

VILNIUS UNIVERSITY

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THE POSSIBILITIES OF INTERVENTION OF MOTHER-INFANT
ATTACHMENT RELATIONSHIP

Summary of doctoral dissertation
Social sciences, Psychology (06 S)

Vilnius, 2010

The dissertation was carried out at Vilnius University in 2001- 2005 and Leiden university (the Netherlands) in 2003 (September-November) and 2007 (July).

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The doctoral dissertation will be presented for public defense in the room 201 at the Faculty of Philosophy, Vilnius University on the 12th of November at 2 p.m.

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The summary of doctoral dissertation was sent out on 12th of October, 2010

Copy of the dissertation is available at the library of Vilnius University.

VILNIAUS UNIVERSITETAS

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**MOTINOS IR KŪDIKIO PRIERAIŠUMO SANTYKIŲ KOREKCIJOS
GALIMYBĖS**

**Daktaro disertacijos santrauka
Socialiniai mokslai, psichologija (06 S)**

Vilnius, 2010

Disertacija buvo rengta Vilniaus Universitete 2001- 2005 ir Leiden'o Universitete (Nyderlanduose) 2003 (rugsėjo-lapkričio mėn.) ir 2007 (liepos mėn).

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Daktaro disertacija bus viešai ginama Vilniaus Universitete, Filosofijos fakultete 201 auditorijoje 2010 m. lapkričio 12 dieną 14 valandą.

Adresas: Universiteto g. 9/1, LT 01513 Vilnius, Lietuva

Daktaro disertacijos santrauka išsiųsta 2010 m. spalio 12 d.

Disertacijos kopiją galima rasti Vilniaus Universiteto bibliotekoje.

Introduction

Early child's attachment relationship with its closest human beings has psychological consequences on child's development. Intervention programs for child-parent attachment relationship has been developing for about two decades. The aim of these programs is to improve parent-child attachment relationship. Although there are many programs, there is still no clear answer, what kind of mother-infant attachment relationship intervention may be more or less useful for what participants and how long could be the effect of participation in the intervention.

There are two different view points to the attachment intervention.

The first approach is based on the meta-analytic study of Egeland and others. (15 attachment intervention programs were analysed; Egeland et al., 2000). They suggest that the best attachment intervention program should begin during pregnancy, take a relatively long time, should be intensive and involve a variety of services, for example, mental health services. Although maternal sensitivity to infant signals predicts infant attachment security (De Wolff and VanIjzendoorn, 1997) it is not enough to increase maternal sensitivity. The attachment intervention programs should attempt to change mothers' attachment representations. This approach is called the "more is better".

Another point of view based on the fact that "less is more". Bakermans-Kranenburg, VanIjzendoorn, and Juffer (2003) analyzed 29 attachment intervention programs and found that child's attachment security and maternal sensitivity are best increased when attachment intervention programs are shorter term, begin at sixth month of baby's life and aim at improving maternal sensitivity.

Studies conducted in clinical samples shows that it is possible to increase the child's attachment security, if the family is involved in attachment relationships intervention program. However, little is known whether and how we can improve the child's attachment security in a sample without clinical disorders. Even in non-clinical samples children's insecure attachment is associated with later child behavioral and emotional difficulties, child psychopathology. Although there is little published research

about the results of attachment interventions in non- clinical samples, they show that it is possible, for example, to increase maternal sensitivity to infant signals.

The scientific novelty of the dissertation. The mentioned two different theoretical points of view create a space for exploration. It is known that attachment intervention can change child-mother attachment relationship, but now it is important to find out what kind of intervention program is more beneficial for what mothers and babies. To our knowledge in Lithuania or elsewhere there has not been research done where mothers for the attachment intervention would be selected according to one criteria- their low sensitivity to their infants' signals. Therefore, in this research, we will explore the possibility to increase maternal sensitivity and child's attachment security by participating in attachment intervention program. Mothers who were rated as insufficiently sensitive to their six months old infants participated in our intervention program. Our sample is unique because mothers did not work until the child reached the age of one year. This is a particularly rare research context.

Children high in negative emotion, particularly in the early years, suffer most from adverse environments but also appear to benefit disproportionately from supportive rearing environments (Belsky, 1997; Boyce & Ellis, 2005). In the current study, therefore the potentially differential effectiveness of intervention was also tested for children with higher negative emotionality versus lower negative emotionality.

Research aim and the main objectives: The research *aim* is to analyze the influence of participation in the short term attachment intervention program on insufficiently sensitive middle-class mothers' sensitivity to their infants' signals, infants' attachment security and later children's behavior problems.

In support of the research aim, the following *objectives* were set:

1. To compare maternal sensitive responsiveness and infant attachment security in experimental and control groups when experimental group mothers finished to participate in the attachment intervention program. To analyze factors associated with maternal sensitive responsiveness.

2. To compare whether participation in attachment intervention program was more useful for mothers and infants with higher negative emotionality or for mothers and infants with lower negative emotionality.

3. To analyze the long term effect of the participation in the attachment intervention program on children's behavior problems at two years of age.

4. To investigate relationship among children's behavior problems and other factors.

Theses defended:

1. *Maternal sensitive responsiveness* will be higher in the experimental group after participation in the attachment intervention as compared to the control group.

2. *Infant attachment security* will be higher in the experimental group after participation in the attachment intervention as compared to the control group.

3. Experimental group infants characterized by higher negative emotionality will be more *secure* and their mothers will be more *sensitive* to their infants' signals as compared to experimental group mothers and infants characterized by lower negative emotionality.

4. Participation in attachment intervention will have a long term effect: experimental group children at two years will be assessed as having fewer *behavior problems* than children in the control group.

Approbation of the research findings

The main results of the research have been published in two scientific articles and presented at two international conferences:

“Human diversity: cognitive, affective and behavioral dimensions : VI international Baltic psychology conference”, Vilnius, September 16-18, 2004.

“International Attachment Conference” in Braga, Portugal, July 6-8, 2007.

CONTENT OF THE DISSERTATION

Theoretical issues

In the theoretical part of the dissertation the main concepts of attachment theory are introduced. Then possibilities of attachment relationship interventions and the effectiveness of interventions are discussed.

Infant attachment is defined as child’s emotional tie with his mother. Maternal sensitivity is considered to be the primary determinant of infant attachment security. Maternal sensitivity is defined as mother’s ability to perceive her infant’s signals appropriately and respond to them promptly and adequately. Studies on secure and insecure infant attachment reveal the beneficial long term effects of secure infant attachment on child’s later social- emotional and cognitive functioning. Infant’s attachment security can be enhanced by parenting interventions. The success of intervention programs is moderate in increasing children’s attachment security, but they seem to have larger impact on parental sensitivity. However, not much is known about the long term effects of brief and focused interventions. One might argue that teaching mothers to be sensitive to their infants is not sufficient because mothers’ mental representations of attachment would remain unchanged and in the long run the mothers might not be able to adequately respond to their infant’s changed attachment needs and signals, and to keep supporting a secure attachment relationship (Egeland et al, 2000).

Currently attachment intervention research is moving beyond generic effects to addressing the question what works for whom. That is, research focuses on the different types of interventions and their effectiveness for various groups and samples. In this respect one of the major questions is the differential effectiveness of interventions in groups more, or less optimally functioning in terms of parent-child interactions. It cannot be expected that all children and their parents benefit equally from the same intervention. More specifically, in families with low levels of parenting quality more might be gained by an intervention effort, and in fact only in such low functioning families interventions

might be effective at all. In the present intervention study the participants were therefore selected on the basis of the low level of maternal sensitivity to infants' signals.

In contrast to the large number of intervention studies performed in multi and high risk samples, the present study was conducted in a non-clinical middle class sample. The selected mothers had only one major risk factor for their children's insecure attachment formation - they were inconsistently sensitive or insensitive to their infant's signals. To our knowledge this is the first intervention study in Lithuania or elsewhere in which sample selection was based solely on behavioral criteria. In our study the intervention mothers' sensitivity to their infants' signals was maximally 5 (inconsistently sensitive) or less on the 9-point Ainsworth sensitivity rating scale (Ainsworth et al., 1974). Because of the relation between parental sensitivity and children's attachment (Ainsworth et al, 1978; De Wolff & VanIjzendoorn, 1997) the mothers, who lack sensitivity to their infants' signals, should be good candidates for an intervention to prevent infants' insecure attachment to develop. In order to bring about changes in mothers' sensitive behavior, new ways of responding to infants' signals must be modeled and reinforced. Consequently, the right choice for these mothers would be the behaviorally focused intervention, which could help them to become more aware of their infants' signals and to interpret these signals more accurately. Short term interaction-oriented intervention may be considered as an optimal type of intervention in low risk, non-clinical groups.

We are interested in the effects of our intervention approach in mothers with low sensitivity but otherwise showing similar levels of psychosocial functioning. Therefore we also assessed and controlled for the level of maternal daily stresses, and maternal self-efficacy. It was revealed in previous studies that mothers who become overwhelmed by daily stresses their sensitivity may suffer (Crnic, Greenberg & Slough, 1986; Coyl, Roggman & Newland, 2002; Scher & Mayseless, 2000). Self-efficacy refers to one's belief in the ability to successfully perform the behavior necessary to achieve a desired outcome (Bandura, 1977, 1982). Self-efficacy may have a positive impact on maternal behavior in general and sensitivity in particular (Hsu & Lavelli, 2005; Teti & Gelfand, 1991). Low self-efficacious mothers may prove to be less sensitive to their infants' behaviors, because they might be less persistent when soothing a distressed infant (Teti & Gelfand, 1991).

Children high in negative emotion (or “highly reactive” children), particularly in the early years, suffer mostly from adverse environments but also appear to benefit disproportionately from supportive rearing environments (Belsky, 1997; Boyce & Ellis, 2005) Klein-Velderman, Bakermans-Kranenburg, Juffer and VanIJzendoorn (2006) found that experimentally-induced changes in maternal sensitivity exerted greater impact on the attachment security of highly negatively reactive infants than other infants. In the current study, therefore the potentially differential effectiveness of intervention was also tested for children with higher negative emotionality versus lower negative emotionality.

Low maternal sensitivity, insecure infant attachment are associated with possible child psychopathology and later behavior problems (internalizing and externalizing behavior problems). In order to find out about longterm effect of the intervention we assessed children behavior problems at two years of age (one year after intervention was finished).

Research method

Sample

Our study had three stages (T1, T2, T3) and the number of participants was different in each stage.

In the first stage (T1), 141 mothers and their 6 month old firstborn infants were visited at home and screened for sensitive responsiveness to their infants' signals during free play using Ainsworth's rating scale for sensitivity (Ainsworth, Bell, & Stayton, 1974). Infants' temperament was assessed as well.

In the second stage (T2), fifty-four mothers out of 141 who were evaluated as insensitive to their infants' signals were asked to participate in the intervention study. Mothers who scored below the midpoint of 5 on Ainsworth's rating scale for sensitivity were considered "insensitive", because their infants run the risk of insecure attachment formation. By random assignment, insensitive mothers were assigned to *experimental* ($n = 26$) and *control* ($n = 28$) groups. Only mothers from intact families, who were primary caregivers to their infants, did not work until their children reached 12 months of age, and had at least high school education, were included in the intervention and control groups. Mothers and infants were free of serious health problems.

In the third stage (T3), when children were two years old, parents were sent questionnaires about their child's behavior problems. In this stage a total of 85 mothers with children participated in the study: 21 mother from *experimental* group, 21 mother from *control* group and 43 mothers, who were evaluated as sensitive in the T1 stage.

We performed a comparison among subjects who participated in T1 stage, and then were left to participate in T2 and T3 stages. These three groups differed only in maternal sensitivity to infant signals at T1, $F(2,277) = 15.67, p < .01$. Mothers at T2 stage were less sensitive ($MT2 = 4.09$) to their infants as compared to T1 ($MT1 = 4.98$) and T3 ($MT3 = 4.96$) mothers.

We also checked out whether there were differences between participants at T3 who returned us questionnaires on child behavior problems and those who did not return. We found a significant difference in child's gender. There were more boys in the group

of these participants who returned us questionnaires ($\chi^2 = 5.24, p < .05$) as compared to those who did not return.

Procedure

The control and intervention group mothers were contacted by phone when their infants were 7 months old. In order to create a ‘dummy’ intervention control group mothers were contacted by phone monthly for five months, and asked for information on their infants’ development. No advice about sensitive parenting or attachment was given to the control group mothers during these conversations.

Parallel in timing, the intervention group mothers were visited monthly at home with a total of five intervention sessions. During these sessions mother-child interactions were videotaped. After collecting video material to be used in the next home visit, feedback was given on the video fragments of the previous session. The duration of each session was approximately 90 minutes. Intervention mothers were informed that they were participating in the study of mother-infant interaction, but the goal of the study was not specified. The intervention was implemented when the infants were between their 7th and 12th month of age.

The first intervention session was arranged approximately one month after the first home visit (which was part of the screening procedure and served as a pre-test), and videotaped interaction of this first home visit was used for video feedback.

When the children in both groups were 12 months old, their attachment security was evaluated on the basis of 3 hours of home observations (including a 15-20 min competing demand task for the mother during observation) with the Attachment Q-sort (AQS; Vaughn & Waters, 19??) by a coder who was unaware of the intervention condition of the mothers and the results of the previous stages of the study. Moreover, videotaped observations of mother-infant free play at home were made in order to assess mothers’ sensitive responsiveness. The intervention was conducted by two psychologists with a MA degree in clinical psychology. One of the interveners was trained by the authors of the Video-feedback Intervention to Promote Positive Parenting (VIPP) developed at Leiden University (Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2008). The other intervener was trained by the first one.

When children were two years old questionnaires about child's behavior problems were sent to all parents who participated in stage T1.

Measures

1. *Maternal sensitive responsiveness.* Ainsworth's 9-point rating scale for sensitivity (Ainsworth et al., 1974) was used to evaluate maternal ability to perceive and interpret baby's signals correctly and respond to them appropriately and promptly during 14 minutes of mother-infant free play at home, when infants were 6 (pre-test) and 12 months old (post-test). Mothers were given a set of 8 toys and were instructed to play with their baby as they usually did for 7 minutes. For the next 7 minutes mothers were asked to play with their baby without any toys. Intercoder reliability among 7 coders ranged from .72 to .86.

2. *Infant-mother attachment.* Infant-mother attachment security was assessed using Waters' Attachment Q-set (Version 3.0; Waters & Deane, 1985) when infants were 12 months old (post-test). Trained observer blind to all other information about the participants visited mothers and infants at home and observed the dyads for 3 hours. On the same day, the observer sorted the 90 items, describing the child's secure-base behavior towards the mother (Waters & Deane, 1985) The observer was instructed using special video-tapes for training. Intercoder reliability among three coders on tapes during training phase ranged from .75 to .85. One of the coders observed and assessed attachment security of all children in the study.

3. *Infant temperament.* Infant temperament was assessed by behavior observation at home, when infants were 6 months old (pre-test). Mothers and infants participated in three procedures designed to elicit infants' positive and negative affect: face-to-face with a stranger, during a peek-a-boo game with the mother, and using the arm-restraint procedure. During the *face-to-face with the stranger procedure* the infant was exposed face-to-face to an unfamiliar adult at a close distance (approximately 30 cm) for 60 seconds. The stranger maintained a still face and did not interact with the infant. The infant's mother was present, but not engaged in this procedure. The *peek-a-boo game with the mother* was used to elicit positive affect (smiling and laughing) in the infant (Sroufe & Waters, 1976; Stifter & Fox, 1990). Mothers were instructed to interact normally with the infants and then prompted to play peek-a-boo for 90 seconds. Mothers

were also encouraged to draw the infant's attention by making sounds, calling infant's name and smiling. The *arm-restraint procedure* was used to elicit the infant's distress or anger (Provost & Gouin-Decarie, 1979; Stifter & Fox, 1990). During the procedure the mother was sitting in front of the infant and holding down his/her arms for 30 seconds. The mother was instructed to maintain a still face and not to interact with the infant.

Infants' emotional and facial expressions in the three procedures were assessed from videotapes using a second-by-second strategy. Duration of positive affect (smiling, laughing) and distress (fussing, crying) were measured for all three procedures. Reliability between two coders for duration of positive and negative affect in the three procedures was established on 12 cases, kappa for positive affect was 0.74, for negative affect 0.93.

4. *Mothers' daily stress.* The Daily Hassles scale (Crnic & Greenberg, 1990) was administered at pre-test (6 months). The questionnaire concerns daily events (20 items) in the family (being whined at, complained to, difficulties in getting the kid ready for outings on time, etc). Mothers rated the frequency of occurrence of the events on a 5-point scale (never occurred, rarely, sometimes, a lot, constantly). On another 5-point scale they evaluated how hassled they felt by the event, starting from 1- no hassle, ending to 5- big hassle. Sum scores indicating the total frequency and the total intensity of daily stressful events were used. Alpha reliability at 6 months of age amounted to .71 for daily hassles frequency, and .82 for daily hassles intensity.

5. *Mothers' perceived competence as a caregiver (efficacy).* The Parental Efficacy Questionnaire (VanIjzendoorn, Bakermans-Kranenburg, & Juffer, 1999) was used to measure the mothers' own feelings of the childrearing competence at post-test only (when infants were 12 months old). Alpha reliability was .85.

6. *Child behavior problems* at two years of age. CBCL / 1 1/2-5 questionnaire (Achenbach and Rescorla, 2000) is designed to rate children's behavior problems at the age of 1.5 to 5. Mothers of the children filled the questionnaire at stage T3. The questionnaire consists of 99 items. Items belong to: *emotionality* subscale (9 items), *anxiety / depression* subscale (8 items), *somatic complaints* subscale (11 items), *withdrawn behavior* (8 items) subscale, *sleep problems* subscale (7 items), *aggressive behavior* subscale (19 items), *attention problems* subscale (5 items). The internalizing behavior problems' factor consists of the first four and the

externalizing behavior problems factor consists of aggressive behavior subscale and attention problems subscale. CBCL / 1 1/2-5 is translated into Lithuanian language and used in research (Jusienė and Raižienė, 2006). In our research the reliability of CBCL / 1 1/2-5 subscales were: the Cronbach alpha of emotionality subscale was .72, anxiety / depression -.68, somatic complaints-.53, withdrawn behavior-.50, sleep difficulties .67, attention problems .45, aggressive behavior .85, internalizing behavior problems .79, externalizing behavior problems .84, total problems .91.

Intervention

The Video-feedback Intervention to promote Positive Parenting (VIPP; Juffer et al, 2008) was applied according to the detailed protocol. The main goal of the intervention was to reinforce mothers' sensitive responsiveness to their infants' signals focusing on different characteristics of mother-infant interactions (opportunity to focus on baby's signals and expressions, observational skills, empathy for the child, etc.). Additionally, mothers were provided with information on attachment related issues by giving them brochures about sensitive parenting

Each intervention session focused on a different topic: baby's contact seeking, playing, exploration and crying behavior and possible reactions to it, understanding baby's feelings, sensitive responsiveness to the baby's signals, and sharing emotions. The last session was a booster session summarizing the previous ones: all important messages were repeated.

In the beginning of every session an aspect of mother-infant interaction (playing with the infant, cuddling, etc) was videotaped. Then the mother was provided with personal video-feedback from the recording of the previous visit. She was supported whenever she showed moments of sensitive maternal behavior. Mother's empathy and understanding of her baby's feelings and intentions were encouraged by "speaking for the baby" (Carter, Osofsky, & Hann, 1991). Corrective messages to the mother's behavior were given in the third and later sessions of the intervention.

Results

Intervention Effects on Mothers' Sensitive Responsiveness

Independent t tests were computed to compare intervention and control group variables at pre-test and post-test. These analyses indicated no significant differences between intervention and control groups on sensitive responsiveness at the pre-test ($t(52) = .06, p=.96$). There were no significant group differences on any of the other pretest measures either. At the posttest intervention group mothers' sensitive responsiveness was significantly higher than that of controls, $t(52) = -2.88, p=.01$. This significant posttest difference in maternal sensitive responsiveness indicates that the VIPP intervention significantly improved maternal sensitivity.

A repeated measures analysis of variance with pretest and posttest sensitive responsiveness as the repeated measure also showed that the intervention group mothers' sensitive responsiveness increased significantly compared to the control group mothers, $F(1, 52) = 5.95, p < .02$, 10% explained variance. Controlling for pretest differences and pre- to posttest stability of maternal sensitivity we found that intervention mothers showed more sensitive responsiveness than mothers who did not take part in the video-feedback sessions. The increase was substantial and amounted to almost one scale-point or 10 % of the variance in sensitive responsiveness.

Application of repeated measures analysis of covariance with sensitive responsiveness as repeated measure and one of following variables as covariates did not change the outcome of the intervention: mothers' age, years of education, daily hassles, and efficacy. Also, the inclusion of infant gender, negative and positive affect as a covariate yielded similar results.

At posttest maternal sensitive responsiveness was significantly correlated with maternal efficacy, $r=.32, p=.02$. In order to estimate the unique contribution of efficacy to predicting posttest sensitivity independent of the intervention, we performed a multiple regression analysis. Maternal sensitive responsiveness pretest, efficacy at posttest, and participation in the intervention were included as predictors of the variance in maternal sensitive responsiveness at posttest. Participating in the intervention ($\beta = .33$,

$p = .01$) and mothers' efficacy ($\beta = .27$, $p = .03$) were significant predictors of sensitive responsiveness at posttest. 26% of the variance in sensitivity at posttest was predicted by these three independent variables.

Relations between maternal sensitivity and other variables at stage T1

The study showed that *older* ($r = .23^{**}$) and *better educated* ($r = .28^{**}$) mothers were more sensitive to their infant signals. Mothers were rated as less sensitive, if infants' negative emotionality was assessed as higher ($r = -.24^{**}$).

Mothers of the babies who have been assessed as having higher negative emotionality, scored higher on daily hassles (unrelated to child care) intensity ($r = .19^*$), higher daily hassles (related to child care) frequency ($r = .20^*$) and intensity ($r = .18^*$). The infants' negative emotionality of more educated mothers was assessed as lower ($r = -.22^{**}$).

More daily hassles not related to child care ($r = -.19^{**}$) and related to child care ($r = -.25^{**}$) had mothers whose spouses were younger. Higher daily hassles (related to child care) frequency ($r = -.23^{**}$) and intensity ($r = -.19^*$) felt the younger mothers.

Two factors: *maternal education* and *infant negative emotionality* significantly predicted maternal sensitivity at T1, $F(3,137) = 6.95$, $p < .01$, the regression predicted 14 percent of variance.

Intervention Effects on Children's Attachment Security

The hypothesis that the intervention group infants would show significantly higher attachment security than controls was not supported. At the posttest, intervention group children's mean attachment security score was equal to that in the control group, $M_{exp} = .33$ ($SD = .22$) and $M_{contr} = .33$ ($SD = .19$), respectively. The intervention effect was not significant, $t(51) = -.02$, $p = .99$.

Intervention effect on infants characterized by higher negative emotionality

For the purpose of testing hypothesis of differential susceptibility to the intervention effects, we checked the differences in intervention effects on the sensitivity of the mothers of infants characterized by higher negative emotionality versus the mothers of infants with lower negative emotionality. Two groups of infants were formed on the basis of the duration of displayed negative affect during infant temperament evaluation procedures. The higher negative emotionality group consisted of infants who displayed more negative affect than average, and the lower negative emotionality group scored below the average. Repeated measures analysis of variance on sensitive responsiveness with the condition (intervention vs. control) and infant emotionality (higher vs. lower) as factors did not show a differential effect for higher versus lower negative emotionality infants, $F(1, 50) = .53, p = .47$. The result indicated that mothers of infants characterized by higher and lower negative emotionality equally profited from the intervention. In both emotionality groups the intervention showed significant effects on maternal sensitivity. In the infants' characterized by higher negative emotionality group, the difference in maternal sensitivity between intervention and control groups was significant, $t(25) = -2.14, p = .04$. In the infants' characterized by lower negative emotionality group, the difference between intervention and control group mothers was also significant, $t(25) = -2.07, p = .049$.

In a similar way we tested differential susceptibility in case of intervention effects on infant attachment security. The interaction effect of infants' emotionality (higher vs. lower) and condition (intervention vs. control) on infants' attachment security was not significant, $F(1, 49) = .61, p > .05$.

Thus, we did not get support for the hypothesis that more negatively reactive infants would be more susceptible to intervention effects than less reactive infants.

Intervention effects on children's behavior problems

We did not find significant differences in any CBCL subscale among experimental group children, control group children and children of sensitive mothers. So, in this research we did not see intervention effect on children behavior problems at two years of age.

Realations between children behavior problems and other factors

In the *sensitive mothers* group, we found some significant correlations. Children who lived in families with *lower-income* exhibited more internalizing ($r = -.31^*$) behavior problems, externalizing behavior problems ($r = -.37^*$) and total problems ($r = -.38^*$). Children whose *father* was more *busy* (worked and studied) were rated as having higher total behavior problems ($r = .34^*$).

In the *control group* higher *intensity* of maternal *daily stress* (related to child care) when children were six months old significantly correlated with higher children's behavior problems in internalizing, externalizing, and total behavior problems scales (respectively, $r = .50^*$, $r^{**} = .55$, $r = .58^{**}$). *Frequency of maternal daily hassles* (related to child care), when children were six months old was related to higher children's internalizing behavior problems ($r = .46^*$) and total behavior problems ($r = .49^*$) at two years. *Higher frequency of maternal daily stress* (unrelated to child care), when children were six months old, significantly correlated with higher children's behavior problems in internalizing behavior problems scale ($r = .44^*$) at two years.

In the *experimental group* we did not found statistically significant correlations between behavior problems scales and other characteristics.

In the *sensitive mothers* group children's total behavior problems were predicted by children's *older fathers' age*, *more time of father being busy*, and *lower family income*, $F(3,42) = 7.45$, $p < .01$, regression was significant and predicted 36% of the variance.

In the *control group*, children's total behavior problems were predicted by frequency and intensity of maternal *daily stress* (related to child care) at six months, $F(2,20) = 5.03$, $p < .05$, regression was significant and predicted 21% of the variance.

Discussion

We found that low sensitive mothers indeed significantly improve their sensitive responsiveness through participation in our VIPP. The effect size was large according to Cohen's criteria, $d = 0.78$. That is, the VIPP mothers increased their sensitivity with 0.78 standard deviation compared to the control group. This difference amounted to one scale-point on the Ainsworth 9-point rating scale for sensitivity. VIPP enhanced maternal sensitive responsiveness even when we controlled for maternal age, educational

level, daily hassles, efficacy, infant gender, and infant negative and positive affect. The large increase in sensitive responsiveness in the VIPP group as compared to controls is in line with several other studies in non-clinical as well as clinical populations (see for a review, Juffer et al., 2008). We may suggest that a relatively short (5 sessions) and low-cost program can provide effective support for mothers who lack sensitivity while interacting with their infants.

Speaking about the *mean maternal sensitive responsiveness score* in our sample (it was $M = 4.98$, $n = 141$) it is slightly lower than the mean scores usually found in studies in which subjects are free of clinical problems and risk factors. For example, Frodi and others (1985) found an average maternal sensitivity score $M=5.51$ in their sample, Pederson and others (1990) in their study found the average score $M=5.97$. Although there are a few studies where the average maternal sensitivity score is comparable to ours or even lower than in our sample, for example, Grossman and others (1985) found an average sensitivity score $M=4.83$, Ainsworth and others (1978) found the average score $M= 4.4$. It is possible that maternal sensitivity to infant attachment security are dependent on cultural factors.

We found that higher *maternal sensitivity* and lower *infant negative emotionality* are significantly related. We also found that more years of *maternal education* and lower *infant negative emotionality* significantly predicted higher maternal sensitive responsiveness. It is important to take into account that we cannot talk about causation here, because maternal sensitivity and infant negative emotionality may influence and reinforce one another. In the mother- infant interaction maternal errors (omission of infant signals, incorrect understanding of the signals, etc.) may increase the duration of infant negative emotion. When the baby expresses many negative emotions, the mother may become less sensitive, because she does not know what to do, how to correct her mistakes (Mills-Koonce et al., 2007). Our finding that lower infant negative emotionality predicted higher maternal sensitive responsiveness confirm and complement other studies, for example, Mills-Koonce and others (2007), Crockenberg (1981), Van den Boom (1994). Although there are a few studies where no significant relationship between maternal sensitivity and infant negative emotionality was found (Calkins et al, 2004).

Speaking about links between maternal education and sensitive responsiveness, it can be that less educated mothers have less knowledge about parenting and they are less able to obtain such knowledge. Our study results confirm the trends observed in other studies, that more-educated mothers are more sensitive to infant signals (Drake et al., 2007, Fish, Stifter & Knock, 1993; Pederson et al., 1990; Valenzuela, 1997).

We also found positive significant correlation between maternal age and her sensitive responsiveness. Maternal age is usually significantly associated with their education, so his influence alone is questionable.

Increased *maternal stress* (daily hassles) was positively correlated with *higher infant negative emotionality* in our study. This finding has confirmation in other studies as well (Calkins et al, 2004). In addition, in Calkins et al. (2004) study, where subjects were only infants characterized by high negative emotionality, maternal functioning and sensitivity were best predicted by mothers' stress. Although our study can not establish a causal link between maternal stress and infant negative emotionality, but both of these factors are important for the analysis of maternal sensitivity and infants characterized by high negative emotionality.

Discussing the intervention effect on infants' attachment security, we see that infants, however, seemed to profit less from VIPP. Although mothers' sensitivity appeared to be substantially associated with attachment security of their infants, at pre- and posttest, we did not find enhanced security in the VIPP infants after the intervention, compared to the control infants. Furthermore, infants' differential susceptibility to intervention effects was examined to test the hypothesis that infants characterized by high negative emotionality would be more susceptible to intervention effects than less reactive infants (Belsky et al., 2007). In the current study we did not find any evidence for differential susceptibility to changes in the mothers' sensitivity. High as well as low reactive infants did not profit from VIPP enhanced maternal sensitivity, at least not within the time-frame of the current project. Of course, it cannot be excluded that in the long run the VIPP effects on maternal sensitivity may also affect infant attachment security, and maybe more so in those infants who are high on negative emotional reactivity, but the current study does not support the differential susceptibility theory.

Unexpectedly, we did not find enhanced attachment security of the infants in the intervention group compared to the control group. This converges with some previous

studies (e.g. Klein Velderman et al., 2006), but it diverges from the findings of other investigations in this area (e.g. Moran, Pederson, & Krupka, 2005; Cohen, Muir, Lojkasek, Muir, Parker, Barwick, & Brown, 1999), where the positive impact of attachment-based intervention included a significant shift towards the infants' attachment security. Across attachment-based interventions meta-analytic evidence suggests that maternal sensitivity is easier to enhance than infant attachment security (Bakermans-Kranenburg et al., 2003). However, the same series of meta-analyses also provided evidence that those intervention studies showing more change in the mothers also documented more positive change in infant attachment security (Bakermans-Kranenburg et al., 2003). Considering the large change in maternal sensitivity in the current intervention we had expected to find significant enhancement of infants' attachment security as well.

The composition of the sample may be one explanation. The only selection criteria for inclusion in the VIPP study was mothers' low sensitivity to infant signals as measured from video-recorded mother- infant free play. Selection on the basis of infant attachment would have created more opportunity for effective intervention. Average attachment security on the AQS ($M = .33$) in the untreated control group was in the normal range of AQS scores in non-clinical populations (see Van IJzendoorn et al., 2004). Thus, our sample of middle class infants seemed to function in the normal range despite the low maternal responsiveness. This might be due to protective factors in these families (or the lack of additional risk factors), for example the support of the partner in these two-parent families. In intervention studies on children at great risk for deviant attachment development, e.g. because of maltreatment, the effectiveness of attachment-based interventions on the level of children's functioning might be much easier to demonstrate (see Cicchetti et al., 2006). More risk factors may enlarge the possibility of positive change in infant attachment (Ammaniti, Speranza, Tambelli, Muscetta, Lucarelli, Vismara, Odorisio, & Cimino, 2006; Beckwith, 2000). In a clinical sample of preterm infants and infants suffering from dermatitis we found only positive effects on children's attachment security when mothers displayed insecure representations of their own childhood attachment experiences. For children of securely attached mothers VIPP intervention did not lead to more security of attachment (Cassibba, Van IJzendoorn, Coppola, Bruno, Costantini, Gatto, Elia, & Tota, 2007).

We did not find significant differences in the intervention group infants' attachment security between the less and more reactive infants, indicating that intervention group infants of higher or lower reactivity equally profited from the intervention. Unexpectedly, we failed to find support for the theory of differential susceptibility. One of the reasons for this absence of evidence for differential susceptibility is the age of temperament assessment. Infant temperament was assessed by behavior observation at home, when infants were 6 months old (pre-test). Mothers and infants participated in three procedures designed to elicit infants' positive and negative affect: face-to-face with a stranger, during a peek-a-boo game with the mother, and using the arm-restraint procedure. Although this observational procedure is more valid than using temperament questionnaires (Kagan, 2007) the assessment should have been repeated after a few months in order to control for instability of temperament. It should also be noted that the current sample size is rather small for detecting interactions, and power is too low for finding more subtle signs of differential susceptibility.

One of the limitations of the current is the assessment of attachment security with the observer AQS. Although it has been proven that the AQS belongs to the gold standards of attachment measures (VanIJzendoorn et al., 2004) the AQS fails to assess attachment disorganization. We do not know therefore whether the VIPP might have involved a decrease in attachment disorganization. It should be noted, however, that in our study we found rather strong associations between maternal sensitivity and infant attachment security, amounting to the association reported in a previous meta-analysis ($r = .39$, (Van IJzendoorn, Vereijken, Bakermans-Kranenburg & Riksen-Walraven, 2004), which certifies the validity of this assessment. Another limitation may be the restricted generalizability of the VIPP effect on maternal sensitivity. In our sample we included only mothers who did not (yet) work outside their homes at the time of the intervention. This is an increasingly rare sub-group of mothers in western industrialized countries. Lastly, interventions may show sleeper effects, that is, effects only to be detected several months or even years after the last intervention session (for an example with VIPP, see Bakermans-Kranenburg et al., 2008). Changes in maternal behavior may need time to be ingrained in the child's internal working model of attachment, and to be observed in interactive behavior during the AQS.

In this study we analyzed the *long term intervention effect*. We found that children in experimental and control groups were assessed as having the same level of *behavior problems* at two years of age (one year after intervention in experimental group was finished). The level of children behavior problems in sensitive mothers group was similar to the experimental and control group. However, we noticed that the correlation between maternal stress (in particular, the intensity of stress associated with child care) and child behavior problems is higher in the control group as compared to the experimental group. In control group the correlation is moderate. Meanwhile, in the experimental group, this correlation is not significant. Maybe participation in the intervention relaxed experimental group mothers' daily stress links with their children's behavioral difficulties. Maybe intervention served as a buffer for intervention group mothers.

Although mothers in experimental and control groups did not differ in respect to their children behavior problems, we can not think that the positive effect of intervention was lost at two years of age. We have assessed only one possible dimension, namely children's behavioral difficulties. In another similar study it was found that mother-infant intervention in infancy did not reduce children's behavior problems in general, but it was found that in the experimental group children had significantly less behavior problems of clinical level, as compared to controls (Klein et Velderman al. 2006). In our study we can not determine what percentage of children could be assessed as having clinical levels of behavior problems, as there are no norms.

It is important to note that we have assessments only about mothers' perceived behavioral problems of their children, because questionnaires on child behavior were filled by children's mothers. It may be that another person (not mother) would assess behavior problems more objectively.

According to the literature, children in experimental and control groups could have a higher risk of behavior problems, because their mothers have not been sufficiently sensitive. As already mentioned, in some studies the links between maternal sensitivity and later child behavior problems is statistically significant, but in this study the link was not statistically significant. Why? Maybe our chosen method of measuring

maternal sensitivity measures the sensitivity of the mother in a narrow aspect, largely reflecting the synchronicity of mother-infant interaction (Velderman Klein, et al., 2006). In addition, we did not assessed the stability of maternal sensitivity between one and two years of child's age. In some studies it was found that mothers were more sensitive to younger infants (Kivijarvi et al., 2001). In addition, between one and two years of age some other important aspects of maternal sensitivity emerge, for example, limits setting for child's behavior, setting rules, punishments and rewards, which are also associated with later child behavior problems (Rothbaum and Weisz, 1994).

The fact that maternal stress has effect on mother-child relationship was observed in many studies. It was found that mothers experiencing more stress are less sensitive to their children (Paulussen-Hoogeboom et al., 2008), often make mistakes in bringing up their children (Calkins, Hungerford & Dedmon, 2004; Kazdin and Whitley, 2003). Increased maternal stress is considered a risk factor for child behavior problems (Barry et al. 2005; Podolski and Nigg, 2001; Qi and Kaiser, 2003; Williford, Calkins & Keane, 2007).

Why we did not found significant links between mothers' daily stress and children's behavioral problems in *sensitive mothers' group*? It can be that sensitive mothers have enough inner resources that protect their children from the negative impact of stress because sensitive mothers may have more secure attachment relationship representations. This means that they may be more able to control negative emotions and stress, have better coping mechanisms, may be more able to mobilize other people to help them, etc.

We can find explanation why we did not found significant links between mothers' daily stress and children's behavioral problems in *experimental group*. We assume that intervention group mothers may have acquired knowledge related to child rearing, have received socio-emotional support from intervener and that could serve as a protection against the effect of daily stress on their children's behavior.

When we analyzed the sensitive mothers group, we found that *older fathers' age, more time spent at work, lower family income* predicted higher children's behavior

problems. Similar results can be seen in other studies. It was found that children have fewer behavior problems when fathers spend more time with them (Jacobs, 1999). Thus, the noted link between father's age, time being at work and child's behavior problems does not contradict to the results of other research findings. Higher family income was found to be related with fewer child behavior problems in other studies as well (Teramoto et al., 2005).

In sum, our VIPP randomized control trial demonstrated the effectiveness of a relatively brief and cost-effective attachment-based intervention in increasing the level of maternal sensitivity to the signals of her infant. Our findings confirm the idea of selecting prospective participants in this kind of parent training programs on the basis of their low levels of sensitive responsiveness. Middle class parents without additional risk factors may profit from parenting support provided by short term attachment intervention.

Conclusions

1. Intervention group mothers' *sensitive responsiveness* after intervention was higher than the control group mothers' sensitivity to infants' signals .

2. Intervention group infants' *attachment security* after intervention was the same as in the control group.

3. Intervention showed equally significant effect on *maternal sensitivity* in the group of infants characterized by lower negative emotionality and in the group of infants characterized by higher negative emotionality. Children's *attachment security* did not differ as well in the two reactivity groups.

4. Intervention group children at two years were assessed as having the same level of *behavior problems* as control group children.

5. Maternal sensitive responsiveness to 6 months old infant signals was significantly predicted by mothers' *education level, age, and higher infant negative emotionality*.

6. Higher maternal daily *stress* when infants were 6 months old predicted more total and externalizing behavior problems in the control group.

7. *Older fathers' age, more time at work and lower family income* predicted more children's behavior problems in the sensitive mothers group.

MOTINOS IR KŪDIKIO PRIERAISUMO SANTYKIŲ KOREKCIJOS GALIMYBĖS

Santrauka

Ankstyvieji vaiko santykiai su artimiausiais žmonėmis turi daug lemiančių pasekmių vaiko raidai. Vaiko-tėvų santykius koreguojančių programų tikslas yra pagerinti vaiko-tėvų santykius, susijusius su prieraišumu. Ieškoma atsakymo, kokio pobūdžio motinos- kūdikio prieraišumo santykių korekcija gali būti daugiau ar mažiau naudingos kokiems dalyviams ir kiek ilgalaikis gali būti dalyvavimo korekcijos programoje poveikis.

Egzistuoja du skirtingi požiūriai apie prieraišumo santykius koreguojančių programų efektyvumą.

Pirmasis požiūris, kurį meta-analitiniu tyrimu pagrindė Egeland ir kt. (apibendrinta 15 korekcijos programų, Egeland et al., 2000) teigia, kad geriausios programos turėtų prasidėti dar nėštumo laikotarpiu, trukti gana ilgai, pasižymėti dideliu intensyvumu ir būti susijusios su įvairiomis paslaugomis, pvz., psichikos sveikatos paslaugomis. Nors motinos jautrumas kūdikio signalams yra labiausiai kūdikio prieraišumą prognozuojantis veiksnys (De Wolff ir Van Ijzendoorn, 1997), autorių nuomone, nepakanka siekti vien tik padidinti motinų jautrumą. Programos turėtų keisti ir tėvų prieraišumo santykių reprezentacijas. Toks Egeland ir kt. (2000) požiūris vadinamas „daugiau yra geriau“.

Kitas požiūrio taškas remiasi tuo, jog „mažiau reiškia daugiau“. Apibendrinę 29 prieraišumo santykius koreguojančių programų rezultatus, Bakermans- Kranenburg, Van IJzendoorn ir Juffer (2003) nustatė, kad labiausiai padidinamas vaiko prieraišumo saugumas ir padidinamas motinos jautrumas tada, kai naudojamos trumpos, nukreiptos į motinos jautrumo pagerinimą ir prasidedančios tik apie šestą kūdikio gyvenimo mėnesių programos.

Tyrimų, atliktų klinikinėse imtyse rezultatai rodo, kad galima padidinti vaiko prieraišumo saugumą, jei šeima dalyvauja prieraišumo santykius koreguojančioje programoje. Tačiau mažai žinoma, ar galima ir kaip galima padidinti vaiko prieraišumo

saugumą klinikinių sutrikimų neturinčioje populiacijoje. Net ir klinikinių sutrikimų neturinčiose šeimose vaikų nesaugus prierašumas yra susijęs su vėlesniais vaikų elgesio ir emocijų sunkumais, psichopatologija.

Paminėti dviejų teorinių požiūrių prieštaravimai sudaro erdvę tyrinėjimams. Mūsų žiniomis, nei Lietuvoje, nei kitur iki šiol nebuvo atlikta tyrimų, kur būtų siekiama padidinti nepakankamai jautrių kūdikio signalams motinų jautrumą, specialiai atrinktų tik pagal šį kriterijų. Todėl šiame darbe mes ir siekėme panagrinti klausimą, ar galima padidinti nepakankamai jautrių motinų jautrumą kūdikiui ir jų kūdikių prierašumo saugumą. Korekcijos programų efektyvumo tyrimai ne klinikinėse imtyse pasitaiko retai. Mūsų tirta imtis unikali tuo, kad visos tiriamosios nedirbo iki kol kūdikiui sukaks vieneri metai.

Kadangi šiuo metu atrandama vis daugiau patvirtinimų, kad auklėjimas gali nevienodai veikti skirtingo temperamento vaikus, tyrinėdami korekcijos programos efektyvumą, mes atsižvelgėme į kūdikių temperamento aspektus. Manoma, kad aukštu neigiamu emocionalumu pasižyminčius vaikus labiausiai veikia tėvų elgesio pasikeitimai.

Taigi, mūsų tyrimo *tikslas* yra įvertinti dalyvavimo trumpalaikėje, vaizdo analizės metodu pagrįstoje prierašumo santykių korekcijos programoje poveikį nepakankamai jautrių vidurinėsios klasės motinų jautrumui kūdikio signalams, kūdikių prierašumo saugumui bei vėlesniems vaikų elgesio sunkumams.

Uždaviniai:

1. Palyginti dalyvavusių korekcijos programoje ir kontrolinės grupių motinų *jautrumą kūdikio signalams* prieš ir po dalyvavimo korekcijos programoje. Nustatyti veiksnius, susijusius su motinų jautrumu 6 mėn. amžiaus kūdikio signalams.

2. Palyginti dalyvavusių korekcijos programoje kūdikių *pieraišumo saugumą* su kontrolinės grupės kūdikių prierašumo saugumu.

3. Palyginti korekcijos programoje dalyvavusių aukštesniu neigiamu emocionalumu pasižyminčių kūdikių *pieraišumo saugumą* su korekcijos programoje dalyvavusių žemesniu neigiamu emocionalumu pasižyminčių kūdikių prierašumo saugumu. Taip pat palyginti korekcijos programoje dalyvavusių aukštesniu neigiamu emocionalumu pasižyminčių kūdikių *motinų jautrumą* kūdikių signalams su korekcijos

programoje dalyvavusių žemesniu neigiamu emocionalumu pasižyminčių kūdikių motinų jautrumu kūdikių signalams.

4. Palyginti korekcijos programoje dalyvavusių ir kontrolinės grupių dvimečių vaikų *elgesio sunkumų* lygį. Nustatyti veiksnius, susijusius su vaikų elgesio sunkumais.

Ginamieji teiginiai:

1. Dalyvavusių korekcijos programoje *motinų jautrumas* kūdikio signalams bus didesnis negu kontrolinės grupės motinų jautrumas kūdikių signalams.

2. Dalyvavusių korekcijos programoje motinų *kūdikių prieraišumo saugumas* bus didesnis negu kontrolinės grupės kūdikių prieraišumo saugumas.

3. Korekcijos programoje dalyvavusių aukštesniu neigiamu emocionalumu pasižyminčių *kūdikių prieraišumo saugumas* ir *motinų jautrumas* kūdikio signalams bus didesnis negu korekcijos programoje dalyvavusių žemesniu neigiamu emocionalumu pasižyminčių kūdikių prieraišumo saugumas ir motinų jautrumas.

4. Dalyvavimas korekcijos programoje turi ilgalaikį poveikį: dalyvavusių korekcijos programoje motinų dvimečiai vaikai bus įvertinti kaip turintys mažiau *elgesio sunkumų* negu kontrolinės grupės vaikai.

Metodika

Tyrimė dalyvavo pirmagimio susilaukusios motinos. Kai kūdikiams sukako 6 mėn., buvo įvertintas motinų jautrumas kūdikio signalams pagal Ainsworth „Motinos jautrumo kūdikio signalams“ skalę. Iš nepakankamai jautrių kūdikio signalams motinų atsitiktine tvarka buvo suformuota eksperimentinė ir kontrolinė grupės. Buvo įvertintas visų kūdikių temperamentas (stebėjimo metodu), motinos užpildė klausimyną apie kasdiena patiriamą stresą. Eksperimentinės grupės motinos dalyvavo trumpalaikėje, motinos-kūdikių prieraišumo santykius koreguojančioje, vaizdo analizės metodu pagrįstoje programoje (VIPP, Juffer et al., 2008) kas mėnesį, iš viso penkis kartus. Su eksperimentinės grupės motinomis dirbo dvi specialiai apmokytos psichologės pagal išsamų protokolą. Su kontrolinės grupės motinomis buvo susisiekiama telefonu penkis kartus, bet nesuteikiama žinių apie vaiko raidą ar auklėjimą. Taip buvo daroma siekiant išvengti Howtorn'o efekto. Kai kūdikiams sukako dvylika mėnesių nepažįstama motinai ir kūdikiui tyrėja įvertino kūdikių prieraišumo saugumą trijų valandų stebėjimo metu pagal Waters'o „Prieraišumo Q rūšiavimo“ metodiką. Dar kartą buvo įvertintas motinų jautrumas, motinos užpildė „Motinos saviveiksmingumo“ skalę. Praėjus metams po

baigimo dalyvauti korekcijos programoje, kai kūdikiams buvo du metai, vaikų motinos užpildė klausimyną apie vaikų elgesio sunkumus (CBCL 1 ½-5. Klausimyną užpildė eksperimentinės, kontrolinės ir pakankamai jautrių motinų grupių motinos.

Rezultatai ir jų aptarimas

Kai eksperimentinės grupės motinos baigė dalyvauti VIPP programoje, jų jautrumas kūdikio signalams buvo reikšmingai didesnis negu kontrolinės grupės motinų jautrumas kūdikio signalams (buvo kontroliuojami eksperimentinės ir kontrolinės grupės motinų jautrumo skirtumai iki pradėdant dalyvauti VIPP programoje, motinų jautrumo stabilumas prieš ir po dalyvavimo programoje, motinų amžius, išsilavinimas, kasdienių rūpesčių lygis ir suvokiamas saviveiksmingumas, kūdikio lytis ir temperamentas).

Daugumoje korekcijos programų, kurių tikslas yra motinų jautrumo pagerinimas, šitas tikslas yra pasiekiamas. Gali būti, kad taip yra todėl, kad motinos jautrumą kūdikio signalams stebime jos elgesyje su kūdikiu ir tokio akivaizdaus elgesio keitimas yra korekcijos tikslas. Elgesio ypatumus ir pasikeitimus nesunku pastebėti ir tiksliai įvertinti, nes paprastai naudojami vaizdo įrašai. Sunkiau yra apčiuopti psichinių reprezentacijų lygmenyje. Todėl iškyla klausimas, ar motinų jautrumo pasikeitimas, kurį mes pastebėjome šiame tyrime yra ilgalaikis, ar motinų jautrumo pasikeitimai reiškia, kad atsirado pasikeitimų motinų psichinėse reprezentacijose.

Pastebėjome, kad tarp eksperimentinės ir kontrolinės grupės motinos vienodai įvertino saviveiksmingumą, nors vertindami motinų jautrumą kūdikio signalams pagal vaizdo įrašą, mes matėme, kad eksperimentinės grupės motinos yra jautresnės vaikų poreikiams negu kontrolinės grupės motinos. Gali būti, kad eksperimentinės grupės motinos per žemai vertina savo kompetenciją. Būtent todėl, vėliau praktiškai taikant VIPP programą, labai svarbu dar daugiau dėmesio atkreipti į motinų kompetencijos jausmo ugdymą.

Kalbant apie veiksnius, susijusius su motinos jautrumu, nustatėme, kad *dalyvavimas korekcijos programoje ir motinų saviveiksmingumas* reikšmingai prognozuoja motinų jautrumą, įvertintą, kai kūdikiams buvo dvylika mėnesių. O kai kūdikiams buvo šeši mėnesiai *motinų išsilavinimas* ir *kūdikių neigiamas emocionalumas* reikšmingai prognozuoja motinų jautrumą.

Tyrimo duomenimis, *vyresnės, labiau išsilavinusios* motinos yra jautresnės šešių mėnesių kūdikio signalams. Gali būti, kad vyresnės ir labiau išsilavinusios motinos

turi daugiau žinių apie vaiko auklėjimą bei galimybių tokių žinių gauti. Mūsų tyrime motinos yra tuo mažiau jautrios kūdikio signalams, kuo kūdikių *neigiamas emocionalumas* buvo vertinamas kaip aukštesnis. Svarbu atkreipti dėmesį, kad čia negalime nustatyti priežastinio ryšio, nes motina ir kūdikis abu aktyviai kuria bendravimą. Panašūs rezultatai gaunami ir kituose tyrimuose. Šešių mėnesių kūdikių, kurie buvo įvertinti kaip pasižymintys *aukštesniu neigiamu emocionalumu*, motinos patyrė didesnę *kasdienių rūpesčių*, nesusijusių su vaiko priežiūra intensyvumą, didesnę kasdienių rūpesčių, susijusių su vaiko priežiūra dažnumą ir intensyvumą. Tikriausiai tai natūralu, kad daugiau neigiamų emocijų reiškiantis kūdikis sukelia motinai daugiau rūpesčių. Labiau išsilavinusių motinų kūdikių neigiamas emocionalumas įvertintas kaip žemesnis. Gali būti, kad labiau išsilavinusios motinos, kaip jau minėjome, turi daugiau žinių apie vaikų auklėjimą todėl galbūt gali išmokyti vaiką geriau kontroliuoti savo emocijas. Didesnę kasdienių rūpesčių, susijusių su vaiko priežiūra dažnumą ir intensyvumą jautė *jaunesnio amžiaus* motinos. Galime galvoti, kad jaunesnės motinos turi derinti vaiko priežiūrą bei mokymąsi ar darbą, yra blogiau apsirūpinusios finansiškai lyginant su vyresnėmis, todėl jos susiduria su daugiau kasdienių rūpesčių.

Kai eksperimentinės grupės motinos ir kūdikiai baigė dalyvauti VIPP programoje, eksperimentinės ir kontrolinės grupių kūdikių *prieraišumo saugumas* nesiskyrė. Dalyvavimas programoje buvo *vienodai naudingas* tiek aukštesniu tiek žemesniu neigiamu emocionalumu pasižymintiems kūdikiams ir jų motinoms. Gali būti, kad galėjome pasiekti vaikų saugumo pasikeitimų, jei į eksperimentinę ir kontrolinę grupes būtume atrinkę kūdikius, kurie yra mažiausiai saugūs, tačiau tokia amžiuje, kada pradėta korekcijos programa, prieraišumo saugumo dar neįmanoma įvertinti. Be to, mūsų kontrolinės grupės kūdikių saugumo vidurkis atitinka normos ribas, yra gana aukštas.

Tyrime nustatyta, kad daugiau ir mažiau neigiamų emocijų reiškiantys kūdikiai gavo tiek pat naudos iš dalyvavimo VIPP programoje.

Vertinant vaikų *elgesio sunkumus*, praėjus metams po baigimo dalyvauti VIPP programoje, reikšmingų skirtumų tarp jautrių ir eksperimentinės bei kontrolinės grupių motinų nenustatyta. Vertinome tik vieną galimą aspektą, t. y. elgesio sunkumus. Galbūt, jei būtume tyrę daugiau aspektų, būtų galima aptikti dalyvavimo VIPP programoje poveikį. Be to, negalėjome įvertinti, kiek klinikinio lygio elgesio sunkumų turėjo vaikai

Kalbant apie veiksnius, susijusius su vaikų elgesio sunkumais, *eksperimentinėje* grupėje nestebėjome nei vienos statistiškai reikšmingos koreliacijos tarp elgesio sunkumų skalių ir kitų charakteristikų.

Jautrių motinų grupėje elgesio sunkumus *bendrų elgesio sunkumų* skalėje reikšmingai prognozuoja *tėčių amžius*, *tėčių užimtumas* ir *šeimos pajamos*. Kuo vyresni ir kuo labiau užsiėmę buvo kūdikių tėčiai, ir kuo mažesnės buvo šeimos pajamos, kai kūdikiai buvo 6 mėn. amžiaus, tuo jų dvimečiai vaikai buvo įvertinti kaip turintys daugiau bendrų elgesio sunkumų. Dvimečių eksternalius elgesio sunkumus reikšmingai prognozuoja šeimos pajamos ir kūdikio amžius tyrimo pradžioje, o dvimečių internalius elgesio sunkumus reikšmingai prognozuoja tėčių amžius ir šeimos pajamos.

Kontrolinėje grupėje vaikų elgesio sunkumus, atsispindinčius bendrų elgesio sunkumų skalėje ir eksternalių elgesio sunkumų skalėje reikšmingai prognozuoja kontrolinės grupės *motinų patirti rūpesčiai*, *susiję su vaiko priežiūra*. Kontrolinės grupės motinų patirtų kasdienių rūpesčių, susijusių su vaiko priežiūra, intensyvumas reikšmingai prognozuoja vaikų eksternalius elgesio sunkumus. Kuo intensyvesni buvo šie motinų rūpesčiai, kai kūdikiams buvo 6 mėn., tuo aukštesniais balais motinos įvertino savo vaikų eksternalius elgesio sunkumus dviejų metų amžiuje.

Išvados

1. Dalyvavusiųjų korekcijos programoje *motinų jautrumas* kūdikio signalams buvo didesnis negu kontrolinės grupės motinų jautrumas kūdikių signalams..
2. Korekcijos programoje dalyvavusiųjų kūdikių ir kontrolinės grupės kūdikių *prieraišumo saugumas* statistiškai reikšmingai nesiskyrė.
3. Korekcijos programoje dalyvavusių aukštesniu ir korekcijos programoje dalyvavusių žemesniu neigiamu emocionalu pasižyminčių kūdikių *prieraišumo saugumas* statistiškai reikšmingai nesiskyrė. Nustatyta, kad korekcijos programoje dalyvavusių aukštesniu ir korekcijos programoje dalyvavusių žemesniu neigiamu emocionalu pasižyminčių kūdikių *motinų jautrumas* kūdikių signalams statistiškai reikšmingai nesiskyrė.
4. Tarp korekcijos programoje dalyvavusiųjų ir kontrolinės grupės motinų dvimečių *vaikų elgesio sunkumų* lygio statistiškai reikšmingo skirtumo nenustatyta.

5. *Motinių jautrumą* 6 mėn. kūdikių signalams statistiškai reikšmingai prognozuoja motinų išsilavinimas, amžius bei aukštesnis kūdikių neigiamas emocionalumas.

6. Didesnis 6 mėn. kūdikių motinų patirtas *stresas* prognozuoja didesnius dvimečių bendrus ir eksternalius elgesio sunkumus kontrolinėje grupėje.

7. 6 mėn. kūdikių *tėčių vyresnis amžius, didesnis užimtumas ir žemesnės šeimos pajamos* prognozuoja didesnius dvimečių vaikų elgesio sunkumus jautrių kūdikio signalams motinų grupėje.

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Lina Kalinauskienė commenced her psychology studies in the Faculty of Social Sciences of Vytautas Magnus University in 1993. In 1997 she graduated with the Bachelor's Degree in Psychology. In 1997-1999 Lina Kalinauskiene studied clinical psychology in the Faculty of Philosophy in Vilnius University. In 1999 she was awarded a Master's Degree in Clinical Psychology. In 2002 Lina Kalinauskiene was accepted into the PhD program at Vilnius University. She also studied at Leiden University, the Netherlands, in 2003. Her scientific interests include early child development, early intervention and psychotherapy.

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MOTINOS IR KŪDIKIO PRIERAIŠUMO SANTYKIŲ KOREKCIJOS GALIMYBĖS

*Daktaro disertacijos santrauka
Socialiniai mokslai (psichologija, 06 S)*

Tir. 40 egz. 2 sp.l. Užsak. Nr.

Spausdino Vilniaus Universiteto leidykla, Vilnius.

