Linköping University Post Print

Eight years after - a follow-up study of mothers and children at psychosocial risk who received early treatment: does early intervention leave its mark?

Marie Wadsby and Elisabeth Arvidsson

N.B.: When citing this work, cite the original article.

This is the authors' version of the following article:

Marie Wadsby and Elisabeth Arvidsson, Eight years after - a follow-up study of mothers and children at psychosocial risk who received early treatment: does early intervention leave its mark? 2010, CHILD and FAMILY SOCIAL WORK, (15), 4, 452-460.

which has been published in final form at:

<http://dx.doi.org/10.1111/j.1365-2206.2010.00696.x>

Copyright: Blackwell Publishing Ltd

<http://eu.wiley.com/WileyCDA/Brand/id-35.html>

Postprint available at: Linköping University Electronic Press

<http://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-66144>

**Eight years after – a follow-up study of mothers and children at psychosocial risk who
received early treatment:
does early intervention leave its mark?**

Marie Wadsby & Elisabeth Arvidsson

Corresponding author:

Marie Wadsby, associate professor

IKE/Child and Adolescent Psychiatry

Faculty of Health Sciences

Linköping University

SE-581 85 Linköping

Sweden

Phone +46 13 224208

E-mail: Marie.Wadsby@liu.se

ACKNOWLEDGEMENT

This study was supported by grants from the Swedish Council for Working Life and Social Research.

ABSTRACT

One-hundred and forty-five mothers at psychosocial risk who, with their babies, had been given treatment at a parent-baby clinic during a two-year period starting in 1999, treatment designed to strengthen the mother-child relationship, were followed up eight years later. Both the mothers who had agreed to take part in the treatment programme (n=73) and those who declined (n=72) were searched for in the records of the Social Welfare office in order to determine if the treated mothers had been focused on to a lesser degree in the following eight years than those who had declined treatment, a hypothesis that was initially put forward. The behaviour of the children whose mothers had undergone treatment (n=46) was studied. The initial hypothesis had to be rejected; support and intervention from the social authorities had been equally common in both groups. However, the children of treated mothers had fewer externalizing behaviour than children of untreated mothers at psychosocial risk.

INTRODUCTION

The mother-child relationship during infancy is considered by clinical and developmental theorists (Huth-Blocks, 2003) to be one of the most important determinants of a child's social and emotional development. It is therefore of great importance to intervene in a mother-child relationship at an early stage as soon as the lack of contact and attachment is observed (Berlin, Brooks-Gunn, McCarton, & McCormick, 2004). Several clinics are run for just this purpose in Sweden, mostly under the guidance of the Department of Child Psychiatric Care or the Social Welfare authorities (www.orebroll.se/psykhab/pagewide___16996.aspx)

The short term effects of treatment offered at these kinds of clinics have been studied (Broberg, 2000; van der Bloom, 1994; Danoff et al, 1994; Huxley & Warner, 1993), but it is even more important that the long term effects are evaluated as these clinics often are significant consumers of resources. What has been found is that the early mother-child relationships where the mother is depressed are strongly influential (Radke-Yarrow, 1998), especially as concerns low competence and low adaptive functioning in the children (Luoma et al, 2001). Luoma et al (2001) also stated that maternal depressive symptoms are a strong predictor of the child's externalizing and total problem levels. In another study it was noted that a child behaviour inventory such as the Child Behavior Checklist (Achenbach & Rescorla, 2001) can be helpful in predicting psychopathology and in identifying children at psychosocial risk (Kroes et al, 2002).

Psychosocial and family adversity primarily influence cognitive and psychosocial functioning, and the cumulative effects of organic and psychosocial risks are found to be additive (Laucht, Esser, & Schmidt, 2000; Laucht, Schmidt, & Esser, 2004). In a study of psychosocial predictors of achievement it was found that psychosocial variables from the first 3 years of life predict achievement in elementary school (Teo et al, 1996). Intergenerational transfer of risk between

mothers and children also must be considered. Mothers' childhood aggression has been found to be consistently predictive of negative outcomes in each area of intergenerational risk, especially when combined with social withdrawal and low levels of academic achievement (Serbin et al., 1998). These findings stress the importance of implementing preventive strategies to reduce the impact of multiple adverse factors on multiple outcomes. Overall, psychosocial, socioeconomic and sociocultural variables have been found to be the strongest predictors of all outcomes (NICHD, 2002). The importance of early intervention has also been stressed as the effect of early intervention programmes speak to both the effectiveness of early intervention and the effects on children's cognitive and socioemotional development (Berlin et al., 2004). The limited prognostic value of single risk factors has been emphasized as has the diminishing impact of organic perinatal risk factors over time. However, the influence of psychosocial context in influencing developmental outcomes in childhood and adolescence has increasingly been put forward as a factor of importance (Meyer-Probst et al., 1991). What has also been put forward is the need of professional parenting programs grounded in theory and epidemiology (Olds, Sadler, & Kitzman, 2007).

The Hagadal Parent-Baby Clinic

The comprehensive aim of the Hagadal Parent-Baby Clinic, a clinic run by the Department of Child and Adolescent Psychiatry at Linköping University Hospital in cooperation with the Social Welfare authorities, is to promote mother-child interaction as early as possible and to prevent the development of mental and psychosocial problems in children identified as having parents at psychosocial risk. Psychosocial risks include the following situations or conditions: the mother and/or father of the baby have/has alcohol and/or drug problems identified by the mother, her family, or the social authorities, the mother has psychiatric problems (she is under psychiatric care

or has been treated previously within 5 years prior to pregnancy and/or during pregnancy), and/or she has social problems of particular relevance for motherhood (for example pregnant before 17 years of age, women with permanent sick leave, children placed in foster care at some point etc.). For further detailed definitions of what is meant by psychosocial risks, see Sydsjö (1992). Usually it is the mother who is the identified patient, although it can be the father - thereby the name parent-baby clinic.

The mothers are usually referred to the clinic from the Antenatal Health Care Clinics and Maternity and Paediatric Wards, but they may also be referred from the Department of Child and Adolescent and Psychiatry and by the Social Welfare Authorities. The treatment is voluntary and free of charge, although a strong and guiding principle of the team at the clinic is to capture the mothers as early as possible (*i.e.* at the Maternal Health Care Unit) and motivate them to take part in the treatment programme. No mothers with ongoing alcohol and/or drug addiction are accepted at the clinic.

The treatment extends over 6 weeks. The mother – or father – and the baby spend 5 hours a day, 3 days a week at the clinic participating in the treatment programme. Every mother and her baby have two staff members who are responsible for their treatment. The remaining two weekdays are set aside for individual talks, talks with the couples or in groups or just for socializing with mothers, fathers and children who previously have participated in the treatment. The staff, who consist of social workers, a preschool teacher, a pediatric nurse and a psychologist, all of whom are specialists in child development and family work, also make house calls and support the mothers in formal contacts.

The child must not be older than 6 months when the mother enters the treatment programme as the main focus is on *early* intervention. The purpose of the treatment is to support the mothers in their parenting, strengthen their care-giving skills, and to facilitate and improve the mother-child relationship and interaction. This is done through treatment organized around an approach marked by structure and support, a milieu-therapeutic approach, which means that daily life situations that arise are seized upon and used to aid the mother to learn about and improve mother-child interactions. The staff also uses the Marte Meo method, developed by Maria Aarts (Weiner et al, 1994), which aims to strengthen positive communication and interaction between mother and child through the use of immediate feedback from a video recording.

The effects of the treatment programme have been continuously evaluated since the start of the clinic 1993. These studies have shown a significant improvement in mother-child contact after treatment, and the mothers have after treatment turned significantly more positive towards the treatment than they were when they first got the option to go through the treatment (Wadsby et al, 1998, 2001; Wadsby & Blom, 2005).

As the short-term intervention made at the clinic described above is based on voluntary participation and is resource consuming, it is of great importance to determine if the target group has been reached successfully and also to determine if beneficial effects have been retained in the long run. The aim of this study was therefore to investigate:

1. How many of the mothers referred to Parent-Baby clinic Hagadal for treatment in 1999-2000 agreed to take part in the voluntary treatment programme offered and how many declined?
2. Was there any difference between those who agreed to take part in the treatment programme and those who did not due to the type of problems they had, *i.e.* alcohol/drug problems, psychiatric problems, or social problems?

3. How many had been in need of support and/or intervention from the Social Welfare authorities during the eight years after their baby was born, *i.e.* had a record been filed at the Social Welfare office?
4. What kind of support/interventions had been provided and was there a difference between the treatment and non-treatment group? A hypothesis was that mothers who agreed to take part in the treatment programme at Hagadal would display fewer and less serious problems - as documented in the records – than those who declined to take part.
5. Did the children of mothers treated at Hagadal display fewer behaviour and emotional problems at the age of 8 years than those not treated, as this has been found to be helpful in predicting psychopathology in children and children at psychosocial risk (Kroes et al, 2002)?

METHOD

Subjects

All mothers (N=145) who had been referred to the Hagadal Parent-baby Clinic during a 2-year-period (1999-2000), and whose children at the time of the study were eight years old formed the study group. All mothers were living in the city of Linköping when their children were born (Figure 1).

Of the mothers who together with their children had agreed to go through the treatment at the Hagadal Parent-baby Clinic when the children were babies (n=73), 46 (63%) agreed to take part in the 8-year follow-up, and they formed a sub-study group for studying the presence of behaviour problems in the children.

Two reference groups for the children's mental health were used, one comprising 8-year-old children of mothers at psychosocial risk defined as in the present study and who had not undergone

any treatment (n=45) which corresponded 62% of the potential group to be included, and one comprising 8-year-old children of mothers without psychosocial problems (n=56) corresponding 74% of the potential group. The children and mothers at risk were identified through their contacts with the Child Health Care centre, which is visited by almost 100% of all children in Sweden, and they formed the Reference group 1. The Reference group 2 was formed by the children and mothers registered at the same instance and next in sequence after the children and mothers identified as being at risk, and who did not fulfil any of the stipulated risk criteria. These groups formed the study groups in earlier studies of mothers at psychosocial risk and have been described more thoroughly in earlier publications (Svedin, Wadsby & Sydsjö, 1996; Wadsby, Sydsjö & Svedin, 1996; Sydsjö, Wadsby & Svedin, 2001).

Procedure

The reason for being referred to the clinic, *i.e.* drug/alcohol-, psychiatric- or social problems, was determined from the records at the Parent-baby Clinic.

The records at the Social Welfare service serving the region were searched to find the names of the mothers and their children in records covering the eight years after treatment – or non treatment. This was done with due permission from the Social Welfare Board. According to the Social Services Act (SFS, 2001:453) all documents that are sent in to or set up at the Social Welfare office have to be documented, as have all actions made in chronological order in every single case. This procedure is required for all social welfare secretaries handling a case.

When a mother and/or child were found in the records, information about services received in chronological order was noted on a separate form prepared for the documentation. Information recorded on the form in addition to personal identity data for mother and child included the

following: the date on which financial support was received and the amount of that support, the date(s) on which decisions about the investigation of unsatisfactory situations were made, the nature of the unsatisfactory situations, the date(s) when decisions taken by the social authority board about both voluntary and coercive interventions were made. Two researchers with no earlier knowledge about the mothers and the children compiled the documentation by reading through all information collected in all records, information that according to law must be recorded.

Explanation of services offered by the Social Authorities in Sweden

In Sweden, financial support is given to those whose economic situation is below the state-specified economic minimum for existence. A basic element of Swedish social policy is that all citizens are to be assured of having a reasonable living standard, a standard which is calculated according to a national norm.

A contact person is a person who in the interests of preventing the development of problems is to promote social contacts and aid in the development of people who may need help. Single parents with children and teenagers who do not have contact with adults can get a contact person for support.

A home therapist is available to provide support to parents and children in the home environment. The purpose of this support is to ensure that the family or the individual person will come to learn to see new alternatives of choice and be strengthened in any decision made to change the life situation of the parent(s) and child(ren).

A support family is a family that has chosen to open their home for a child or teenager and to offer a secure milieu for shorter periods such as weekends and, by so doing, provide support for the parent/parents.

A family home is supposed to provide a residence for the child for longer periods when a child lacks enough support from parents and a functioning home. The reason for this can be parental illness, drug addiction or personal problems creating a milieu in which children are neglected. The family home is intended to offer security and a stable social situation, and placement in such a home can either be voluntary or compulsory.

An investigation home is an institution at which a mother and child/children can stay while an investigation is made in cooperation with the Social Welfare Authorities with the aim of finding a way for child/parents to get necessary support that will lead to a working future. This home can be the child's own family with support from the social authorities, or a family home or a home for care and living, which in Swedish terminology is called an HVB-home.

Intervention by the social authorities, police etc. means that a team from the Social Authorities on duty after office hours or a police patrol has been alerted by a phone call, usually from someone in the neighbourhood, to check on any activity and especially to check if there are children involved in the disturbance. A report to the Social Welfare Authorities about the unsatisfactory state of things in a family results when a representative from, for example, the medical care system, the school or even an anonymous person alerts the authorities about the apparently unsatisfactory situation in a family. If such a report is filed, then the social authorities are required to start an investigation. The same applies when a report about maltreatment/or sexual abuse is made.

Child behaviour

The mothers who had taken part in the treatment programme at Hagadal were asked about the presence of emotional and behaviour problems among their 8-year-old children. This questioning was carried out by using the Child Behaviour Checklist (Achenbach, 1991; Achenbach & Rescorla, 2001), a 113-item questionnaire widely used as a standardized measure of parent-reported behaviour. These items yield scores on three broad-band scales: internalizing, externalizing and total scores. The CBCL scales have high internal consistency and test-retest reliability, and the discriminative capacity has been found satisfying (Kasius, Ferdinand, van der Berg, & Verhulst, 1997). The mothers in the two reference groups were asked to answer the questions about their children as well.

The 1991 version of CBCL was translated and standardised for use in Sweden by Larsson and Frisk (1999), and this version was used in the current study as the Swedish norms are based on this version.

Ethical considerations

The study was approved by the Human Research Ethics Committee at the Faculty of Health Sciences, Linköping University (No. 146/05).

RESULTS

The first aim was to study how many of the mothers offered treatment at the Parent-baby clinic Hagadal accepted or declined to take part. One hundred and forty-five mothers and children were offered treatment during 1999 and 2000. Seventy-three of them (50%) underwent the treatment. Among the 72 who did not undergo the treatment, there were 18 (12% of the total group) who experienced other types of interventions on behalf of the social authorities.

The second aim was to study if there was any difference between those mothers who agreed to take part in the treatment and those who did not as concerned the risk-group to which they might be assigned, *i.e.* alcohol/drug, psychiatric, or social problems groups. As shown in Table 1, no difference between the groups was found.

A third and a forth aim was to determine how many of the mothers had a record at the Social Welfare office, and then to establish the reason or reasons for being recorded there. Of the 145 mothers and children, 96 (66%) were found to be in the records kept by the Social Welfare office. In seven of these cases, the mothers had had a contact before the child was born but no further contact after birth of the child. The reasons for contact in these seven cases were for three need for financial support and in two cases a need for provision of a contact person during a specified period. In the remaining two cases more than one reason had been given: suspected sexual abuse and physical violence, drug addiction, need for contact person, and need for a family home. These seven cases were not included in the analyses as they referred to a time period when the child was not involved.

Of the remaining 89 cases for which records existed, 49 had had contact both before and after the birth of the child, while in 40 of the cases the first contact had been initiated after the child was born. Forty-one of these had undergone treatment at Hagadal while 48 had not.

As shown in Table 2, the most common reason for contact with the Social Welfare office was a need for financial support, 76% in the treated group and 65% in the non-treated group. The only significant difference noted between the groups was that provision of a home therapist was a

service more frequently provided for the group treated at Hagadal than for the group not treated ($p<.01$). For the rest, the different kinds of services given had been equally common.

An additional fifth aim of our study was to determine if the children of the mothers who had been treated at Hagadal clinic displayed fewer behaviour and emotional problems at eight years of age than children whose mothers had not undergone any treatment. Both the children in the Hagadal group and the children of mothers at psychosocial risk who were not treated (Reference group 1) scored significantly higher ($p<.05$) on behaviour problems than children of mothers without psychosocial problems (Reference group 2). When only externalizing problems were considered, it was noted that both the children in the Hagadal group and the children of mothers without psychosocial problems (reference group 2) scored significantly lower ($p<.05$) than the children of untreated mothers at psychosocial risk (Table 3).

DISCUSSION

In this study, it was found that fifty percent of the psychosocial risk mothers offered treatment accepted to take part, while 50% declined or were the focus for other interventions. It was furthermore found that there was no difference between those who agreed to take part and those who did not as concerned the type of problems: alcohol/drug, psychiatric or social problems. A main finding was that mothers identified as being at psychosocial risk who agreed to undergo treatment at Hagadal had been in need of support and/or intervention from the Social Welfare authorities just as often as those who declined to undergo the treatment with the exception of the Hagadal-mothers who more often had had support from a home therapist. The hypothesis that only mothers with less serious problems could be induced by the Hagadal clinic to take part in the treatment programme could be rejected. A finding was also that although the Hagadal children had

behaviour problems to an equal extent as the untreated children in the reference group, they displayed fewer externalizing problems.

The finding that it is not only the mothers with less serious problems who are treated at Hagadal but also those with serious problems was a valuable finding. As the treatment is based on voluntary decision to participate, it had been a common belief that mothers with more serious problems are more inclined to refuse treatment (Wadsby et al, 2001). An explanation for the finding that this was not the case might be that so much effort is made by the staff at Hagadal to meet the mothers when their problems are first noticed during pregnancy. The motivational work done by the staff may convince the mothers that there is support for them that will help them and in no way reduce their value as a mother. Another explanation, although valid in only a few cases, might be that although the treatment is voluntary, there might be sufficient pressure from the social authorities to take part or that other actions of a more drastic or imperative character are being considered. When this is the case, a heavy responsibility is placed on the staff to turn this concern with mandatory actions into an appreciation of the positive benefits of taking part at Hagadal.

There was no difference between the mothers who agreed to take part in the treatment programme and those who declined as concerned psychiatric or social problems. It might be assumed that mothers with psychiatric problems would be more inclined to take part than those with social problems as general experience with mothers with social problems is that they are more difficult to motivate for treatment as they are not aware of their problems to the same extent as are mothers with psychiatric problems (Wadsby et al, 2001). It was, however, a positive experience to find that the two groups were equally common in the treatment programme since both groups are in focus for the treatment commission. That the group with alcohol/drug problems was in the minority was expected as fewer mothers with these kinds of problems accept treatment.

Provision of a home therapist was more common in the Hagadal group than among those mothers who had declined treatment. An explanation for this is probably that if the team at Hagadal believes that the mother is in need of further support after the treatment period has ended, then they try to motivate the mother to request this support and also urge the social welfare authorities to provide this support for the mother. As the team at Hagadal usually has a very good understanding of the needs of the mother, their opinions often are listened to. This might also contribute to explaining the fact that so many of the contacts - about 45% - with the Social Welfare authorities were first initiated after the birth of the child when psychosocial circumstances were more clearly expressed. Support of a home therapist following the treatment period at Hagadal might be a good complement in those cases where the treatment is not regarded as having been sufficient. This is only true if the home therapist has been professionally trained as has been emphasized as being of importance for gaining results (Olds, Sadler, & Kitzman, 2007).

A desirable finding would have been that children of mothers treated at Hagadal displayed fewer behaviour problems than children of untreated mothers at psychosocial risk, but this was not the case. This indicates that the treatment does not leave any evidence of these effects as expected, although it is a very delicate – if at all possible - task when such a long time period as eight years had passed between intervention and follow up, a period during which it is impossible to control for what may have passed in the mothers' and children's lives. An interesting finding was, however, that although the Hagadal children had behaviour problems in total to the same extent as children whose mothers not had been treated, their externalizing symptoms were not more prevalent than in the non-risk children. Studies have shown that although externalizing behaviour typically peaks in toddlerhood and decreases by school entry, some children do not show this normative decline (Hill, Degnan, Calkins, & Keane, 2006), and problem behaviour, *i.e.*

externalizing behaviour, is relative stable over time, especially in boys (Reitz, Dekovic, & Meijer, 2005). In a study by Klein Velderman et al (Klein Velderman, Bakermans-Kranenburg, Juffer, & IJzendoorn, 2006) evidence was found for the positive effect of attachment-based interventions on highly reactive children, this also supported by Belsky's hypothesis of children's evolutionary based differential susceptibility to rearing influences in the domain of sensitivity and attachment. This also supports the outcome that the treatment at Hagadal might have had this effect on the children. Although it might be a risky conclusion to draw as eight years had passed, there is support in research for the positive effect this kind of intervention can have in the long run of the type of intervention made at Hagadal (Van Zeijl et al, 2006; Wadsby et al, 2001).

A few considerations about this study are in order. It would have been desirable to have a larger study group. Only 63% of the potential study group was included in this analysis. One reason for not being able to access many of the assessments of the children's mental health was that many of the mothers could not be reached for inquiry about participation because no telephone numbers were available, they had secret addresses etc. Another reason was that although the mothers were positive about participation when first asked, they did not show up at the agreed upon time for the interview. The reason for this was probably not an unwillingness to participate but rather an inability to arrange to attend the meeting, an experience we had in earlier studies of mothers at psychosocial risk (Svedin, Wadsby, & Sydsjö, 2005; Wadsby, Svedin, & Sydsjö, 2007), and supported by the staff at Hagadal. The same holds true for the recruitment of Reference group 1 (response rate 62%), but recruitment of Reference group 2 (response rate 74%) was somewhat easier, probably due to greater stability in personality and life situation. Also with reference to the staff at Hagadal who had a good personal knowledge about the mothers comprised in the study; there were no obvious differences between those mothers who agreed to take part in the 8-year follow-up and those who did not. It would have been desirable to have had a randomised control

group with the purpose of getting a even stronger evidence, but as this not was possible in the present study it was at least beneficial to have one reference group comprising mothers at psychosocial risk defined according to exactly the same criteria as in the current study but untreated, and to have one reference group lacking these criteria.

Yet another note to be made is that the reference groups were studied some years before the children at Hagadal were studied (1996). However, the same specified criteria for identifying mothers at psychosocial risk were used in the study of these groups as for identifying the mothers referred to Hagadal for treatment, and earlier long term follow up studies of children at psychosocial risk have shown similar outcomes irrespective of the time that has passed (Svedin et al, 1996, 2005; Sydsjö, Wadsby, & Svedin, 2001; Wadsby et al, 1996, 1998, 2001, 2007).

To summarize, the hypothesis that mothers who take part in the treatment programme at Parent-Baby clinic Hagadal display fewer problems according to the records at the Social Welfare office was rejected; whether they agree to go through the treatment programme or not, the mothers receive services equally often from the social services. There were no differences between mothers who took part in the treatment programme and those who declined due to type of problems they had, *i.e.* drug/alcohol-, psychiatric- or social problems. The children of the mothers who had been treated at Hagadal did not display fewer behaviour problems in total than the children of mothers not treated, but they showed fewer externalizing problems at the age of eight years.

As this study showed that it is possible to reach mothers at psychosocial risk and their babies for intervention in a voluntary way, even those who have heavy psychosocial problems, it is of importance to put even more effort into motivating mothers to take part in the treatment. There was also an indication that the treatment might have a positive impact on children's acting-out behaviour in the long run, an outcome that further supports investment in these kind of clinics.

REFERENCES

- Achenbach, T.M. (1991) Manual for the Child Behavior Checklist/4-18 and 1991 profile. Burlington, Vt: Dept, of Psychiatry, Univerity of Vermont.
- Achenbach, T.M. & Rescorla, L.A. (2001) Manual for the ASEBA School-Age Forms and Profiles. Burlington, Vt: ASEBA.
- Belsky, J. (1997). Theory testing, effect-size evaluation, and differential susceptibility to rearing influences: The case of mothering and attachment. *Child Development*, **68**, 598-600.
- Berlin, L.J., Brooks-Gunn, J., McCarton, C. & McCormick, M.C. (2004). The effectiveness of early intervention: examining risk factors and path ways to enhanced development. In M. Feldman (Ed.), *Early intervention: The essential readings* (pp. 134-10. Malden: Blackwell Publishing.
- van der Boom, D.C. (1994) The influence of temperament and mothering on attachment and exploration: An experimental manipulation of sensitive responsiveness among lower-class mothers with irritable infants. *Child Development*, **65**, 1457-1477.
- Broberg, A. (2000) Är det möjligt att bli en bättre förälder? [Is it possible to become a better parent?]. *Läkartidningen*, *25*, 3072-3073.
- Hill, A., Degnan, K.A., Calkins, S.D. & Keane, S.P. (2006) Profiles of externalizing behaviour problems for boys and girls across preschool: The roles of emotion regulation and inattention. *Developmental Psychology*, **42**, 913-928.
- Huth-Blocks, A.C. (2003) Mother-infant attachment: The impact of maternal representations during pregnancy, maternal risk factors, and social support. Dissertation Abstracts International: Section B: The Sciences and Engineering, *63*, 4374.
- van Ijzendoorn, M.H., Juffer, F. & Duyvesteyn, M.G.C. (1995) Breaking the intergenerational cycle of insecure attachment: A review of the effects of attachment-based interventions on maternal sensitivity and infant security. *Journal of Child Psychology and Psychiatry*, **36**,

225-248.

- Kasius, M., Ferdinand, R., van der Berg, H. & Verhulst, F. (1997) Associations between diagnostic approaches for child and adolescent psychopathology. *Journal of Child Psychology and Psychiatry*, **38**, 625-632.
- Klein Velderman, M., Bakermans-Kranenburg, M.J., Juffer, F., & IJzendor, M. (2006). Effects of attachment-based interventions on maternal sensitivity and infant attachment: Differential susceptibility of highly reactive children. *Journal of Family Psychology*, **20**, 266-274.
- Kroes, M., Kalff, A.C., Steyaert, J., Kessels, A.G.H., Feron, F.J.M., Nedriksen, J.G., van Zeben, T.M., Thea, M.C.B., Troost, J., Jolles, J. & Vles, J.S.H. (2002) A longitudinal community study: Do psychosocial risk factors and Child Behavior Checklist at 5 years of age predict psychiatric diagnoses at a later age? *Journal of the American Academy of Child & Adolescent Psychiatry*, **41**, 955-963.
- Larsson, B. & Frisk, M. (1999) Social competence and emotional/behaviour problems in 6-16 years-old Swedish school children. *European Child and Adolescent Psychiatry*, **8**, 225-236.
- Laucht, M., Esser, G. & Schmidt, M.H. (2004) Longitudinal research on the developmental epidemiology of mental disorders: Aims, concepts, and major results of the Mannheim Study of At Risk Children [German]. *Zeitschrift fur Klinische Psychologie: Forschung und Praxis*, **29**, 246-262.
- Laucht, M., Schmidt, M.H. & Esser, G. (2004) The development of at-risk children in early life. *Educational and Child Psychology*, **21**, 20-31.
- Luoma, I., Tamminen, T., Kaukonen, P., Salmelin, R. & Almqvist, F. (2001) Longitudinal study of maternal depressive symptoms on child well-being. *Journal of the American Academy of Child & Adolescent Psychiatry*, **40**, 1367-1374.

- Meyer-Probst, B., Teichmann, H. & Hayes, R.H. (1991) Follow-up of a cohort of risk children from birth into adolescence: The Rostock Longitudinal Study. *International Journal of Disability, Development and Education*, **38**, 225-246.
- NICHD Early Child Care Research Network (2002) The interaction of child care and family risk in relation to child development at 24 and 36 months. *Applied Development Science*, **6**, 144-156.
- Olds, D.L., Sadler, L & Kitzman, H. (2007). Programs for parent of infants and toddlers: Recent Evidence from ranodmized trials. *Journal of Child Psychology and Psychiatry*, **48**, 355-391
- Reitz, E., Dekovic, M. & Meijer, A.M. (2005) The structure and stability of externalizing and internalizing problem behaviour during early adolescence. *Journal of Youth and Adolescence*, **34**, 577-588.
- Serbin, L.A., Cooperman, J.M., Peters, P.L., Lehoux, P.M., Stack, D.M. & Schwatzman, A.E. (1998) Intergenerational transfer of psychosocial risk in women with childhood histories of aggression, withdrawal, or aggression and withdrawal. *Developmental Psychology*, **34**, 1246-1262.
- SFS (2001:453). The Social Services Act.
- Svedin, C.G., Wadsby, M. & Sydsjö, G. (1996) Children of mothers who are at psycho-social risk. Mental health, behaviour problems and incidence of children abuse at age of 8 years. *European Journal of Child & Adolescent Psychiatry*, **5**, 162-171.
- Svedin, C.G., Wadsby, M. & Sydsjö, G. (2005) Mental health, behaviour problems and incidence of child abuse at the age of 16 years. A prospective longitudinal study of children born at psychosocial risk. *European Journal of Child and Adolescents Psychiatry*, **14**, 386-396.
- Sydsjö, G. (1992) Psykosociala riskgraviditeter och deras utfall [Psychosocial risk-pregnancies and their outcome]. Dissertation. Linköping University.
- ISBN 91-7870-639-4.

- Sydsjö, G., Wadsby, M. & Svedin, C.G. (2001) Psychosocial riskmothers: early mother-child interaction and behavioural disturbances in children at 8 years of age. *Journal of Reproductive and Infant Psychology*, **19**, 135-145.
- Teo, A., Carlson, E., Mathieu, P.J. & Egeland, B. et al (1996) A prospective longitudinal study of psychosocial predictors of achievement. *Journal of School Psychology*, **34**, 285-306.
- Van Zeijl, L., Mesman, J., Van Ijzendoorn, M.H., Bakerman-Kraneburg, M.J., Stolk, M.N., Koot, H.M. & Alink, L.R.A. (2006) Attachment-based intervention for enhancing sensitive discipline in mothers of 1- to 3-year-old children at risk for externalizing behaviour problems: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, **74**, 994-1005.
- Weiner, A., Kuppermintz, H. & Guttman, D. (1994) Video hometraining (the Orion project): a short-term preventive and treatment interventions for families with young children. *Family process*, **33**, 441-453.
- Wadsby, M., Sydsjö, G. & Svedin, C.G. (1996) Children of psychosocial risk-mothers: life events, social interaction, and behaviour problems at the age of 8 years. *Scandinavian Journal of Social Medicine*, **24**, 227-236.
- Wadsby, M., Sydsjö, G., & Svedin, C.G. (1998). Evaluation of a short-term intervention program for psychosocial risk-mothers and their infants. *Nordic Journal of Psychiatry*, **52**, 501-511.
- Wadsby, M., Sydsjö, G., & Svedin, C.G. (2001). Evaluation of an intervention programme to support mother and babies at psychosocial risk: assessment of mother/child interaction and mother's perceptions of benefit. *Health and Social Care in the Community*, **9**, 125-133.
- Wadsby, M., Svedin, C.G., & Sydsjö, G. (2007). Children of mothers at psychosocial risk growing up: A follow up at the age of 16. *Journal of Adolescence*, **30**, 147-164.
- Wadsby, M., & Blom, L. (2005). Short-term intervention programme for psychosocial risk-mothers and their babies. In: *Contemporary Issues in Parenting* (ed M.J. Kane), pp. 125-

144. Nova Science Publishers, New York.

Figure 1 Overview of numbers comprised in the different parts of the study.

Table 1 Mothers treated/not treated at the Parent-Baby clinic Hagadal.

	Treated at Hagadal (<i>n</i> =73)		Not treated at Hagadal (<i>n</i> =72)	
	<i>n</i>	%	<i>n</i>	%
Drug addiction problems	3	4	3	4
Psychiatric problems	31	42	27	38
Social problems	34	47	38	53
Other problems	5	7	4	5

$\text{Chi}^2 = 13.82, \text{Df}=3, \text{N.S.}$

Table 2 Support given/interventions made by the Social Authorities in the group of children who had and had not been treated at the Parent-Baby clinic Hagadal.

	Treated at Hagadal (<i>n</i> =41)		Not treated at Hagadal (<i>n</i> =48)	
	<i>n</i>	%	<i>n</i>	%
Financial support	31	76	31	65
Contact person	10	24	13	27
Home therapist	15	37**	5	10
Support family	3	7	7	15
Family home	9	22	11	23
Investigation/treatment home	7	17	7	15
Interference from social authorities, police etc.	5	12	6	13
Report to the social authorities regarding unsatisfactory state of things	15	37	19	40
Investigation of sexual abuse/ maltreatment	4	10	9	19

** $\chi^2 = 8.657$, $Df=1$, $P < 0.01$

Fisher's exact test; N.S.

Table 3 The presence of behaviour problems in children at the age of 8 years of mothers treated at Hagadal in comparison with two reference groups.

	Hagadal		Reference		Reference				
	children		group 1		group 2				
	n=46		n=45		n=56				
	M	SD	M	SD	M	SD			
	a		b		c		a/b	a/c	b/c
Internalizing	5.9	5.2	5.6	5.1	4.8	4.3			
Externalizing	7.0	6.1	10.0	7.4	7.4	7.2	.05*		.05*
Total problems	25.2	19.1	24.6	16.6	18.1	15.8		.05*	.05*

* *t-test*