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ENHANCING THE EFFECTIVENESS OF RESIDENTIAL TREATMENT FOR SUBSTANCE ABUSING PREGNANT AND PARENTING WOMEN: FOCUS ON MATERNAL REFLECTIVE FUNCTIONING AND MOTHER-CHILD RELATIONSHIP

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Abstract

Substance abuse during early motherhood has become a significant problem and has led to accelerated efforts to develop specific treatment facilities for these mothers and children. Despite the often intensive treatment efforts in residential settings, there is surprisingly little evidence of their efficacy for enhancing the quality of caregiving. The situation of these mother-child pairs is exceptionally complex and multilevel, and has to be taken into account in the content and structuring of treatment. Intensive work in the “here and now” focusing on the mother-child relationship from pregnancy onwards in an effort to enhance maternal reflective capacity and mindedness is considered a key element for better treatment prognosis, in terms of both abstinence and quality of parenting. Pioneering work with such a focus is described in this article.

INTRODUCTION

Alcohol abuse in women has a long history in Finland, and during the past ten years drug use among young women during their childbearing years has also become a considerable problem. As a consequence, the number of prenatally exposed infants has also significantly increased. In a recent study of 400 pregnant women in maternal health care services, about 6% were found to have dependency on substances including alcohol, other drugs, and pills, but not cigarette smoking (Pajulo, Savonlahti, Sourander, Helenius, & Piha, 2001a).

About 90% of Finnish pregnant women use alcohol to at least some extent at the beginning of pregnancy, but 65% have been found able to reduce their consumption by at least half through counseling and support (Halmesmäki, 1988). The prevalence of heavy alcohol consumption among all pregnant women in Finland has been estimated to be about 1%–3% (Halmesmäki, 2000) and of cigarette smoking about 18% (Jaakkola, Gissler, & Jaakkola, 2001). However,

cigarette smoking is known to be much more prevalent among pregnant women who have other substance abuse.

Within a sample of mothers in residential treatment with their babies due to drug abuse problem, over 80% were found to smoke cigarettes excessively during pregnancy (Pajulo, 2001). Most commonly used drugs in this group are cannabis products, amphetamine and heroin, but polydrug use including alcohol and excessive cigarette smoking is the most common type of abuse (Halmesmaki & Kari, 1998; Pajulo, 2001). In Finland over 99% of all pregnant women use the cost-free public health checkups with a midwife, over ten times during pregnancy (Puura, Papadopoulou, & Tsiantis, 2002). At least in theory, this gives a unique possibility for identification and referral of mothers with substance abuse problem to specific treatment facilities. In practice, however, many mothers still don't become identified with their problem, and referral to treatment is dependent on their living area.

The efforts to provide specialized treatment services for pregnant and parenting women with a substance abuse problem have increased during recent years. These developments have arisen from growing scientific findings on the negative effects of substance abuse on pregnancy and development of the child, estimated economic costs of those effects, and limited availability of substance abuse treatment services for this group (Daley, Argeriou, & McCarty, 1998; Mayes & Truman, 2002). Among all substance abusers, pregnant and parenting women present an especially pronounced societal cost because the women are typically the primary caregivers of their children (French, McCollister, Cacciola, Durell, & Stephens, 2002). Despite the often intensive efforts in treating these mothers and children in residential as well as outpatient settings, there is little evidence of the effectiveness of such treatments either in terms of rates of abstinence or of parenting abilities. In this review we summarize the specific aspects that should be taken into account and previous research findings regarding residential treatment of mothers and their children. A new treatment approach focused directly on the mother-child relationship is described. This approach has emerged from clinical experience in residential settings in which we have found that a woman's relationship with her children is a critical factor in her efforts toward abstinence and understanding of how her addiction impacts her children and other important figures in her life. Although the focus in this paper is in describing a Finnish residential model program, we propose that it has applicability also in out-patient facilities and well beyond Finland.

THE PSYCHOSOCIAL CONTEXT OF MOTHER-INFANT DYADS ENTERING TREATMENT

Substance-abusing pregnant and parenting women typically have limited economic resources, are less educated, receive little social support, and have difficulties securing housing. Their pregnancy is often unplanned, and they suffer from depression, anxiety or more severe psychopathology, low self-esteem, and feelings of shame and guilt. They often have a history of childhood trauma, parental substance abuse, abusive relationships, negative representations of their childhood and the parental care they received, and hence, negative models for parenting (Grella, Joshi, & Hser, 2000; Pajulo 2001; Mayes & Truman, 2002; Suchman, McMahon, Slade, & Luthar, 2005). In addition to substance effects *per se*, all these factors have a cumulative negative effect on the well being of the mother and the child and on the quality of their relationship. Quality of early care and postnatal caregiving environment combined with the neurophysiological vulnerability of the exposed child are considered most important for the prognosis of child development and psychosocial outcome in later years (Lester & Tronick, 1994; Carmichael Olson, O'Connor, & Fitzgerald, 2001; Mayes & Truman, 2002).

Despite the clear need for support in their parenting role, substance abusing women have special difficulties attending and staying in treatment. They often have experienced a lot of difficulties

in their social relationships, have fear towards authorities, and little confidence and trust about their own maternity and parenting. At the same time they often have high expectations for their children and for themselves, and easily get offended by their children and disappointed in their parenthood. They are often in a situation where they have to make several great changes at the same time and in multiple areas in their life: Make room for the child in their mind, take responsibility for the child, give up substances, reach for a new social network, and deal with practical life arrangements and authorities.

The substance-exposed mother and child are difficult regulatory partners for each other, as the exposed infant often has an impaired ability to regulate his states of wakefulness, sleep, or distress, and needs more parental help. At the same time, the mother usually has a reduced capacity to read the child's communicative signals (Beeghly & Tronick, 1994) and a reduced tolerance for coping with a distressed and difficult to soothe infant. This combination easily leads to viciously negative cycle that culminates in withdrawal from interaction and increased risk for child neglect and abuse (Kalland, 2001). In empirical studies of mother-child interaction, substance-abusing mothers have been found to be less sensitive in interaction with their children, less emotionally engaged, less attentive, resourceful, flexible and contingent, to experience less pleasure in the interaction and to be more intrusive in their behavior (Eiden, 2001; Pajulo, Savonlahti, Sourander, Ahlqvist, et al., 2001; Johnson et al., 2002; Mayes & Truman, 2002; LaGasse et al., 2003). Substance-exposed children have been found to show less positive emotion during the interaction, more distress to novelty, a slower recovery from interruptions, an impaired response to stress, and a diminished ability to persist in a task or maintain an alert, attentive state (Bendersky & Lewis, 1998; Eiden, 2001; Eiden, Lewis, Croff, & Young, 2002; Johnson et al., 2002; Molitor, Mayes, & Ward, 2003). The pair shows fewer moments of dyadic interaction, the quality of the dyadic interaction lacks enthusiasm and mutual enjoyment, and includes more dyadic conflict and less mutual arousal (Burns, Chetnik, Burns, & Clark, 1991; 1997; Mayes et al., 1997; Eiden, 2001). Studies on child attachment profiles have shown that a higher percentage of substance-exposed children have insecure and, in particular, disorganized attachment compared to normative samples (Rodning, Beckwith, & Howard, 1991; Swanson, Beckwith, & Howard, 2000; Espinosa, Beckwith, Howard, Tylor, & Swanson, 2001; Beeghly, Frank, Rose-Jacobs, Cabral, & Tronick, 2003).

PREVIOUS RESEARCH ON RESIDENTIAL TREATMENT FOR SUBSTANCE USING PREGNANT AND PARENTING WOMEN

According to literature, residential treatment interventions for substance abusing women and their children have varied greatly regarding the timing, content, length, and structure of the intervention, as well as target population (depending, for example, on the substance used). The primary emphasis in residential programs has been on treating the substance abuse problem of the mother and assisting her with gaining access to services, e.g., arranging medical care, room and board for her and her children/family, arranging legal, psychological, and social services, vocational assistance, child care and/or transportation. Children have rarely been the direct focus of the intervention, most probably because of the prevailing assumption that children benefit indirectly from both the parenting support and drug treatment services offered to their mothers (Barnard & McKeganey, 2004). When included as a specific part of the treatment program, the focus on parenting has mostly involved teaching parenting skills such as limit setting and discipline (Cosden & Cortez-Ison, 1999; Killeen & Brady, 2000; Knight, Logan, & Simpson, 2001; French et al., 2002).

There is a notable absence of reports on interventions that have explicitly described a focus on enhancing the relationship between the woman and her child/children. In two studies, the interaction quality has been systematically assessed during the relationship-focused residential intervention period (Camp & Finkelstein, 1997; Pajulo, Savonlahti, Sourander, Ahlqvist, et

al., 2001). Surprisingly little difference was found compared to normative and low-risk comparison groups, which may speak to the positive impact of the ongoing intervention. Remarkably few studies have reported here and now work on the interaction between mother and child, and none has described the interaction work in a detailed way.

The different outcomes of residential treatment reported in the literature are presented in Table 1. Most studies have measured treatment retention and reduction in maternal substance abuse as the primary outcomes of treatment and assumed that work with mothers regarding their parenting is secondary to this primary goal. Residential services have been considered ultimately more effective than outpatient services because of savings on foster-care placements, medical and psychiatric admissions, repeated detoxifications, incarcerations, special education needs (Killeen & Brady, 2000), and lower infant intensive care costs (Killeen & Brady, 2000; French et al., 2002). Long-lasting intervention beginning in pregnancy and extending through the postnatal period, a focus on mother-infant interaction, parenting behaviors, and cognitive stimulation for the child combined with a focus on addiction treatment are considered centrally important for the child's developmental outcome (LeJeune, Floch-Tudal, Montamat, Crenn-Herbert, & Simonpoli, 1997; Blackwell, Kirkhart, Schmitt, & Kaiser, 1998; Eiden, 2001). However, there are few empirical data demonstrating the effectiveness of such interventions on the quality of maternal and dyadic interaction and child's later development.

TRANSMISSION OF ATTACHMENT SECURITY ACROSS GENERATIONS

Perinatal Period: A Time of Motivation, Upheaval and Early Representations of the Baby

The basis for intensive treatment intervention for women who are pregnant is most fundamentally to protect the child inasmuch as maternal substance use during pregnancy presents clear toxicological risks to fetal development. Often, the safety and well being of her infant provides strong motivation for a woman to work towards abstinence. On the other hand, pregnancy can also be a period of increased fear, anxiety, and guilt regarding the health of the child, each of which may compromise a woman's full engagement in substance abuse treatment. The pregnancy is usually unplanned, and the guilt is often reinforced by societal stigmatization of addicted mothers (Daley et al., 1998), which in turn may make it difficult for pregnant substance using women to seek treatment.

The perinatal period is a time of enormous psychological change and upheaval, which makes it an especially important and difficult time from the intervention point of view (Raphael-Leff, 1991; Slade, 2002). In psychoanalytic theory and research, the importance of mental representations during this phase has become of growing interest. The mental representation about maternity and being a child become strongly activated during pregnancy and early motherhood (Stern, 1995; Ammaniti, Candelori, Pola, & Tambelli, 1995). The relationship between representations of the experiences of being parented and current maternal behavior has special significance for high risk populations such as substance addicted mothers, since they so often have negative, fragile, or idealized representations of their own childhood and own parenting—and hence, of their own parenting capacities (Pajulo, Savonlahti, Sourander, Helenius, & Piha, 2001b, 2004; Suchman, McMahon, Slade, & Luthar, 2005). Interventions aimed either toward abstinence or abstinence plus supportive guidance regarding expected infant and caregiver behavior do not seem to have an effect on the mothers' interactive behavior, that is, they do not show increased sensitivity to their children's needs. Change may often occur in the mothers' attitude and perception of the child, but these changes are often not reflected in the behavior between mother and child. These modest changes in maternal attitudes may or may not be experienced by the child as any change in the parent's behavior.

Reflective Functioning

During the past ten years, the British psychoanalysts have increasingly drawn attention to the definition and importance of the concept of reflective functioning in human development. We propose that this concept has a strong relevance in the situation of substance abusing mother-baby couples and their treatment in a residential setting. The term reflective functioning (RF) refers to the psychological processes underlying an individual's capacity to mentalize. Mentalizing refers to the capacity to understand oneself and others in terms of mental states (feelings, beliefs, intentions, and desires), and to reason about one's own and others' behavior in relation to these (Fonagy, Gergely, Jurist, & Target, 2002). The concept is theoretically rooted in both object relations and attachment theory, and can be measured as a parent's capacity for mentalizing about him/herself, about the child, and about relationships with the child.

Reflective functioning enables an individual to understand another's behavior as meaningful and predictable. A reflective parent is able and interested to think about the child's behavior and experience and her/his interests and feelings in terms of the child's mental states, i.e., in terms of the child's psychological reality. In addition to being a metacognitive capacity, reflective functioning refers to the ability to hold, regulate, and experience emotions. The developmental roots for a capacity to understand and interpret affects lie in the early interaction between mother and child. Early interactions between a mother and her infant are based on the mother contingently mirroring her infant's behavior and affect, that is, smiling when the baby smiles or looking sad when the baby cries. At the same time, mother expands upon these mirroring moments. For example, she comments on the baby's smile by adding a statement about the experience that has led to the infant's pleasure, or soothes the crying infant even as she looks initially sad herself. This ability to provide contingent mirroring of the child's emotions and behavior is the behavioral expression of a reflective ability, and high reflective functioning makes it possible for a mother to behave sensitively with her child. The impact of reflective contingent mirroring is that it provides for the child a "mirror" of his own feelings; when the child looks into his mother's eyes, he sees there not only his mother, but the reflection of himself and his own feelings. Furthermore, mother often mirrors her child's behavior and emotions in a marked or exaggerated way, that is, with a gently exaggerated cry or a very large smile. When a mother reflects upon her child's distress or pleasure in a "marked" manner, this is a clear signal to the child that the mother understands his feelings and at the same time has a separate feeling herself. The mother is able to empathize with the child while at the same time showing her own individuality and separateness (Fonagy et al., 2002). Highly reflective parents also understand that mental states can be ambiguous, that they can change in valence or intensity over time, and that they can be hidden or disguised (Slade, 2002).

Reflective functioning is considered a mediator in the intergenerational transmission of attachment security, and plays a critical role in the shaping of maternal representations of an understanding, caring parent versus a distant, impervious one. Deprived and traumatized mothers who nonetheless are highly reflective are more likely to have securely attached children, whereas deprived mothers with low reflectiveness almost invariably have been found to have insecure children (Fonagy, Steele, & Steele, 1991; Fonagy et al., 1995).

Maternal reflective abilities also correlate positively with a child's better social skills, and negatively with a child's attention problems, tendency to withdraw from interaction, maternal distress, and dysfunctional mother-child interaction. When maternal reflective abilities are well developed, children are more prosocial, responsive, better able to regulate their emotional state, and the dyadic relationship is more congruent, less frustrating, and less stressful (Fonagy et al., 2002). Reflective functioning is considered a parental capacity which can be enhanced by accurate intervention (Schechter, Zeanah, & Myers, 2002; Schechter, Kaminer, Grienberger, & Amat, 2003), and also in a group setting with at-risk (Goyette-Ewing et al., 2002) and drug-

dependent women (Suchman, Altomare, Moller, Slade, & Mayes, 2003; Suchman, Mayes, Conti, Slade, & Rounsaville, 2004). There are a few data showing that among substance using mothers, reflective abilities toward their children are generally low (Suchman et al., 2003, 2004; Truman, Levy, & Mayes, 2004). It seems a promising avenue for substance abuse treatment programs to incorporate the concept of reflective functioning in clinical interventions with substance abusing parents, and we focus here on the incorporation of such an emphasis in a residential treatment approach.

RESIDENTIAL TREATMENT PROGRAM FOR SUBSTANCE ABUSING PREGNANT WOMEN AND MOTHERS OF INFANTS IN FINLAND: A DESCRIPTION OF THE MODEL

Treatment Units

In 1990, the first treatment unit specifically for pregnant and parenting women was established in the capital area, and, in 1998, a second unit was established in another larger city. At the present time, five new residential units are starting their work in different parts of the country with the same approach in their work. The units are part of child protection field in social welfare sector (Federation of Mother and Child Homes and Shelters). The personnel in the units represent different educational backgrounds and working experience, as they come from the substance abuse field, family and infant work, child protection field, and psychiatry. A typical unit has a leader, who is usually a social worker, one social worker, one special worker (e.g., social worker, occupational therapist, or psychologist), and eight clinical counselors, who work in three shifts. The treatment staff of each unit receives an intensive initial training as a group during the first six months, which concentrates on early parent-child interaction, attachment, and child development within the context of maternal substance abuse. The units have the capacity to serve, on average, five mother-baby couples, and one place for a whole family to live in, and are situated within the ordinary city-area with their own house and garden. The treatment occurs throughout each day on all days of the week. The residential treatment period lasts from pregnancy to at least four months postpartum. The average duration has been six months, and the treatment has started usually two to four months before delivery. The referral to the unit is made by social welfare agency, delivery hospital, well-baby clinic or by the mother herself due to her primary problem with alcohol and/or other drugs. The use of a residential facility gives the mothers a substance-free environment and way of living to make healthy food, take care of herself personally, support her improving physical health, and organize her daily life, rhythm, and use of leisure time. An important task is to establish the out-patient treatment and follow-up plan for the time after the residential treatment period. Accumulated clinical experience suggests that most of these mothers benefit from a highly structured and holding environment in the beginning.

Structure of the Intervention

In the units, each mother and each baby have their own individual counselor as well as working familiarity with all of the staff. All mothers and all staff participate in weekly group meetings focusing on a specific parenting theme, for example, on different roles in being a parent, feelings evoked by parenting, or how to deal with a child's tantrums. Each mother participates in planning her living, treatment aims and work with her family and social network, and has responsibilities for helping with the daily routines in the unit. When needed, detoxification and other medical or mental health treatment are provided outside the unit. The mother is supported in her participation in those, and openness of the collaboration between the unit, social welfare agency, and well-baby clinic is emphasized. Mothers are expected to stay substance free, but one to two relapses are allowed during the treatment period. All relapses are discussed in the group meetings.

Main Aims of the Intervention

The core idea in treatment is to create a holding environment at three levels: Helping the mother hold the baby and her relationship with the baby in her mind (Winnicott, 1957); helping the mother's social network and the unit personnel hold the mother in mind; and through supervision, evaluation, and research work holding the treatment units by showing continuous interest in developing their work.

The two main aims in the treatment are to intensively support the mother in her efforts toward abstinence and simultaneously to support her relationship with the child. This is based on the clinical finding that the specific challenges and most worrisome deficiencies found in parenting of these mothers include their inability to keep their baby in mind and stay emotionally connected and present to the baby. The mother often cannot adjust her own needs, rhythm, and behavior in ways that are responsive and sensitive to the baby, and the baby is not able to follow the mother in her actions. The mother often has great difficulties anticipating and following the child in her/his next developmental stage and new skills, in part because of her unrealistic expectations for the child and in part because of her difficulty in differentiating the child's needs from her own.

Parenting is supported through discussions and support in daily situations with the child, through weekly group meetings around a parenting theme, and through setting small concrete aims for each week. The mothers are also helped in dealing with authorities, repairing and building up new social network during the treatment period which in turn is felt to increase their own psychological resources and makes it possible for them to focus on their child.

The residential format of treatment makes intensive support possible, as daily situations between the mother and the baby form a natural and rich working arena. There are multiple moments each day to work on interaction experiences, to help parents shift from a negative to a positive attitude toward their own parenting and their child, to effect change in maternal representations, to enhance reflective capacity in the mother, and to facilitate change in mother's interaction behavior. Additionally, the residential setting affords more concentrated therapeutic time for a mother to reveal and explore her perceptions of her relationships with her own parents and to understand how those perceptions play out in her current relationship with her child.

Enhancing Reflective Functioning: General Aspects

The relationship work is considered most important for the outcome of the treatment, both for the mother and the child. It is also an area of the work that requires most careful and ongoing training, clinical experience and regular supervision. During pregnancy, the mother is helped to keep the child in her mind in many ways: By supporting her to prepare for the delivery and life together, to make room for the child in concrete and psychological ways, to name the baby, to imagine how and whom she/he will be like, to think of the child in the future, to imagine what will be most wonderful or difficult times for them together, and to think how she would like to be similar to or different from her own parents. The mother is helped to recognize different and often ambivalent feelings in herself, and to work with depressive feelings and anxiety. Being able to begin such work prenatally is especially critical and facilitative because negative perceptions toward the infant and the derailment of mother-child relationship almost always begin in pregnancy.

After birth of the child, the mother is supported to reflect on the intentions of her child and, to see the child's actions and affects as meaningful. Equally important is that the clinician is able to do the same: To be interested in the intentions of the mother, to help the mother to focus on experiences, and give them value and meaning. The containing relationship between the

clinician and the mother also emphasizes that the negative feelings of the mother are to be tolerated and attuned, not avoided, distanced or criticized.

Growing: Birth to Three

The personnel of the units are trained in the “Growing: Birth-to-three”-method (Doan-Sampon, Wollenberg, & Campbell, 1993), in which the parent-child interaction is considered the primary way to support and promote child growth and development. The training provides techniques for supporting mutually satisfying interactions between parent and child, and offers strategies for enhancing communication also between the clinician and the caregiver. Through the method the development of the child is carefully documented. The intervention includes discussions with the mother on her child’s development, picking up the areas of most concern for her, discussions on normal development, on the steps to be next expected in this child’s development, the role of a parent in enhancing development, the importance of gaining new skills for the child, and the amount of help the child needs from the parent at different ages. The method is used also specifically as the vehicle for enhancing maternal reflective functioning. Generally, the clinician shows interest in and asks mothers about their feelings and is careful not to interpret conflict or ambivalence too early. In Bion’s words (Bion, 1962), the clinician provides the “alpha function,” a state in which the mother is able to think about what she is thinking—which is the beginning of the reflective functioning. The task for the clinician is to help the mother focus on important and often difficult feelings, which is often opposite of what they are used to: Avoiding painful thoughts and using substances for this purpose.

One important aspect of supporting reflective functioning in the mother is to interpret the state of the baby for the mother when she is unable to do that herself. This does not automatically mean inadequate caregiving in terms of feeding or other basic care. The mother is often “technically” adequate, but may be silent, withdrawn, or intrusive in her interaction behavior. The clinician can use the “voice of the infant” to help the mother to understand her baby. This is often not threatening for the mother, and leads to the mother doing what needs to be done. Each developmental step of the child can also be described from the point of view of the baby, like a letter or message sent by the baby to her/his mother.

Use of Videotaping

Different situations between the mother and baby are videotaped: Playing, getting to sleep, feeding, comforting the baby. The tapes are then watched together with the mother, noting moments when the mother feels that she is “clicking” with the child or other positive moments that she feels good about. Also these videotaped interactions may usefully highlight moments when the baby is signalling that she/he is becoming tired, or beginning to withdraw from interaction. The mother is helped through watching the tapes to read her child, and also to recognize her own feelings at that particular moment. The mother is supported to search for the cues, specific for this baby, from which the mother can conclude how he is feeling. For example, watching a situation in which the baby is getting tired, turns his face and gaze away from the mother, the tape is stopped, and the mother is asked what she feels seeing that particular moment and behavior of the child. Often the mother may interpret the child’s signals of getting tired as dislike or rejection by the child towards her. The mother feels distressed about this and tries to get more of the child’s attention towards herself by stimulating him more. The child becomes even more distressed and starts to cry, the mother feels helpless, becomes disappointed in herself and the child, and all this leads to a negative interaction experience in both of them. In the intervention, the mother is helped, step by step using the videos, to become aware of the separateness between her own feelings and experiences and those of the child.

Strengthening the Mother's Capacity for Previewing

Previewing refers to the intuitive knowledge that parents have about the next step in their child's developmental zone (Stern, 1985). In at-risk dyads the parent's capacity to preview the development of the child is often disturbed. The clinician's task is to enhance previewing by offering the mother the mental representations of the next upcoming skill (Trad, 1993). This can happen verbally or by using material provided through the videotaped interaction. The mother is supported in her efforts to facilitate her child's developmental progress or in her "scaffolding" of her child's learning (Cazden, 1983). She is also supported to trust the capacity of the child when help is not needed, as opposed to intrusive and over-directive parenting. Each new developmental step is put in a relational meaning for the mother. For instance, instead of saying "Oh she is trying to crawl" the clinician will say, "Oh, I can see how she is trying to come after you and crawl when you leave the room." Through this the clinician shows to the mother two things at the same time: How important it is that these new developmental steps are acknowledged, and the important role the mother has in the child's mind as being the one whom he wants to show these new skills.

Balance Within the Triad

Through the training the personnel learn to focus on three relationships: Between clinician and the mother, mother and child, and clinician and child. This is important, as most of these mothers have difficulty to trust and feel safe in a relationship. This triangle between mother, infant, and the clinician can become intensively painful, and, therefore, the balance between the three relationships must be given much attention. If the clinician gives too much attention to the mother, the infant may remain invisible in the treatment. If the clinician gives too much attention to the infant, this may elicit jealousy in the mother in two different ways: The mother may feel intimidated in her own motherhood, thinking that the clinician is a better mother than she is. Or she may feel jealous about the fact that the child gets the attention that she needs for her self. Finding the balance in this triangle requires not only keeping the infant visible, but remembering that everything that belongs within the relationship between mother and the infant shall be returned to where it belongs. For example, if the mother turns to the clinician and asks her to take care of her infant while she goes shopping, the clinician will ask the mother, firmly but friendly, to tell her infant how long she will be away and when she will return. Saying this is important, not because the child will yet understand the content of the mother's saying, but instead to encourage the mother to pay attention and think of her child's experience at that particular moment of separation. It is also a message for the mother, that this is something important happening between the mother and her child, not between the clinician and the child.

THE RELATIONSHIP BETWEEN ABSTINENCE AND FACILITATING EFFECTIVE PARENTING: A PROPOSITION

Substance abuse is one of the most challenging risks to parent-infant relationships that clinicians encounter. Despite the magnitude of the problem, the topic has received inadequate attention in the infant mental health and substance abuse literatures, in part because of the professionals' cultural differences that define therapeutic approaches in the infant mental health and in the substance abuse fields. Previous treatment programs for pregnant and parenting women have been based on the idea that parental abstinence is the primary aim and focus of the intervention, and that the quality of parenting is enhanced secondary to a mother's ability to achieve abstinence, that is, that effective parenting depends primarily on parental abstinence from substances. Through this article we suggest that maternal abstinence and enhancing the parent-child relationship are seen not only as equally relevant aims to be worked on simultaneously but also that abstinence may actually be related to effective parenting. That is, we propose that more persistent parental abstinence is achieved especially through intensive treatment focus on parent-child relationship rather than (or in addition to) the converse, that

abstinence facilitates more effective parenting. Suggestive evidence for this hypothesis come from the higher rates of abstinence among those intervention programs that also include focus on parenting (Catalano, Haggerty, Gainey, & Hoppe, 1997; Luthar & Suchman, 2000; Moore & Finkelstein, 2001).

How is it that facilitating effective parenting among substance using women may also facilitate their efforts toward abstinence? We suggest that this relates to the relationship between central reward pathways in the brain and the capacity to invest in another person as in parenting or to become addicted. Many of the abused substances have been shown to affect the dopaminergic pathways in the brain, areas which are associated with initiation of behavior, hedonic reward and motivation. These central dopaminergic pathways are also critically involved in an adult's capacity to invest in the care of the new infant. Drug abuse may be seen as a co-optation or hijacking of this endogenous value system. As a consequence, once this system is co-opted by an addiction to a drug of abuse, the individual is less able to invest in caring for an infant or another person and there is competition between investment in craving the drug and in caring for the infant (Leckman & Mayes, 1998). In the treatment model described in this article, the mothers are helped to invest in their child instead of substances, and to "reset" the focus of the reward system by intensively facilitating and enhancing the mother's satisfaction with positive interaction experiences with her baby and with being a parent. The individual becomes less focused on her relationship with and craving for the drug and more on her preoccupation with and investment in the infant. Being in the middle of this process is well illustrated by a comment of one mother, who was in treatment with her small baby in one of our units and who had a relapse on a weekend. She put into words the competition between parenting and substance use for the same pathways of reward in her mind, saying: "You know, I've noticed that it's so different to be with him (baby) when you are on drugs, it's like, you know, like I cannot get into contact with him then, not really, not in the same way, it's just different and it doesn't feel the same, it doesn't feel so good." In her description, this mother captures the competition between two salient sets of cues, the addictive drug and the dependent infant. Investing fully in one precludes the other and the aim of a parent-centered treatment is to restore the balance in that competitive investment toward caring for the infant and hence reducing the use of the drug.

CONCLUSIONS

Pregnancy and the perinatal period are a time of enormous psychological change and upheaval. Both are vulnerable times with increased risk for triggering psychopathology and derailing mother-child relationship. Both are also times with great potential for positive change through well-timed, theoretically guided, and psychologically skilled intervention. In the treatment of substance-addicted mothers with their babies, focus on mother-child relationship seems to be central for the treatment prognosis, in terms of both abstinence and quality of parenting. The residential form of treatment has been found to be an especially beneficial setting for bringing these two treatment aims together inasmuch as it allows for intensive work in daily situations to enhance positive interaction and maternal reflective capacity. Application of the concept of reflective functioning in the clinical work with these mothers and babies and during this early period has been found particularly important, and it deserves further attention and development as a key aspect of substance abuse treatment for women who are pregnant and are the parents of small children. Positively impacting a substance using woman's relationship with her child not only has long-term benefits for the child that may reduce the child's risk for psychopathology and later substance use but focusing on effective parenting may also provide an incentive for a woman's effort toward sustained abstinence. From a research perspective, a demonstration that a focus on reflective functioning enhances both parent-child relationships and abstinence is one important area begging for empirical studies. We have now built in systematic data collection in these treatment units for that particular purpose.

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TABLE 1

The Different Outcomes of Residential Treatment Reported in Previous Studies on Substance Abusing Women and Their Children

Treatment Outcome	Reference
<i>Better admission</i>	
being pregnant	Daley et al., 1998
child care arranged	Knight et al., 2001
<i>Better retention</i>	
being pregnant	Knight et al., 2001
being older	Knight et al., 2001
having more stable network	Knight et al., 2001
child welfare agency involvement	Knight et al., 2001
child care arranged	Howell, Heiser, & Harrington, 1999
children residing with the mother	Hughes, Coletti, Neri, & Urmann, 1995
methadone maintenance	Howell et al., 1999
focus in women and parenting	Camp & Finkelstein, 1997
	Grella et al., 2000
	Moore & Finkelstein, 2001
<i>Greater attrition rate</i>	
perceived poor early parenting	Cosden & Cortez-Ison, 1999
history of psychiatric treatment	Fiocchi & Kingree, 2001
experience of sexual abuse	Knight et al., 2001
	Cosden & Cortez-Ison, 1999
<i>Reduction in substance abuse/longer post-treatment abstinence</i>	
longer treatment episode	Grella et al., 2000
first treatment episode	Grella et al., 2000
intensive intervention	Namyniuk, Brems, & Clarson, 1997
full retention	Howell et al., 1999
	Grella et al., 2000
	Killeen & Brady, 2000
	Knight et al., 2001
	Moore & Finkelstein, 2001
<i>Better parental knowledge/self-esteem/attitude towards the child</i>	
full retention	Killeen & Brady, 2000
clear parenting component	Camp & Finkelstein, 1997
	Namyniuk et al., 1997
	Howell et al., 1999
<i>Better birth outcome</i>	
higher maternal age at the onset of s.a.	Fiocchi & Kingree, 2001
full retention	Killeen & Brady, 2000