

The importance of attachment representations of professionals in attachment-based early intervention serving young high risk mothers.<sup>1</sup>

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Attachment based intervention for high risk mothers is highly demanding for professionals. They have to draw on their own personal resources in order to provide a secure base, helping mothers to reflect on maladaptive working models and to become more sensitive towards babies' signals. However, can this be accomplished if the professional's own attachment background is insecure? The answer to this question is not only relevant for intervention practice, but also for learning about the influence of attachment representations in interpersonal contexts outside the family. The aims of this paper are (a) to describe attachment representations in a German sample of child welfare workers; and (b) to test its influence on intervention outcomes, assuming less positive effects on children's attachment for professionals with insecure attachment.

### **Sample and Methods**

Within a multi-site intervention study using the STEEP-program (Egeland & Erickson,

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2004) to support young high risk mothers we are carrying out extensive training for professionals, are assisting a smaller group of them in implementing STEEP in three different cities in Germany (Hamburg, Offenburg, Frankfurt), and are following their results across the two year intervention program. Attachment representations of 97 workers participating in our STEEP-Trainings have now been assessed using the Adult Attachment Projective (AAP) (George, West, & Pettem, 1997) at the beginning of training. The 4 coders of AAPs were trained by Carol George, certified, and kept blind, e.g. to intervention and professional status. 28 of the AAP-Transcripts were coded independently by two coders. They attained 73 % agreement on the transcripts regarding the secure/insecure categories. 22 of these professionals are employed in one of the 3 intervention study sites where we collect data during the 2-year-intervention for program-evaluation, including AAPs of mothers at baseline and Ainsworth Strange Situation Procedure (SSP) at 12 months of babies' age (midpoint). At both time points we are assessing the Parenting Stress Inventory (PSI-SF), Depression Screening (EPDS), Adult-Adolescent Parenting Inventory (AAPI), the Attributional Style Questionnaire (ASQ) and information relevant to the intervention process. 38 SSPs have been coded so far according to the 4 attachment categories (A,B,C,D) by Elisabeth Carlson, University of Minnesota, who was blind to intervention status. We report from the larger group of 97 professionals and results of a smaller group of 12 professionals and the 32 mother-infant dyads they served and who were seen in the SSP. In order to minimize error, we included cases only when AAPs of professionals were coded independently by two coders (attained agreement in this smaller group: 78 %; disagreement solved by a third independent coder) and when there was no change of worker within the family after the 4<sup>th</sup> month of child's age, considering the process of attachment formation. STEEP-Interventions were carried out by the steep-workers at the different sites at different points in time. Young mothers were recruited randomly during pregnancy or shortly after birth of their infants when

they were under 25 years old, were low educated, received welfare money and fulfilled the requirements of receiving German Child Welfare Support to prevent Child Abuse according to the current capacities of the participating Child Welfare Agencies. Data collection started after mothers had signed informed consent, which was in some cases preceded by up to 5 contacts.

## **Results**

A high proportion of insecure attachment representations was found among participants of STEEP-Training as is shown in figure 1: 66 workers (68%) were rated insecure compared to 31 secure. Insecure attachment was more prevalent in workers than in high risk mothers, pointing to an important issue in German Child Welfare.

For workers with secure attachment (secure workers), attachment between mothers and infants participating in STEEP were secure in 10 out of 12 cases, whereas for workers with insecure attachment (insecure workers), this occurred only in 9 out of 20 cases (see Figure 2), indicating the influence of workers' attachment background on their intervention. In the next step we tested if the two groups of workers had comparable cases or if they differed on important dimensions, e.g. mothers' AAP (see table 1). Firstly, the mothers' AAPs did not predict Strange Situation results, as one would assume if mothers did not get intervention. Secondly, the insecure workers had 8 mothers with insecure and 8 with secure AAPs. 4 of the 8 secure mothers and 5 of the 8 insecure mothers developed a secure attachment relationship to their child. Only 2 of the 8 mothers of Secure Workers had insecure AAPs, and all were coded as securely attached to their one-year old in Ainsworth's Strange Situation. More cases with the combination of Secure Workers and insecure mothers are needed to see if there is an interaction effect between mothers' and professionals' inner working model on the process of attachment development. In the next step we compared mothers of Secure and Insecure Workers with regard to other baseline variables. As is shown

in Table 2, the two groups did not differ on 11 of the 12 baseline-variables tested, i.e they did not differ on screening for depression (EPDS), Parenting Attitudes (AAPI), Attributional Style (AQS), and all but one subscale of the Parenting Stress Index (PSI). Mothers of secure workers scored almost significantly ( $p=0,06$ , t-Test) higher on the Parent-Child Dysfunctional Interaction subscale, indicating that the child does not meet their expectations and that the interaction with his or her child does not reinforce them. With mothers re-tested at their child's age of 12 months, this subscale no longer proved significant. However, there were now other significant results indicating improvements in the group of mothers of secure workers after one year of intervention. They scored slightly less on the depression screening, showed higher levels of empathy and understanding of the needs of their children (AAPI-S2), valued mutual parent-child relationships and alternatives to corporal punishment (AAPI-S3), experienced an overall lower degree of Parental Stress (PSI-TS). In contrast, the mothers of insecure workers reported their children being more difficult on PSI-DC subscale, which indicates difficulties in children's self-regulatory processes. Overall these results point out that the two groups are rather similar at the beginning of intervention and, if there are differences among groups at all, that rather the group of secure workers has initially more problems, which improve over the one year of intervention significantly in important areas of parenting. When starting intervention, mothers were roughly of the same age, with a mean of 17,56 years for mothers of secure and 18,11 years for mothers insecure workers. However, the children of mothers with insecure workers were significantly older ( $p=0,042$ , t-Test, 2-tailed) at the beginning of data collection with a mean of 1,81 months ( $SD=2,53$ ) as compared to 0,33 months of age ( $SD=0,7$ ) of the children of secure workers. Although sometimes up to 5 home visits were needed before informed consent was given and the process of relationship building between social workers and mothers often started earlier than data collection, we tested this influence and excluded all 3 cases, where data collection started after 4 months of

child's age and the effect of AAPP on mother-infant-attachment turned out to be still significant ( $p=0,028$ ; Fisher's Exact, 1-sided). 2 out of this 3 "late" starters developed secure attachment relationships to their children, which does not indicate an adverse effect on the intervention process. Other data indicated that insecure worker had cases, whose subjects were more motivated (i.e., asking for help) than the cases of secure workers who were more often sent from child protection and are thus often hard to motivate for intervention. Accordingly the mothers of insecure workers tended to participate more frequently in the bi-weekly group sessions of the STEEP-Program (U-test,  $p=0,074$ ). Other variables, e.g. number of home visits, nationality, educational level were not differentiated within the two groups.

## **Discussion**

The results demonstrate the significance of inner working models in the area of intervention in two ways. Firstly, we can show that among a group of 97 workers the insecure backgrounds are clearly overrepresented, even if one considers possible coding errors. Those who are familiar with attachment in the German culture know that there is traditionally an overrepresentation of insecure attachment qualities beginning with the Bielefeld Study, which started in the mid-1970's (Grossmann, Grossmann, Spangler, Suess, & Unzner, 1985). Secondly, the mothers of secure workers showed better results at the child's age of 1 year not only with regard to secure attachment relationships with their children (SSP), but also with regard to PSI-Subscales indicating less total stress as parents and less problems with their children as compared to mothers of the group, being served by of insecure workers. Further on, mothers of secure workers also showed a tendency to experience less depression and significantly more empathy for/and understanding of their child's needs (AAPI-S2). Furthermore, they value alternatives to corporal punishment and show more respect for their child's needs (AAPI-S3) compared to mothers of the other group. However, the results

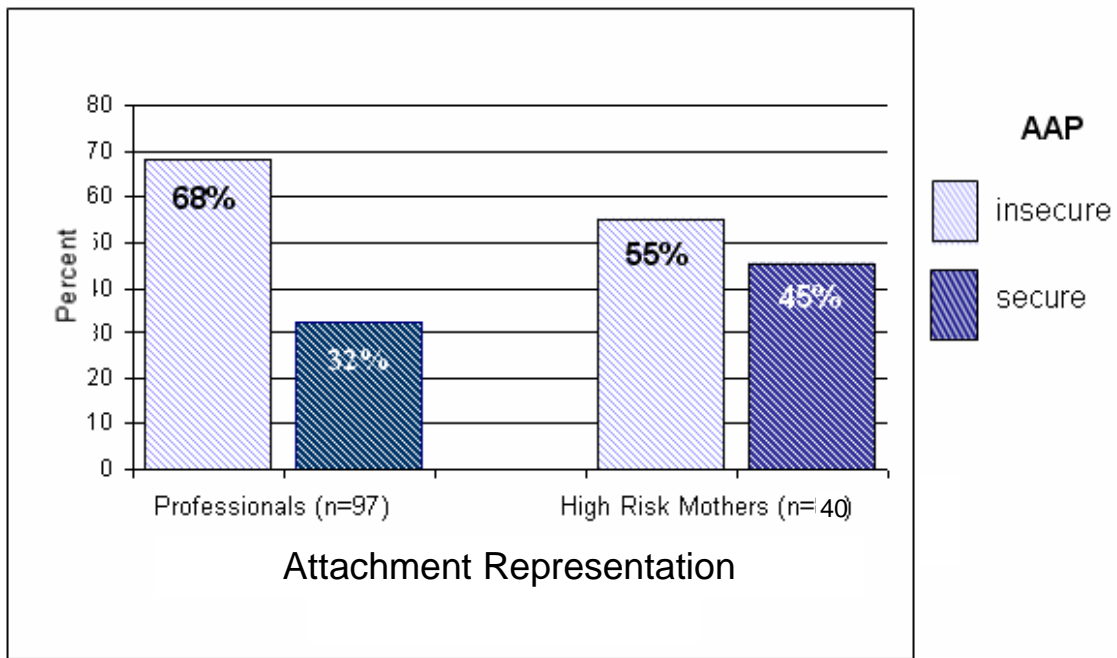
reported here are preliminary and cover only base line and midpoint assessments of a two year program. The groups are still small and results of the influence of security of workers on mother-infant attachment can change due to changes in single cases. Therefore we proceeded very conservatively in order to exclude measurement error of the AAPs of professionals and included only cases where we had two independent codings and in case of disagreement a third independent coding of professionals' AAP. This was done because of the rather modest interrater reliability we found in the codings of the larger group of 97 AAPs (73%) and we did this although the interrater agreement in the smaller group of 22 professionals, whose intervention we are evaluating, was 78 %. Using the AAP instead of the AAI was mostly due to its practicability, but its suitability for clinical groups has also been stressed recently (Bretherton & Munholland, 2008). Further on, we researched many aspects which could provide an alternative interpretation of these data rather than that the workers intervention being influenced by their own attachment background. We found no differences at baseline between the two groups, which could provide an alternative explanation for the differences found. The found differences at midpoint are all in line with the reported influences of worker's attachment representations on infant-mother attachment and support its significance. Finally, our results are in line with our clinical observations in training and supervision sessions, which describe the important deactivating and hyperactivating strategies of insecure workers which we think are influencing their intervention practice. So far our results might explain why evidence based programs appear to have variable effects when implemented. Therefore, in order to improve early intervention, it would be of high value to study those processes guiding the influence of attachment background of workers on their intervention. We believe that helping intervention workers to reflect on the many ways their own attachment background is influencing their professional work is a chance to learn more about effective intervention for them personally and for the field of practice and basic research,

since both benefit from studies focusing on mechanisms and processes (Sroufe, Egeland, Carlson, & Collins, 2005; Suess & Sroufe, 2005). According to the principles of STEEP we don't think about excluding insecure STEEP-Workers from intervention and we don't see them as deficient, we see them rather as partners in unpacking intervention (Dozier, Peloso, Lewis, Lauwenceau, & Levine, 2008).

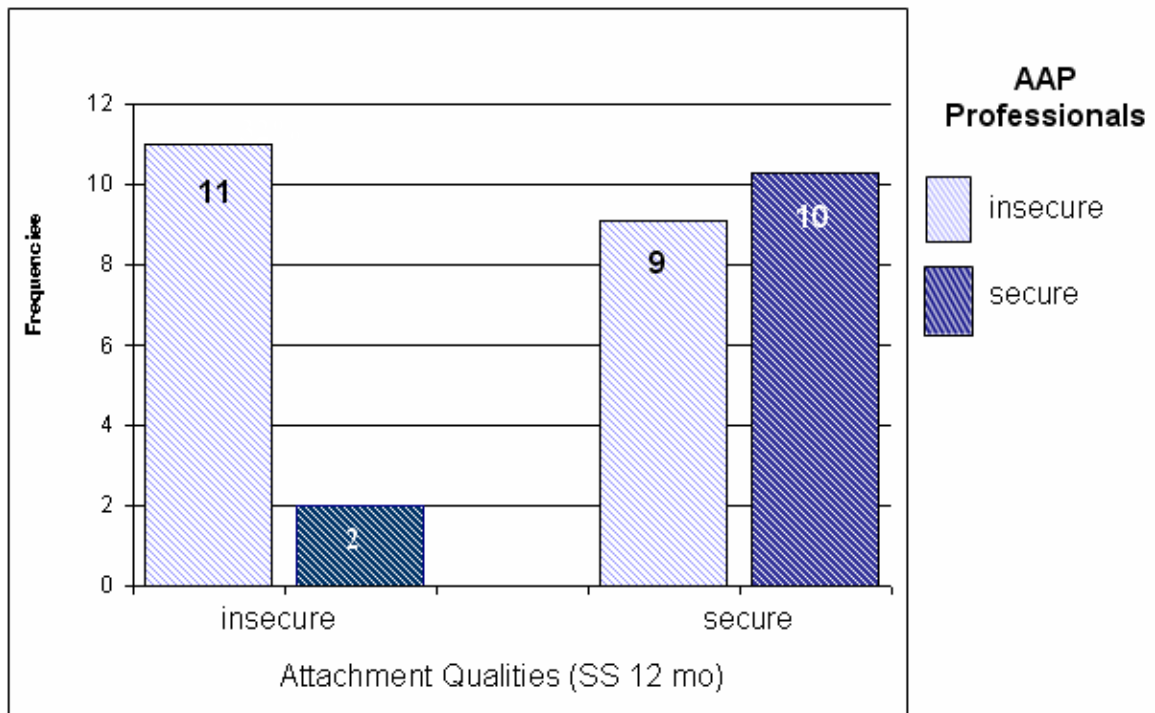
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**Figure 1: Attachment Representations of Professionals and High Risk Mothers**



**Figure 2 Influence of Professionals' Attachment Background on Intervention**





**Table 1: Workers' AAP and Strange Situation under the condition of Mothers' AAP**

Frequencies

Mothers' AAP			Workers' AAP		
			insecure	secure	Sum
insecure	Strange Situation	insecure	3	0	<b>3</b>
		secure	5	2	<b>7</b>
		Sum	<b>8</b>	<b>2</b>	<b>10</b>
secure	Strange Situation	insecure	4	2	<b>5</b>
		secure	4	4	<b>8</b>
		Sum	<b>8</b>	<b>6</b>	<b>13</b>

**Table 2: Differences among secure and insecure workers (t-test)**

		0 Months					12 Months					
Variable	AAPP	N	x	SD	t	P <sup>1)</sup>	N	x	SD	t	P <sup>2)</sup>	
<b>Edinburgh Postnatal Depression Scale</b>												
EPDS	insecure	31	10,32	5,69	0,65	n.s.	22	<b>10,18</b>	6,52	1,65	<b>0,05</b>	
	secure	25	9,24	8,86			16	<b>6,88</b>	5,49			
<b>Attributional Style Questionnaire</b>												
PoAttr .	insecure	23	15,76	1,92	0,16	n.s.	20	15,46	2,04	-0,29	n.s.	
	secure	19	15,64	2,98			13	15,67	2,03			
NegAttr	insecure	23	12,26	2,09	0,78	n.s.	20	12,17	2,32	0,41	n.s.	
	secure	19	11,76	2,03			13	11,87	1,77			
<b>Adult-Adolescent Parenting Inventory (AAPI)</b>												
Approp. Expectation	insecure	29	21,34	3,80	0,59	n.s.	19	20,68	4,55	-0,49	n.s.	
	secure	22	20,63	4,80			17	21,41	4,18			
Appropriate Empathy	insecure	28	42,53	4,49	1,25	n.s.	19	<b>39,05</b>	7,31	-2,01	<b>0,03</b>	
	secure	22	40,59	6,47			17	<b>43,12</b>	4,23			
Corporal Punishment	insecure	28	46,50	5,55	-0,26	n.s.	19	<b>44,68</b>	6,06	-2,25	<b>0,01</b>	
	secure	22	46,90	5,49			17	<b>48,76</b>	4,66			
Approp. Family Roles	insecure	29	24,17	5,71	1,28	n.s.	19	23,84	6,19	-0,75	n.s.	
	secure	22	22,14	5,54			17	25,24	4,75			
Power Independence	insecure	29	19,69	2,30	-0,81	n.s.	19	19,11	3,53	-1,20	n.s.	
	secure	22	20,18	1,91			17	20,24	1,92			
<b>Parental Stress Index</b>												
Total Score	insecure	27	72,81	12,92	-0,75	n.s.	20	<b>85,60</b>	16,81	1,85	<b>0,03</b>	
	secure	18	76,72	19,42			15	<b>76,00</b>	12,59			
Parent-Distress	insecure	28	30,14	6,42	0,75	n.s.	20	31,20	9,13	0,71	n.s.	
	secure	18	28,56	7,82			15	29,13	7,73			
Parent-Child Dysfunc.	insecure	28	<b>18,07</b>	4,63	-1,92	<b>0,06</b>	20	21,95	6,00	1,03	n.s.	
	secure	18	<b>21,28</b>	6,69			15	19,93	5,31			
Difficult Child (DC)	insecure	28	25,39	6,61	-0,66	n.s.	20	<b>32,45</b>	7,85	2,30	<b>0,01</b>	
	secure	18	26,89	8,77			15	<b>26,39</b>	5,71			
						1) 2-tailed						2) 1-tailed