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ADDICTED PARENTS – VULNERABLE CHILDREN. DISTURBANCES OF ADDICTED MOTHER'S FUNCTIONING IN RELATIONSHIP WITH THEIR INFANTS AND POSSIBILITIES OF EFFECTIVE HELP.

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Summary

The consequences of parent's addiction for child development are well examined and described, although treatment centres relatively rarely create programs directed to parents. Although abstinence maintained by the parent is a protective factor for the child development, stress associated with abstinence and the ongoing healing process increase the risk of child abuse and neglect. Developmental behaviours of the child and it needs, can exacerbate parent's tension and activate the desire to consume alcohol, drug, which even laid off, is a strongly rewarding stimulus. Due to the fact that taking the psychoactive drugs disturb the functioning of the reward system, homeostasis and adaptive morphological changes, other stimuli, including social stimuli, related to the child, discontinue to be attractive and rewarding. The consequence of this is that the child safety and it's bond with the parent can be at risk. The aim of this article is to describe the neurobiological relationships between taking psychoactive drugs and the dysregulation of the brain centres involved in creating a parent-child bond. In addition, a therapeutic program will be introduced – Mothering from Inside Out (MIO), developed by a team of scientists under the direction of Nancy Suchman from the Yale University. The program supports parents in developing their reflective function - the ability to assign the emotional and mental meanings to one's own and child's behaviours. The program is a support for treatment systems for addicted adults bringing up young children and is an example of integrating neuroscience and psychotherapeutic interventions.

Introduction

A study on the epidemiology of psychiatric disorders in Poland revealed that 1.2% of adult Poles declare use of psychoactive substances, and 0.2% of the population can be diagnosed with substance use disorder [1]. It means that 461,500 Poles use psychoactive drugs, with about 77,000 addicts. According to global data, at least 20% of drug addicts are parents and take care of underage children [2]. In addition, European studies indicate a significant and increasing number of psychoactive substances by persons in the reproductive age and by pregnant women [3, 4]. About 90% of female opioid users are at childbearing age [5, 6]. Every year between 6.5 and 11% of addicted women become pregnant and give birth to a child: in Europe it is about 30,000 women a year [7]. According to US research, the highest proportion of illegal drug use was seen among teenage mothers - up to 14.6% of women in this age group [8].

Mother's addiction affects the baby from prenatal life, including the risk of prematurity or hypotension [9]. Hyperactivity, impulsivity, difficulty in concentrating and motor planning were observed in children who were exposed to psychoactive substances during the prenatal period [10, 11].

According to the Faden and Graubarda study [12], children exposed to prenatal misuse of alcohol, marijuana and nicotine have, in their parents opinion, higher level of motor activity, more problems with eating, peers, and more frequent temper tantrums in their first 3 years of life than subjects in control group of children of mothers who were non-smoking and drug- and alcohol abstinent during pregnancy.

As soon as 12-48 hours after delivery addicted mothers are more passive and distanced to their newborns compared to mothers who did not take drugs during pregnancy [11]. Babies of addicted mothers show lack of enthusiasm and pleasure in interacting with mother. Mother-child relationship in substance using mothers was characterized by a lower level of mutual attunement and lower level of mutual attunement and less mutual arousal [13]. The literature review shows unanimously that therapist working with addicted parents have to support two patients: an addicted mother and her child since earliest infancy. However, interestingly, a review of Polish websites of regional addiction therapy centres indicates that despite their very rich and diverse offer – addiction therapy, psychoeducation and advice for families, therapeutic groups for children – there is no specific offer for parents of small children such as parent-child psychotherapy, or other parenting support programs focused on dyadic/triadic relationships.

The review of literature clearly indicates that in some families affected by addiction help would be relevant already in the perinatal period and the first year of life of the child. Addicted mothers are less sensitive, less attentive, less emotional and more intrusive towards their infants [13, 14]. They are at risk of not perceiving and not reacting to the emotional aspects of the relationship with the child, which increases the probability of subsequent difficulties of the child. This leads to a vicious circle: a child without adequate care demonstrates greater anxiety, which increases the parent's tendency to withdraw from contact, and increases the risk of negligence or violence against the child. According to Suchman [15], the parental addiction can be linked to the risk of violence, but at the same time the child's irritability may aggravate the stress and desire to drink and/or take psychoactive drugs by carers, which also increases the risk of further addiction and violence. Quantitative research shows that addicted parents have low tolerance for child behaviour, they more often use physical punishment, and intimidating discipline, which is accompanied by passivity, indulgence, lack of control and parental supervision [13, 16]. Between 43% and 79% of children - victims of violence, had at least one parent who was addicted to psychoactive drugs [16]. In families with substance use disorder, parent-child separation occurs in 1/3 of 2 year olds - key period for building a stable relationship pattern [17]. Insensitive parenting style, risk of violence and negligence of the child, more frequent separation between parents and children: it is all associated with the fact that children of addicted parents show more frequent anxious and disorganized attachment patterns compared to non-clinical trials [18, 19]. The issue of intergenerational transmission may also be important. Empirical studies confirm that people with increased levels of anxiety and avoidance in their attachment patterns are more likely to be addicted to alcohol and other psychoactive substances [20, 21].

Despite many scientific reports showing the effect of mother's addiction on the developing mental health of the child, the parent-child relationship is rarely a focus of direct intervention in addiction therapy centres. This is most likely due to clinicians and researchers' assumption that children benefit directly from maternal abstinence, drawing on idea of sober parent being a good enough parent for the child [22]. However, research studies and clinicians draw attention to the need to create a specialized treatment program for parents who are addicted to psychoactive substances. Even the abstinence period - even though it is an important protective factor - does not necessarily mean a change in the parent's response to the signals sent by the child.

Parental dependency is understood as a difficulty in self-regulation of mental states. Parents who have difficulty in self-regulation also have difficulty adjusting to their child's

needs – small children need a parent who can regulate their emotional state especially in a state of stress, anxiety, and crying. According to Bowlby [23] as well as Feldman studies [24], the task of calming the child in stress and anxiety is a key issue of parenting. In the case of substance abuse treatment and, later, abstinence, the mother is much more likely to be stressed and irritable, and simple demanding of attention by child can lead to growing irritation and aggression [25]. In addition, in the Landi study [26], it has been observed that drug abusers show less activation in the prefrontal area of the brain in response to the child's face. Less activity was observed in limbic as well as visual processing brain regions. Similarly, in response to baby crying, mothers abusing psychoactive substances showed reduced activation in the prefrontal lobes. Thus, child-related stimuli appear to be less relevant and less noticeable to brains of addicted mothers. This reduced sensitivity and associated poorer responsiveness affects the bond between parent and child and reduces the ability of mothers to respond to signals sent by the child. The daily requirements of a young child - even when they are noticed, may not necessary activate mother's readiness to help, but can increase their negative affective state and their irritability. This may exacerbate the mother's craving for drugs and provide an important risk factor for the neglect or abuse of the child.

These reactions are the consequence of dysregulation of the mesolimbic dopamine system, also known as the reward system. This system, under normal conditions, is responsible for the development of motivational behaviours, which are targeted at seeking natural reinforcing stimuli. Its important part - the mesolimbic pathway, which runs from the ventral segmental area to the nucleus accumbens, is composed of neurons releasing neurotransmitter: dopamine, which induces a feeling of satisfaction and euphoria. Under natural stimulation, a moderate amount of dopamine is briefly released into the synaptic cleft. The excess is reabsorbed or metabolized by the action of monoamine oxidase [27, 28]. Taking the drug disturbs the normal operating mode of the mesolimbic system - it stimulates the secretion of dopamine with a force many times greater than any natural stimulus [29]. The drug leads to a dramatic increase in the concentration of the neurotransmitter in the synapses, causing the euphoric effect - a positive reinforcement for the person taking over psychoactive substances. The withdrawal causes aggravated anxiety and dysphoria, in the form of rapid depressed mood, irritability, explosiveness, violence, and intensification of other negative emotions. This leads to increasing distress which is associated with lack of substance - the effect of that is negative reinforcement. The organism wants to escape from the negative affective state, demanding to take drugs [30]. At the same time the homeostasis of the organism is disturbed as the consequence of the dysregulation of control processes. Taking the

same amount of drugs as before, does not induce the same effects, because the reward effect is weakened (as a result of a tolerance), while the effect of desire for reward increases (as a result of a sensitization). The organism, which is unable to return to the optimum (homeostasis), creates new "setting" (allostatic) points, that deviate from the pre-substance point of origin and are the apparent state of equilibrium, maintaining the stability of the reward system [31]. As a consequence, in drug addicts, drugs disrupt the normal functioning of the reward system. In addition, new instrumental reflexes are created, as a consequence of the conditional process, in which taking the drug was gratifying for the organism [32]. In one part of the mesolimbic system - the nucleus accumbens, the so-called "unconscious" portion of the reward is formed, which encodes the reception activity as adaptive to the body. Other adaptive rewards: interpersonal relationships, including the relationship with the child, cease to be a competitive stimulus for the reward system [33]. On the contrary: crying baby, waking up at night, etc. can be perceived as stressful and increase dysphoria, and thus lead to increased need for taking drugs or avoiding contact with the baby - as a stimulus for negative feelings.

In addition, studies showed that drug-taking changes, despite withdrawal, are permanent - it has been established that exposure to addictive substances induces marked changes in the expression of more than 100 genes [29], whereas sensitization, caused by certain psychoactive substances, causes a morphological adaptation in some areas of the brain [31].

So how can we help an addicted parent?

Suchman and colleagues, in the series of articles and literature reviews [15, 34, 35], indicate that the activation of a child's representation during therapy is conducive to therapeutic outcomes and is associated with improved outcomes for maternal abstinence, mental health, better pregnancy and fetal health and employment.

Very often it is a child who motivates a sick mother to fight for her health. However, despite the inclusion of a child in maternal therapy, many interventions for addicted mothers have short-term consequences. The reason for this may be the concentration of work on a specific one issue, such as pregnancy only, psychoeducational activities concerning one main topic, without providing the mother with an opportunity for internal integration that could be the basis for more long-term changes.

Nancy Suchman, Cindy DeCoste, Thomas McMahon, Linda Mayes, Monica Ordway and Susan Bers [15, 34, 35] have developed a method of short-term addiction parenting therapy based on John Bowlby's attachment theory [23] and is intended to support parents'

reflexive function. The term reflective function is related to the mentality concept developed by Allen, Bateman and Fonagy in the 1990s [36]. Mentalizing is defined as the ability to give meaning to the actions of others and others by referring to intentional mental states, i.e. understanding behaviours in terms of thoughts, beliefs, feelings, desires, etc. The purpose of the mentalization based treatment (MBT) is to support patients in conscious and open engagement in the effort of thinking and understanding behaviours in the category of thoughts, feelings, desires, and intensions. The process of mentalizing assumes some "slowing down": it involves discussing the difficult patient situation: the cognitive and emotional response to an event that has caused the breakdown of mentalizing capacities. Cyclical engagement in the process of discussing these situations helps the patient to internalize this skill and apply it in his or her own life [36].

This approach has been developed for people diagnosed with borderline personality disorders. However, the MBT components have recently started to be used in prevention programs as well as in work with parents. Practical activities have been inspired by research: the ability of the parent to reflect upon child behaviour seems to be crucial for the development of these abilities in the child, as well as to the development of child's self-regulation and the development of social skills [37, 38]. Grienenberger's research [39] has shown that parents who achieve low performance on a parental reflective scale are more likely to undergo disorganization in the face of infantile crying because they cannot distinguish their own feelings from the feelings of their children. According to Slade [37] the child, in such a situation, is exposed to chaotic and distorted situation. He is more likely to contact the parent looking at them through the prism of their projection and distortion. Crying baby can then cause irritation and anger on the baby - which in some situations ends with aggression towards the child. As a consequence, the child, using the psychodynamic terms, assimilates hatred and aggression of the parent in the process of primitive identification with the aggressor.

Parental support programs that use the notion of mentalizing tend not so much to change the real situation of the mother or the behaviour of the child - which is a common element of other interactions - but the purpose of the intervention is the relationship between parents and children. Not only the programs for parents dependent on the psychoactive substances but also programs for e.g. teenage mothers tend to show higher effectiveness when the goal is not to change the child's behaviour or e.g. mother's education, maternal work, but the parent-child relationship. The programs focusing on parent-child interactions have a better outcome than those aimed at supporting mothers or their education [40]. Based on Allen, Bateman and

Fonagy works [36], the Mothering from Inside Out program (MIO) developed by Suchman, DeCoste, McMahon and Mayes[34, 35] emphasizes the development of a parent's ability to think about his or her mental states as well as the child. This is to enable the parent to understand the behaviour of the child, respond more responsibly to his or her needs, and provide emotional support. Recent studies by the Suchman team show that the parental reflective function has two main dimensions:

a. focused on the parent, related to his/her ability to recognize his/her own emotions and their impact on the child
a. focused on the child - related to the parent's ability to recognize the child's emotions and their influence on the parent [15].

In conclusion: parent learns to make sense of behaviour and emotional experiences both his and her own child. To achieve this, Suchman and colleagues [34, 35] developed a 12 sessions programme of short-term therapy. This program, in the case of substance addicted parents, supplements the basic addiction treatment program.

From the point of view of attachment theory, the MIO program supports parental self-regulation opportunities, but also supports mothers in her bonding with the child. The therapists aim to help parents build relationships with their children and to create opportunities for enjoying their parenting as well as dealing with irritability, disobedience, and rage in children. Addiction to psychoactive substances is aimed to be in a way replaced by a strong bond with the child. Another goal of this intervention is to support parents in seeking more long-term care for themselves – which is more likely when beneficiaries of these programs can experience a positive therapeutic relationship. The Suchman and colleagues [35] short-term program of Mothering from Inside Out combines the elements of directive therapy and non - directive therapy where the therapist follows the mother. The clinical background of therapists taking part in the study was different, for example: one nurse practitioner, two social workers, one licensed psychologist, six pre-doctoral psychology interns and two post-doctoral psychology fellows [35]. They all completed training which lasted 8–12 weeks and included didactic training on mentalization theory and the treatment approach as well as experiential training on the treatment techniques (demonstrations, discussions and role plays). Therapists received weekly clinical supervision from the trainers there until treatment completion.

Short-term therapy involves three stages of work:

1. building therapeutic alliance;
2. mentalizing the mental states of the mother,
3. support the mother in understanding - mentalizing the child's mental states.

1. Building an alliance with the therapist

The first and most important goal of therapy is to create and maintain a therapeutic alliance. Studies show that the age of addicts, higher levels of motivation at the start of treatment, self-efficacy and better coping strategies, and commitment to therapy and trusting attachment styles provide for a stronger therapeutic alliance. Regardless of these variables, the alliance itself is important. Patients who developed a stronger therapeutic alliance with their therapist experience greater benefits: greater stress reduction during treatment, but also earlier abstinence and better coping with anxiety [41]. To provide a framework that enables the development of a therapeutic alliance, the first meeting with the parent is dedicated to provide information about the setting, duration of therapy, limited therapist availability outside the sessions. The therapist describes the way he works: he informs that therapy is based on the concept of attachment and the assumption that human behaviour is strongly influenced by his feelings, thoughts, and behaviour, even when they are difficult they can be understood by referring to his intentions, desires and fears. The therapist also encourages the mother to speak openly about her fears, doubts, or criticism about the therapist [34, 35].

The authors of the program emphasize that for some part of patients the exclusive purpose of the 12 sessions is to work on the alliance - without the possibility of going to the second or third stage. However, for this group of people, the possibility to think together with the therapist about the way they build relationships, discuss and experience trust, anger and the fears that this situation may cause can be a significant developmental experience. Clinical observations also show that the most needy mothers - with no social support, a broader repertoire of coping strategies, less motivated to change, and who tend to perceive others in a threatening way - may be in the group where the key issue of 12 sessions will be the work on the alliance with the goal to see the therapist as a helpful person.

2. Mentalizing the mental states of the mother.

In the second stage of work, after the establishment of a therapeutic alliance, the goal is to reflect on the feelings of the mother. The addiction to psychoactive substances reduces stress tolerance – which can cause mothers with addiction history to have more troubles maintaining their reflective function and more easily react with anger and irritability toward the child. As a consequence, they make it more difficult for them to reflect on their and their baby's feelings. During the session it is the mother who decides on the subject of the conversation. Suchman, DeCoste and Ordway [42] wrote that mothers taking part in their research wanted to talk about very different things: fighting with children and fights between children, frustration, children's demands, parenting, relationships, learning good manners, but also discussing the relationship with partner and other family members, difficulty in maintaining abstinence and fear of relapse, frustration in contact with social care.

If the mother is angry that for example her guidance by a curator has been prolonged, and she would like the therapist to assist her in appealing the decision, the therapist will rather try to get her to talk about her feelings about the situation and support the understanding of herself and the others. The therapist can say: *I would like to reflect on this with you, how do you understand that the curator thought you should continue to cooperate? What do you think, by which factors it was caused?* The therapist shows curiosity and commitment to understanding the situation described by the mother. When maternal feelings related to a stressful situation are initially developed and elaborated, and when the child is not the subject of a mother's speech, the therapist will try to bring the child back to the main narrative - at the time he feels appropriate. The authors of MIO emphasize that this should not happen too soon: the top priority is to restore the possibility of thinking and reflecting by the mother [34, 35]. Stressing situations from mother perspective, especially where her mental capacity is at risk, should be discussed in detail. The therapist encourages mother to study thoughts, feelings, intentions of herself and the child. If a mother comes to the session under the influence of strong emotions such as her social situation, after a quarrel with her partner, the therapist's job is to support her mother in combining the facts and identifying the strong feelings associated with them. Mentalizing is used here as a tool to regain balance, inner peace - and consequently to allow the focusing on relationships with the child. According to the Fonagy team [38], the main purpose of therapy is to model the situation in which even the most extreme anger or difficulty can be understood by trying to elaborate it in the light of the thoughts, desires, intentions and feelings that stand behind oneself and others. During the session the therapist

actively encourages the mother to study her way of thinking about herself and her baby and helps her to “stop” when the strong emotions disorganize the mother.

An example of "stopping" in order to develop the emotional significance of a given event is the therapist's question: *What did you feel when your partner refused to help with childcare? Or when your mother-in-law criticized the way you feed your baby? What did you feel that the social worker judged you critically?* The next step is to combine the emotions with the behaviour: *do you think that the anger toward your partner could affect your relation with your child? etc.*

The therapist's goal is also to identify the moment when a mother's ability to think of her own mental states collapses and help her to restore that competence. The lapses can take many forms, including sudden lapses in coherence, changes in the topic, silence or hostility towards the therapist. People may collapse to one of three pre-mentalizing modes of thinking: psychic equivalence, the theological mode and the pretend mode. These modes are observed in different individuals in varying degrees of severity [36].

In the mode of psychic equivalence, the mother may have difficulty distinguishing inner and outer reality. It can specifically and automatically equate thoughts and feelings with concrete action. This prevents from keeping distance or watching own feelings and thoughts and trying to use them to understand yourself or your baby.

In the theological mode, the mother equates the physical or external reality with its inner. It may be assumed that, for example, the social worker does not like her - for one day she did not receive phone calls from him or he did not agree to additional meetings [35, p. 421].

In such a situation, demonstrating an understanding of the anger or loss of a mother, coupled with its support of distance and the opportunity to investigate this situation, may help to return to a more unmetizing way of experiencing reality. At the same time, it is important to mirror the affect the mother experiences so that she can recognize her own experience in the mind of the therapist. According to Suchman, DeCoste, Ordway and Bers [35, p. 422]: *mirroring the experience (e.g., an intense feeling of threat or fright) even if it is based on a distorted perception of reality, can help the mother feel understood and also to cognitively represent (and regulate) the affective state, a critical first step toward mentalizing*. When the therapist observes that the attention of the mother is disturbed, it is excluded from the contact, the situations are subjected by the therapist to reflect. The therapist may ask: *What happened to you when you stopped talking and pulled out the phone - what was your thought? Where were you at that time?* When the therapist ceases to understand the meaning of mother's

speech, it is also important to catch this moment, for example by saying: *I have the impression that I stopped understanding you when suddenly changed the subject of conversation. Can we go back to the previous topic or will you continue with the new one?*

In pretend mode, the patient has seemingly elaborate or intellectual explanations for why things are the way they are, but there is little sense of emotional truth to her story. The mother may blame her problems on her addictive history or traumatic childhood, bad relationship with mother and son but the use of psychological terms does not seem to be connected to an authentic emotional experience.

Allen, Fonagy and Bateman [36] emphasize that in a short-term work program, it is important for the therapist to care for the mother's space - to think she can, not to work for her. Suchman [35] also emphasizes that it is not so much the result of the mother's elaboration of her feelings, thoughts, intentions, etc., but the process of mentalizing itself.

3. Support the mother in understanding - mentalizing the child's mental states.

Work on the recognition of the emotional state of the child can be based on questions about the child's feelings, such as: *how could he feel when told him that he would not meet Dad today? Cannot go with you to the store; must stay with the new babysitter?* The next step is to model the situation of thinking about the child and the mutual impact of emotions in the family: *Do you think that your daughter was crying because she wanted to spend more time with her grandmother- she did not want her to leave the house? Where was the baby when you quarrelled with your husband? How do you think she can experience what is happening between you?* When the mother replies that the child is too small to understand, so these child situations do not interfere, the therapist can answer: *I wonder if you are upset if your child does not feel this way in a certain way?* – so as to expand the mother's ability to understand and perceive her influence on the child.

When the therapist has the ability to observe the mother-child interaction before or after the session, discuss them often by often giving voice to a child. By giving the child's voice, the therapist suggests what he or she can say to the mother, for example: *I was worried that you would not come!!* .

One of the techniques a therapist can use to record interactions between mother and child and discuss them in the category of desires, intentions and emotions experienced by children during interaction. The therapist selects moments when the interaction between mother and child is synchronous – or absent – and encourages the mother to reflect on the

state of her own and the child's mind. In addition, mothers with substance use disorder often do not have enough information on the development of the child.

However, the research conducted so far indicates, the important effects of the program. For example a study by Suchman and colleagues [15, 35] involved 47 women. 23 of them were assigned to the MIO group and 24 participated in the education program (PE). Mothers enrolled in MIO showed higher levels of self-focused mentalizing (i.e., capacity to think about their own strong negative emotions in the parenting role and their impact on the child) compared to PE mothers at post-treatment and follow up. MIO mothers also showed more balanced and coherent mental representations of their children and the caregiving relationship than PE mothers at follow-up. Even though child-focused RF did not improve, MIO mother-child dyads showed notable improvements in interactive behaviours at post-treatment and follow-up. *MIO* mothers' behaviour during the brief teaching task was more supportive of children's emotional development than PE mothers' at post- treatment. A study of the effectiveness of the Mothering from Inside Out program in the population of psychiatric patients [34] found that the completion of therapy was associated with significant improvements in reflective function, psychiatric symptoms, and parental stress.

Early interventions focused on the development of reflective function - observable and measurable ability which - according to Suchman [34, 35] and Fonagy [38] - is the basis for the conception and regulation of feelings, can support both mother and child. Both the mother can get help seeing her child and consequently - the baby can feel completely reflected in the eyes of the parent.

Rutherford and Suchman [45] emphasize the relationship of parenting programs, including MIO, with Donald W. Winnicott's thesis [46], about "primary maternal involvement". It is a state where the thoughts, feelings, anxieties of a young mother - a few weeks before childbirth and a few weeks after it - completely focus on the newborn. Neurobiopsychological knowledge and research show that strong maternal stress, depression, anxiety, and addiction complicate the transition to parenthood by e.g. depriving the mother of evolutionary neurobiological "benefits" such as the brain activation of the reward system. This has consequences for the child. The brain of addicted parents is unable to see the signals sent by the child [26]. The child is unseen - or seen as irritable, malicious, and rude. According to Winnicott [46] the child discovers itself while being seen by its mother. In such situations, however, the child may see himself in the distorted mirror of the disturbed representation of the parent. According to Fonagy [38] the sense of being seen is important for further development - giving the child a sense of security and a feeling of being whole - with

different feelings, states, desires, and intentions. But to make it happen, the mother should have the possibility to be seen by the therapist – what was underlined with the necessity of mirroring mother's experience.

Due to the social context and the prevalence of both alcohol and psychoactive substances use disorder among mental health disorders in Poland [1], it is important to both extend the offer of addiction treatment centres to therapeutic programs addressed to parents of infants and toddlers. It is also important to recognize that the parental abstinence does not always play a sufficient protective role for the development of the child. The research conducted and presented in the article show that short-term, limited to 12 sessions psychotherapy, which is as a complement to treatment for addiction, not only improves the ability of mothers to reflect on their own mental states, and translates, as the research shows, to more optimal development of the child.

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