risk of its occurrence include: lack of natural childbirth, lack of breastfeeding, lack of the possibility to cuddle the infant in the first 48 hours after delivery, and the risk of the child's death. (8).

The results of qualitative studies (9) suggest that due to premature childbirth mothers feel helpless, and the period immediately after delivery is experienced as surreal and strange. Separation from the infant staying in neonatology leads them to developing the need to regain the relationship with the child (9). Mothers caring for children with CHD (congenital heart defect) aged 2-5 years experience anxiety about the future of the child and maintain a constant elevated state of alertness. Due to this fact they try not to part with the child for a long time and are aware of the increased level of stress experienced every day by family members. At the same time they appreciate each new day and they highlight that they treat the child "normally" (10).

Stress experienced by the caregivers of a sick child can also affect the perception of the infant and attitudes towards undertaking the role of a parent, modifying the early interactions between parents and the child and their relationship, and indirectly affecting the child's behavior (7). Studies focused on attachment and attachment behaviours of a child point to specific differences in the behaviour of infants with CHD during feeding, compared to healthy infants. Lobo (11) found that during feeding, infants with CHD sent less clear cues to the caregiver and besides they responded to the caregiver's behaviour to a much lesser extent than healthy children. The results of studies by Goldberg et al. (12) indicate that secure attachment is less frequent in this group than in the group of healthy children.

These results confirm that stressful perinatal events, such as the diagnosis of congenital heart disease in a child, or premature childbirth and subsequent neonatal treatment, have a significant impact on experiencing the bond between the parent and the child. Taking this into consideration, it is worth analysing the ways of creating maternal bonding in case of the serious illness of the infant.

AIM OF THE STUDY

The aim of the study was to describe both the caregiving behaviour of mothers, as well as their experiencing of the bond with the sick child during their hospital stay on the cardiac surgery ward during the postoperative rehabilitation period.

STUDY GROUP

The study group consisted of mothers whose children were born with a heart defect and were surgically treated. The subjects stayed in the hospital with their children who had undergone at least one surgical intervention aiming at the correction of heart defects. In the case of each of the mothers surveyed, the child who was born with a heart defect was their first-born. This is important, because they had no experience of shaping a maternal bond with a healthy child.

The mothers who stayed on the cardiac surgery ward with their child in the postoperative rehabilitation period were invited to participate in the study. The aim and nature of the study were presented to the mothers of the hospitalized children and then they were invited to participate in the study. They were informed that the consent or lack of consent to participate in the study would not affect the treatment of the child, and that their statements would be used for research purposes only. Each of the subjects expressed written consent

to participate in the study. Altogether four mothers, whose age ranged from 21-30 years, expressed consent to participate in the study. All the women were married. Three of them had completed secondary education and one had higher education. The age of the children of the subjects ranged from 5 weeks to 1 year and 3 months. The heart defects, with which the children of the subjects were born, were as follows: hypoplastic left heart syndrome (HLHS) – in the case of three children, atrioventricular canal defect – in the case of one child.

METHODOLOGY

The research material was collected using the narrative interview technique developed by F. Schütze. It allows the researcher to obtain the subject's spontaneous narrative of her own life, undistorted by the researcher's interventions (13). The researcher asked the subjects to respond to the following request: I would like to ask you to tell me about your life from the moment you found out that your child is sick up to now. When the person surveyed ended her story in a clear way, she was asked additional questions that had been prepared in advance and, if necessary, she was asked to clarify or supplement selected fragments of the narrative.

Transcripts of the interviews were analysed using thematic analysis (14). According to the model suggested by Smith et al. (15) the first step of the analysis was for the first researcher to isolate the core categories that emerged from the text (precoding). In the next stage the basic topics, appearing in all the statements of the subjects were developed as a result of comparative analysis and discussion with the second researcher. Finally, in the last stage of analysis, the researchers determined the relationships between the topics (15).

Finally, five main topics which appeared in all four interviews, were extracted. In the analysis presented, a topic is understood as a pattern of expression repeated in various interviews that conveys significant elements associated with the attitude of the subjects towards the world, or the object of the study. The topics presented, as well as categories that they consisted of, and their frequency of appearance are shown in Table IA.

The next stage of the analysis was to determine how the topics extracted correspond to each other, that is how their interrelationships can be extracted, which in the present study, is shown in model 1B.

RESULTS

The analysis of the four narratives that were obtained allowed the authors to extract five main categories and 34 subcategories which are presented in the table I.

The first of the extracted topics: *from diagnosis: torn between hope and fear*, refers to the experiences accompanying the surveyed mothers in the process of diagnosis, treatment and postoperative rehabilitation of the child, oscillating between fear and hope. Lack of knowledge induced strong fear and a sense of disorientation in the subjects. Information on the type of defect, the available methods of treatment, further medical treatment and prognosis aroused extreme emotions in the subjects: from anxiety associated with the threat of losing the child to hope for a successful course of treatment.

The second topic: *launching mothers' defence mechanisms: between cutting oneself off and task orientation,* concerns those fragments of the mothers' statements in which they appealed to the various ways of coping and described the defence mechanisms allowing them to survive in situations of very strong fear. In their statements the subjects talked about the need to get a grip on themselves – "to bounce back", which requires a suppression of difficult emotions. Some of the ways of pushing aside unpleasant experiences that were employed by the mothers surveyed were: focusing on the course of medical procedure, mastery of medical concepts, joking with the physician and the other mothers of young patients.

Another topic that was identified as: *we and they: community and identity versus misunderstanding*, concerns the psychosocial functioning of the subjects who experienced the support of a partner, other mothers of children with CHD or medical personnel. The mothers surveyed were aware of their relatives' and friends' interest in the fate of the child and, at the same time, they were convinced of the impossibility of describing their experiences in words. The analysis of statements indicates that attempts to being comforted by others (partner, nurse) very often boosted the aforementioned mechanisms of cutting off anxiety ("but do not worry because everything will be all right", "stop it, you know that you hurt him with this weeping"). Some personnel's statements intensified the subjects' fear ("the child may die", "this is the worst possible defect of the heart, it is not always so").

The next topic, which was named: *from intermittent contact with infant and weakened bond to loss of sense of control and competence,* refers to experiencing the bond with the surgically treated infant. The analysis of statements indicates that the mothers surveyed experienced doubts about having the competence to care for a sick child. They experienced a painful split between the desire for intimacy and providing care for the infant on their own and the necessity of subordination to the requirements of treatment, as in the passage: "but one could not take it, just could not take it, because you are standing, looking at the child and ... you cannot even hold him, no". Limited contacts with the child arouse anxiety in the persons surveyed about the lack of bond on the part of the child – e. g. that the child is more bonded to the nurses than to the mother. One of the subjects, who was separated from the child a few minutes after delivery, experienced this separation as a loss of the mother's role: "He was born, all beautifully, nicely, they gave him to me for a while, put him on my chest, on me, and later they took him away. And that was it, when it comes to my child. That's how long I was a mother – for 10 minutes. Not even so long". The medical staff looking after the child had the impact of the mothers experiencing losing their sense of control and feeling a lack of competence to be a mother. One of the subjects experienced fear of the child's being discharged from the ward and of looking after the child herself at home, without medical equipment.

Table I. Main categories and subcategories.

Tabela I. Kategorie główne i składające się na nie kategorie cząstkowe.

	Main category/topic ***Temat główny***	**Subcategories (and their frequency), which constituted the main topic** ***Kategorie cząstkowe (i ich częstotliwość), które składały się na temat główny***
1.	from diagnosis: torn between hope and fear *od diagnozy: rozdarcie pomiędzy nadzieją i lękiem*	− torn between hope and fear (50) − *rozdarcie pomiędzy nadzieją i lękiem (50)* − knowledge about the procedure of treatment (or about the child's health) as a relief (5) − *wiedza o procedurze leczenia (stanie dziecka) jako ulga (5)* − lack of knowledge as a source of anxiety (4) − *niewiedza jako źródło lęku (4)* − getting new information – threatening diagnosis (7) − *uzyskiwanie nowych informacji – zagrażająca diagnoza (7)* − torn between disagreement and acceptance (12) − *rozdarcie pomiędzy niezgodą a akceptacją (12)* − fragility of the child's health − a constant threat (5) − *kruchość zdrowia dziecka – ciągłe zagrożenie (5)* − development despite the threat of death (10) − *rozwój pomimo zagrożenia śmiercią (10)* − regaining of balance – possibility to go home (8) − *odzyskiwanie równowagi – możliwość wyjścia do domu (8)*
2.	launching mothers' defence mechanisms: between cutting oneself off and task orientation *uruchomienie mechanizmów obronnych matek: między odcinaniem się a zadaniowością*	− mobilizing of forces – suppression of emotions (7) − *mobilizowanie sił – tłumienie emocji (7)* − experiencing powerlessness – withdrawal from activities (6) − *przeżywanie bezsilności – wycofanie z działania (6)* − focusing on the course of medical procedure/describing somatic symptoms as a way of coping with anxiety (4) − *koncentrowanie się na przebiegu procedury medycznej/opisie objawów* somatycznych jako sposób radzenia sobie z lękiem (4) − coping with anxiety through laughter (9) − *oswajanie lęku poprzez śmiech (9)* − observing the strong feelings of other mothers − a feeling of anesthesia (3) − *obserwowanie silnych przeżyć innych matek – poczucie znieczulenia (3)* − focusing on heart disease treatment – dismissing other matters (1) − *skoncentrowanie na leczeniu wady serca – odsunięcie innych spraw (1)* − preoccupation with child care – fear of another pregnancy (9) − *zaabsorbowanie opieką nad dzieckiem – lęk przed kolejną ciążą (9)*
3.	we and they: community and identity versus misunderstanding *my i oni: wspólnota i identyfikacja versus niezrozumienie*	− consolation – lack of acceptance of others to expressing fear (8) − *pocieszanie – brak akceptacji innych na wyrażenie lęku (8)* − encumbering reactions of medical staff (3) − *obciążające reakcje personelu medycznego (3)* − mobilization of support network (9) − *zmobilizowanie sieci wsparcia (9)* − inability to express feelings related to the child's disease (6) − *niemożność wyrażenia przeżyć związanych z chorobą dziecka (6)* − sense of union with the parents of children with heart disease (3) − *poczucie wspólnoty z rodzicami dzieci z wadą serca (3)* − inability to understand parents of children treated in different hospital wards (5) − *niemożność zrozumienia z rodzicami dzieci z innych oddziałów (5)*

Table I. Cd.
Tabela I. Cd.

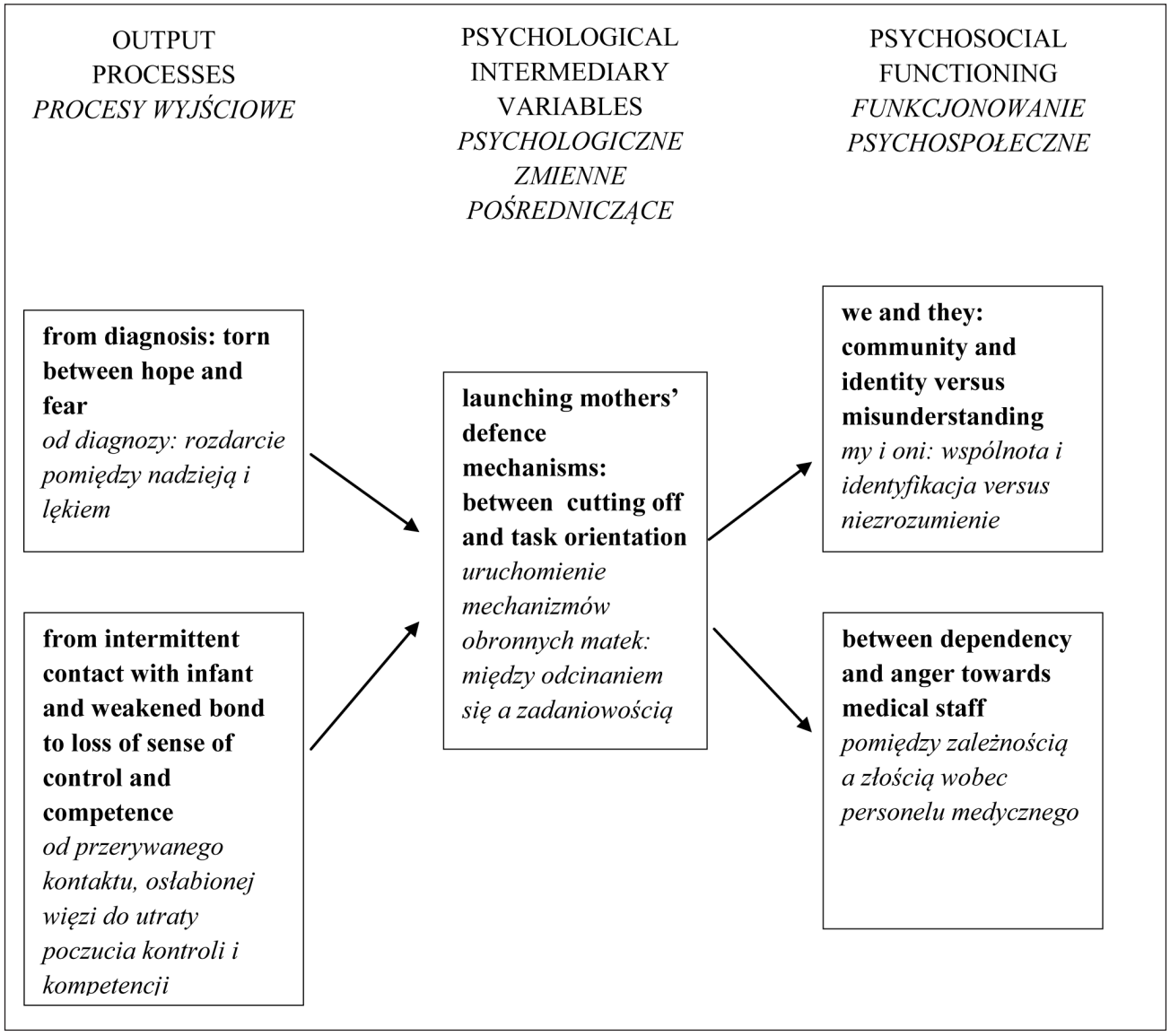
4.	from intermittent contact with infant and weakened bond to loss of sense of control and competence *od przerywanego kontaktu, osłabionej więzi do utraty poczucia kontroli i kompetencji*	– disturbance of the sense of being a mother (8) – *zachwianie poczucia bycia mamą (8)* – torn between the desire of intimacy (providing care for the child on one's own) and subordination to the requirements of treatment (16) – *rozdarcie pomiędzy pragnieniem bliskości (samodzielnej opieki nad dzieckiem) a podporządkowaniem wymogom leczenia (16)* – initiating contact with the child by medical staff (3) – *inicjowanie kontaktu z dzieckiem przez personel medyczny (3)* – limited contact – anxiety of lack of bond on the part of the child (5) – *ograniczenie kontaktu – lęk o brak więzi ze strony dziecka (5)* – mother's involvement in the development of the child's basic impulses (5) – *zaangażowanie matki w rozwijanie podstawowych odruchów dziecka (5)* – limiting physical contact with the child by medical staff (3) – *ograniczenie kontaktu fizycznego z dzieckiem przez personel medyczny (3)* – fear of returning home and taking care of the child on her own(2) – *lęk przed powrotem do domu i samodzielną opieką nad dzieckiem (2)* – bearing the costs of motherhood (4) – *ponoszenie kosztów macierzyństwa (4)* – recognition of the child's suffering (1) – *rozpoznawanie cierpienia dziecka (1)*
5.	between dependency and anger towards medical staff *pomiędzy zależnością a złością wobec personelu medycznego*	– starting medical procedure (threatening diagnosis) (30) – *uruchomienie procedury medycznej (zagrażająca diagnoza) (30)* – fear in response to the contact with medical equipment, to which the child is connected (5) – *lęk w reakcji na kontakt z aparaturą medyczną, do której jest podłączone dziecko (5)* – between dependency and anger towards the medical staff (13) – *pomiędzy zależnością a złością wobec personelu medycznego (13)* – sensitivity to the medical staff's opinion concerning the child's health (2) – *wrażliwość na opinie personelu medycznego dotyczące zdrowia dziecka (2)*

The last topic called: *Between dependency and anger towards medical staff,* concerned the feeling the mothers surveyed experienced towards the doctors and nurses caring for the child. Medical procedures, specialized equipment, the knowledge and skills of professionals were experienced as necessary to save the child and, at the same time, in some situations gave rise to fear or anger. This is illustrated by the following passages of their statements: "I just, (I say) for God's sake, lady, but what are you talking about? Well, I have not entered yet, and you've just assaulted me in advance and I am ... oh, oh, I could not deal with it, God, these first three weeks", "Massacre. It just scared me, going there, for the first time I went there, everything was beeping. Everything".

The analysis of the statements of the subjects allows us to introduce the model shown below (model 1B) (tab. II).

From the moment of receiving the first disturbing information about the health of the child – during pregnancy or shortly after the delivery – throughout the process of diagnosis and treatment, the subjects experienced strong, extreme emotions: anxiety related to the threat of losing the child and hope for the success of treatment and proper development of the infant. All of the subjects first received information that the child had a heart defect during the perinatal period, therefore at a time when a woman takes the role of the mother and establishes a relationship with the child. Intermittent contact with the infant caused a loss of, or the impossibility to build, a sense of control and competence. At the same time each of the subjects faced the challenges related to early motherhood and those that arise from receiving the information about the child's serious health condition. The subjects coped with this situation by launching defence mechanisms involving cutting off unpleasant emotions and focusing on tasks related to the treatment. As a result, the psychosocial functioning of the mothers surveyed was narrowed down to a group of people directly related to the treatment of the child. The social world

Table II. Model 1B.
Tabela II. Model 1B.



of the mothers surveyed became limited to the hospital ward. There the mothers were looking for and experienced emotional support. They felt a sense of dependency on the medical staff and, at the same time, they directed difficult emotions towards them related to the treatment of the child – anger, frustration, a sense of helplessness.

DISCUSSION

The diagnosis of congenital heart disease in a child made during pregnancy or immediately after delivery dramatically changes the period of waiting for a child and the first moments spent by the mother with the newborn. The study presented focused on the mothers of children between 5 weeks and 15 months, at a time which is a crucial period for the development of the mother-infant bond (2). What is more, in this period interactions between mother and infant are based on touch, gaze, vocalizing, and are formed during such activities as feeding, nurturing or play (4), all of which are significantly disrupted during cardiac hospitalization.

During hospitalization, the need for contact between mother and infant is subordinated to the requirements of the process of treatment and hospital procedures. The lack of possibility to cuddle the child and watch the face of the child, who is connected to medical equipment, is one of the most important problems that the mothers of children staying in the intensive care unit must face (16). The analysis of the narrative that was conducted indicates that intermittent contact with the child is experienced by the mother as a threat to the bond. Studies (17-19) confirm that cuddling and touch, including skin to skin contact between mother and infant are important for the development of a secure attachment, and their absence may be a risk factor for the development of anxiety and ambivalent attachment patterns.

The subjects described doctors and nurses as persons responsible for the child: making important decisions, dealing with the daily supervision and care. One of the main categories that was extracted points to the sense of dependency and anger towards medical staff experienced by the mothers surveyed. In the situation when care for the child was „taken" by experts, the subjects felt dependent on them in the area of care for the child and, at the same time their desire to be a good and competent enough mother for their offspring was frustrated. The results of the present study highlight that the limited possibility of the mothers' looking after the sick child may lead to their losing their sense of maternal competence or they may find it impossible to build one. The results of studies conducted by Mac Donald (16) confirm that mothers of premature infants, who stay in the ICU perceive neonatal physicians as persons responsible for making decisions concerning the child, and nurses as persons responsible for the daily care of the child – with simultaneous feelings of confusion concerning their own role in relation to the child.

In the model presented (1B) the authors point out that the subjects coped with anxiety by cutting off emotions and focusing on the process of treatment. As a result, such feelings influenced their distancing themselves from relatives and friends. They started looking for support among people related to the treatment of the child. Strong fear and defence mechanisms also influenced the categories in which the subjects perceived their children. The analysis of narration indicates narrowing the mental image of the child to the aspects related to his/her biomedical functioning. It is proved by such passages as: *she has Down's syndrome; she stopped eating; she was very weak; 10 points on the Apgar scale, he was 58 cm; he did not suck* and by the lack of descriptions of personal characteristics, behaviour or appearance of the infants. Benoit et al. (20) found that the way of describing a sick child by the mother is characterised by: a relatively small amount of details, greater rigidity and emotional distance, as well as lesser sensitivity and acceptance towards individualism and the child's needs when compared to mothers in the control group. The medicalisation of the mental representation of the child and lack of (cutting off) "normal" descriptions of his appearance, behaviour or temper may be related to cutting off the desire of intimacy and „normal" being with the child at home. Due to such thoughts and feelings concerning the child playing important role in shaping the maternal bond, they are also related to the attachment pattern developed by the child (21). The above-mentioned observations may indicate the risk of disturbances in shaping the attachment – i.e. the maternal bond in the study group.

The results of the study presented confirm the occurrence of the threat to building a secure attachment between the mother and the surgically treated infant. The main categories that have been extracted indicate experiencing anxiety, launching defence mechanisms, which are related to cutting off a direct emotional experience of the relationship with the child, as well as disturbances of physical aspects of the attachment. Due to this, it can be implied that there is a risk of developing an anxious attachment pattern in the child which is of avoiding or ambivalent nature. The results of the present study show that having a child whose life and health are greatly threatened determines the way the bond is experienced by the mother in such a significant way that it is hard to make conclusions about the potential possibilities of building the bond with the child in different circumstances.

SUMMARY

The parents of surgically treated infants are dealing with great stress and anxiety related to the child's health condition and medical treatment. At the same time they are experiencing painful separation from the child in the first period of his/her life, which is crucial for the development of the parent-infant bond. The analysis of the narrations that have been conducted confirms the special role of medical staff as a source of knowledge about the child's condition and the course of treatment, but also as a source of social support. It seems that doctors and nurses, and the system of care for the mother and infant on the ward may, to a large extent, contribute to easing possible disturbances in the process of bond development. All the actions aiming at including parents in caring for the hospitalized child may facilitate building their sense of competence and responsibility, weakening the sense of incompetence and unimportance. Asking the mother questions concerning her observations of the child's behaviour – sleeping, eating, well-being – may clearly facilitate defining her role as a person who is closest to the child and who knows the child best. The medical staff's readiness to answer the questions asked by mothers, and to take their observations into consideration when discussing the child's condition (e. g. pain control) (22) seems to be equally important. Nurses can support the development of the maternal bond by including the mother in caring for the infant as often as possible, with particular emphasis on treatment that requires touch. Moreover, they can help by encouraging the mothers to undertake such physical contact with the child as hugging, stroking. Research indicates that one of the main concerns of the parents of children with CHD is feeding, and mothers who, at the time of discharge from the hospital, are more self-confident about breastfeeding, feel greater happiness breastfeeding after coming home (23).

At the end we want to mention that the high level of anxiety and emotional tension experienced by a mother may limit her ability to support the child. Not only the interference in the physical contact with the child, but also the experience of a threat to life and the health of the infant significantly affects maternal bonding with the child. During the interaction with the child, the mother who communicates her emotional state may influence the increase of stress in the child (24). Medical staff's interventions focused on strengthening mothers in the area of adapting and developing strategies of coping with stress may also play an important role for the quality of the mother-child bond.

REFERENCES

1. *Baradon T., Broughton C., Gibbs I., James J., Joyce A., Woodhead J.:* The practice of psychoanalytic parent-infant psychotherapy. Routledge, London 2011.
2. *Bowlby J.:* Przywiązanie. Wydawnictwo Naukowe PWN, Warszawa 2007.
3. *Feldman R., Weller A., Zagoory-Sharon O., Levine A.:* Evidence for a neuroendocrinological foundation of human affiliation. Plasma oxytocin levels across pregnancy and the postpartum period predict mother-infant bonding. Psychol. Sci. 2007, 18(11), 965-970.
4. *Stern D.N.:* The Interpersonal World of the Infant: A View from Psychoanalysis and Developmental Psychology. Karnac Books 1998.
5. *Wallin D.J.:* Podstawy teorii przywiązania (w:) Przywiązanie w psychoterapii. Wydawnictwo Uniwersytetu Jagiellońskiego. Kraków 2007.
6. *Johnson K.:* Maternal-infant bonding: a review of literature. Int. J. Childbirth Educ. 2013, 28(3), 17.
7. *Borghini A., Pierrehumbert B., Miljkovitch R., Muller-Nix C., Forcada-Guex M., Ansermet F.:* Mother's attachment representations of their premature infant at 6 and 18 months after birth. Infant Ment. Health J. 2006, 27(5), 494-508.
8. *Feldman R., Weller A., Leckman J. F., Kuint J., Eidelman A.:* The nature of the mother's tie to her infant: maternal bonding under conditions of proximity, separation, and potential loss. J. Child. Psychol. Psychiatry 1999, 40(6), 929-939.
9. *Fegran L., Helseth S., Fagermoen M.S.:* A comparison of mothers' and fathers' experiences of the attachment process in a neonatal intensive care unit. J. Clin. Nurs. 2008, 17(6), 810-816.
10. *Carey L., Nicholson B.C., Fox R.A.:* Maternal factors related to parenting young children with congenital heart disease. J. Perdiatr. Nurs. 2002, 17(3), 174-183.
11. *Lobo J.L.:* Parent infant interaction during feeding when the infant has congenital heart disease. J. Perdiatr. Nurs. 1992, 7(2), 97-105.
12. *Goldberg S., Simmons R. J., Newman J., Campbell K., Fowler R.S.:* Congenital heart disease, parental stress, and infant-mother relationships. J. Pediatr. 1991, 119(4), 666-666.
13. *Kaźmierska K.:* Wywiad narracyjny – technika i pojęcia analityczne, (w:) Czyżewski M., Piotrowski A., Rokuszewska-Pawełek A. (red.), Biografia a tożsamość narodowa. Katedra Socjologii Kultury. Łódź 1996.
14. *Braun, V. Clark. V.:* Using thematic analysis in psychology. Qualitative Research in psychology 2006, 3, 77-101.
15. *Smith J.A., Flowers P., Larkin M.:* Interpretative Phenomenological Analysis: Theory, Method and Research. London. Sage 2009.
16. *MacDonald M.:* Mothers of pre-term infants in neonate intensive care. Early Child. Dev. Care 2007, 177(8), 821-838.
17. *Red. M. Hertenstein, S. Weiss.:* The Handbook of Touch: Neuroscience, Behavioural, and Health Perspectives. Springer Publishing Company, New York 2011.
18. *Weiss S., Wilson P., Seed M., Paul S.:* Early tactile experience of low birth weight children: links to later mental health and social adaptation. Infant Child Dev. 2001, 10(3), 93-115.
19. *Feldman R., Weller A., Sirota L., Eidelman A.:* Testing a family intervention hypothesis: the contribution of mother-infant skin-to-skin contact (kangaroo care) to family interaction, proximity, and touch. J. Fam. Psychol. 2003, 17(1), 94-107.
20. *Benoit D., Zeanah Ch., Parker K., Nicholson E., Coolbear J.:* "Working Model of the Child Interview": Infant Clinical Status Related to Maternal Perceptions. Infant Ment. Health J. 1997, 18(1), 107-121.
21. *Szewczyk Sokolowski M., Cox S.:* Mothers' representations of their infants and parenting behaviour: associations with personal and social contextual variables in a high-risk sample. Infant Ment. Health J. 2007, 28(3), 344-365.
22. *Nascimento L.C., Strabelli B.S., de Almeida F.C.Q.G., Rossato L.M., Leite A.M., de Lima R.A.G.:* Mothers' view on late postoperative pain management by the nursing team in children after cardiac surgery. Rev. LatAm Enfermagem 2010, 18(4), 709-715.
23. *Spence K., Swinsburg D., Griggs J.A., Johnston L.:* Infant well-being following neonatal cardiac surgery. J. Clin. Nurs. 2011, 20(17-18), 2623-2632.
24. *Skipper J.K., Leonard R.C.:* Children, stress, and hospitalization: A field experiment. J. Health Soc. Behav. 1968, 9(4), 275-287.

Author's contributions/Wkład Autorów
According to the order of the Authorship/Według kolejności

Conflicts of interest/Konflikt interesu
The Authors declare no conflict of interest.
Autorzy pracy nie zgłaszają konfliktu interesów.

Received/Nadesłano: 22.04.2014 r.
Accepted/Zaakceptowano: 12.08.2014 r.

Published online/Dostępne online

Address for correspondence:
Karolina Sikora
Zakład Psychologii Lekarskiej
Katedra Psychiatrii Uniwersytet Jagielloński
Collegium Medicum
ul. Kopernika 21a, 31-501 Kraków
tel. 602-469-928
e-mail: karo.sikora@uj.edu.pl