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Preventing socio-emotional disturbances in children at risk. The EVA study

Journal for educational research online 8 (2016) 1, S. 110-131



Empfohlene Zitierung/ Suggested Citation:

Leuzinger-Bohleber, Marianne; Läser, Katrin Luise; Pfenning-Meerkötter, Nicole; Neubert, Verena; Rüger, Bernhard; Fischmann, Tamara: Preventing socio-emotional disturbances in children at risk. The EVA study - In: Journal for educational research online 8 (2016) 1, S. 110-131 - URN: urn:nbn:de:0111-pedocs-120444

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Preventing socio-emotional disturbances in children at risk

The EVA study

Abstract

In Germany the gap between children growing up in privileged conditions and those living in poverty on the fringe of society is widening. Neglect and violence in early childhood may lead to future psychosomatic and mental illnesses such as depression and addiction. Therefore it deems necessary to provide early interventions to children, their parents, and caretakers in institutions in socially challenged neighborhoods, in order to prevent socio-emotional disturbance in children at risk.

How this can be done, will be exemplified in this paper by the EVA study (Evaluation of two prevention programs in early childhood care centres with children-at-risk) in which two prevention programs – “Early Steps” and “Faustlos” (“Without fists”) – are implemented in early childhood care centers (ECCCs) in Frankfurt am Main, Germany. The EVA study was conceptualized as a longitudinal cluster randomized study, where the ECCCs – randomly chosen on the basis of a representative baseline survey conducted in 2003 of all ECCCs in Frankfurt am Main (N = 5,300) – are all located in socioeconomically deprived neighborhoods. It is a good example for early intervention. The trial involved 298 children aged 3 to 4. Some preliminary findings illustrated with case examples serve

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to discuss implications on how early intervention may help to prevent socio-emotional disturbances.

Keywords

Early intervention in kindergartens; Prevention; Attachment research; Manchester Child Attachment Story Task (MCAST); Faustlos; Children-at-risk; Psychoanalysis

Prävention sozioemotionaler Störungen bei „children-at-risk“

Die EVA-Studie

Zusammenfassung

In Deutschland klafft die Schere immer weiter auseinander zwischen Kindern, die unter Bedingungen aufwachsen, die gerade in diesem Land historisch wohl so gut sind wie noch kaum zuvor, und solchen, die am Rand der Gesellschaft leben und Armut sowie einer Kumulation von Risikofaktoren für ihre Entwicklung ausgesetzt sind. Frühverwahrlosung, Gewalt und eine Zunahme psychosomatischer und psychischer Erkrankungen wie Depression und Sucht gehören zu den möglichen Folgen. Deshalb ist es notwendig Kindern und ihren Eltern sowie den Erziehern und Erzieherinnen in Kindertagesstätten in Stadtteilen mit erhöhter sozialer Problemlage frühe Interventionsmaßnahmen anzubieten, um solchen sozio-emotionalen Störungen vorzubeugen.

Wie eine solche Frühprävention realisiert werden kann, wird am Beispiel des EVA Projekts (Evaluation der beiden Frühpräventionsprojekte „Frühe Schritte“ und „Faustlos“) aufgezeigt. Die EVA-Studie wurde als cluster-randomisiertes Design zur Evaluation der Wirkung zweier Präventionsprogramme in 14 Kindergärten in Stadtteilen mit erhöhter sozialer Problemlage konzeptualisiert. Die Studie mag exemplarisch die Chancen und Grenzen von Frühpräventionen bei „children-at-risk“ illustrieren. Die Einrichtungen wurden aufgrund einer Basiserhebung an 5300 Kindern aller städtischen Kindertagesstätten in Frankfurt und soziologischen Daten zufällig den beiden Präventionsprogrammen zugeordnet. In der Studie konnten 298 Kinder im Alter von 3–4 Jahren mit einer breiten Palette verschiedener Messinstrumente untersucht werden. Erste Ergebnisse werden vorgestellt und mit exemplarischen Fallbeispielen illustriert.

Schlagworte

Frühprävention im Kindergarten; Prävention; Bindungsforschung; Manchester Child Attachment Story Task (MCAST); Faustlos; Children-at-risk; Psychoanalyse

1. Introduction: Prevention as a social responsibility and requirement of interdisciplinary research

Since 2008, researchers from various disciplines have been working closely with the *Center for Individual Development and Adaptive Education of Children at Risk* (IDeA)¹ to investigate the process of children's individual development as well as educational interventions to enhance learning and promote academic success of children at risk². Findings from research in the fields of education, sociology, developmental psychology, and neuroscience indicate the promising and long-lasting effects of early support and interventions.

Psychoanalytic research on prevention stems from the highly influential hospitalization studies by René Spitz in the 1940s in which he illustrates the effects of emotional neglect and traumatization on psychological development. Since then these effects have been clinically, empirically and inter-disciplinarily studied (Becker-Stoll, Berkic, & Spindler, 2009; Bohleber, 2000, p. 802–805; De Bellis & Thomas, 2003). Findings from various longitudinal studies of children with disorganized attachment patterns (Type D, see chapter 3.7) indicate that such children have a poor prognosis, exhibiting aggressive-destructive behavior and severe psychological problems and performing below-average at school (Green, Stanley, Smith, & Goldwyn, 2000; Helmsen, Koglin, & Petermann, 2012; Lyons-Ruth, Alpern, & Repacholi, 1993; Petermann & Petermann, 2012). Most of the children in these studies had been severely traumatized and exposed to violence by their primary caregivers (Lyons-Ruth, Bronfman, & Atwood, 1999; Fonagy, 2010; Lyons-Ruth, et al., 1993), underlining the need for further research on prevention programs. Based on extensive clinical work with children and adults, the profound knowledge of psychoanalysts of the effects of traumatizing object relations in early childhood and their impending consequences can be put to use in prevention programs.

The *Sigmund-Freud-Institut* (SFI) in cooperation with the Institute for Analytical Psychotherapy for Children and Adolescents (IAKJP; now called *Anna-Freud-Institut* [AFI]) has initiated various psychoanalytically-based prevention projects (i.e., Frankfurt Prevention Study, *Starthilfe*, EVA, and *Erste Schritte*) and combined professional skills of adult- and child-psychoanalysts and empirical professional skills to conduct valuable large-scale sustainable studies. In the following sections a brief overview of this long clinical and empirical tradition is given, the objectives of this study are outlined, the study design is explained and some results

1 The IDeA Center is funded by the LOEWE research promotion program, the federal state of Hessen's offensive for the development of scientific and economic excellence.

2 In 2007 the psychoanalytic research institute SFI was given the chance to cooperate with the German Institute for International Educational Research (DIPF), the Goethe-University Frankfurt for a large scale research proposal by the LOEWE Excellence Initiative (coordinator Prof. Dr. M. Hasselhorn). The SFI is participating with five projects: the EVA project, the MAKREKI project, the *ERSTE SCHRITTE* project, the KIGRU and the UfeBB project at the IDeA center (see www.sigmund-freud-institut.de).

of the EVA study (Evaluation of two prevention programs in early childhood care centers with children-at-risk) currently conducted at the IDEa Center are provided.

2. Psychoanalysis and prevention: National and international examples

Randomized controlled trial (RCT) studies of prevention have been conducted primarily in the United States (e.g., Emde, 2014) by psychoanalysts and developmental researchers committed to the field for many years such as Emde, Olds, and Parens (Raikes & Emde, 2006). Olds, Sadler, and Kitzman (2007) claimed that internationally conducted RCT studies of the effects of prevention could show their sustainability with at-risk children (see Bengel, Meinders-Lücking, & Rottmann, 2009; Olds, Sadler, & Kitzman 2007). RCT studies can provide researchers with reliable and valid results of the effects of prevention projects; however, findings thereof often are general and do not fully depict the complex intertwining effects of the various factors of prevention (e.g., Emde & Leuzinger-Bohleber, 2014). This multi-level interaction of factors can be observed through clinical-psychoanalytic studies in which both quantitative and qualitative approaches³ are taken (Leuzinger-Bohleber, 2007; Leuzinger-Bohleber, 2010a). When clinical knowledge and psychoanalytic concepts are applied to the non-psychoanalytic setting of a prevention program conducted in an early childhood care center (ECCC), deeper understanding of children can be obtained. This combined approach to understanding and helping children can be referred to as *outreach psychoanalysis* (*Aufsuchende Psychoanalyse*) (Leuzinger-Bohleber, 2014a).

In 1951 Bowlby identified infants' biological need to form attachment to caregivers to build a secure base from which they can explore the world. According to Bowlby, human attachment behavior is biologically programmed and a means of survival, as it directs the infant to seek proximity to his/her caregiver when he/she needs protection from danger or emotional support. The infant's attachment to his/her caregivers allows him/her to build trust and thereby explore his/her surroundings and assume social relationships (Bowlby, 1951). Ainsworth expanded on Bowlby's seminal work and conducted empirical research on attachment which involved investigating the effects of early traumatization on attachment patterns and children's subsequent development (Cassidy & Shaver, 2008). She found a strong correlation between neglect during early childhood and emotional problems during adolescence (Cassidy & Shaver, 2008; De Bellis & Thomas, 2003; Dozier, Albus, Fisher, & Sepulveda, 2002; Gunnar, Bruce, & Grotevant, 2000; Teicher, Andersen, Polcari, Anderson, & Navalta, 2002; Maheu et al., 2010; Rutherford & Mayes,

3 In psychoanalysis a variety of research methods to investigate unconscious conflicts and fantasies have been developed (see, e.g., Wallerstein, 2012; Leuzinger-Bohleber, 2010b, 2015).

2014; Wolraich, Drotar, & Felice, 1996) which often led to anxiety disorders, depression, and even suicide (Pine, 2003; 2007).

2.1 Attachment representation, social and emotional development, and achievement at school

Findings from many empirical studies have supported the theoretical assumption of a basic conflict between attachment patterns and exploration behavior: When a child feels secure, he/she is better able to explore his/her environment and learn. Therefore, children who had the opportunity as infants to develop a secure attachment pattern have a great learning advantage over those who did not. Furthermore secure attachment representation is associated with optimal infant development and prosocial behavior later in life, including higher levels of social competence, more advanced emotional understanding, better cognitive and linguistic skills, and less dependency on adults (e.g., Belsky & Fearon, 2002; Bohlin, Hagekull, & Rydell, 2000; Leuzinger-Bohleber, 2009; 2014b; 2015; Spieker, Nelson, Petras, Jolley, & Barnard, 2003; Stacks & Oshio, 2009; Weinfeld, Sroufe, Egeland, & Carlson, 1999).

Infants and children identified as having insecure-ambivalent or insecure-avoidant attachment relationships are typically at greater risk of poor developmental outcomes than children with secure attachment relationships (see chapter 3.7). Jacobsen and Hofmann (1997) showed in a longitudinal study of 108 children (aged 7, 9, 12, and 15) that insecure attachment representation was linked to attention deficits, insecurity, and low grade point average (GPA). The latter is supported by findings of a longitudinal study by Moss and St.-Laurent (2001), who found that children with secure attachment relationships had higher scores than their insecurely attached peers on tests on communication, cognitive engagement, and mastery motivation (Geserick, 2004). A mediator analysis strongly supported the importance of mother-child interactional processes for children's cognitive engagement at school. Further results consolidated this finding with respect to social-emotional regulation strategies (Geserick, 2004; Schleiffer, 2009), motivation to learn and tolerance of frustration, enabling securely attached children to achieve better results in mathematics and German at the end of the first school year (Ahnert & Harwart, 2008; Atashrouz, Pakdaman, & Asgari, 2008). In addition, some authors found that children with *insecure-avoidant* attachment may develop well academically because they employ strategies to regulate emotions and suppress painful attachment information (Main, 1990; Solomon & George, 1999), thus associating this attachment behavior with later internalizing rather than externalizing symptoms (Lyons-Ruth, Easterbrooks, & Cibelli, 1997).

Most authors agree that infants with *disorganized attachment* are at the greatest risk of later behavioral problems, including clinical levels of externalizing and/or aggressive behavior, and hostility in the classroom, as well as poor academic achievement (Dozier, Stovall, Albus, & Bates, 2001; Gloger-Tippelt, 2011; Green, Stanley, Smith, & Goldwyn, 2000; Lyons-Ruth, Alpern, & Repacholi, 1993; Moss,

Cyr, & Dubois-Comtois, 2004; Moss, Smolla, Cyr, Dubois-Comtois, Mazzarello, & Berthiaume, 2006; Solomon, George, & De Jong, 1995; Stacks & Oshio, 2009). Disorganized attachment has been associated with traumatic, disrupted maternal affective communication, and/or frightened, frightening, and helpless parenting behaviors. It develops when an infant feels he/she cannot rely on his/her primary caregiver for protection. Fonagy (2010) considers disorganized attachment as an attachment trauma (see also Green, Stanley, & Peters, 2007; Lyons-Ruth, Bronfman, & Atwood, 1999; Madigan et al. 2006). Most children with disorganized attachment in infancy develop a control strategy by the time they enter school, enabling them to reorient their need for comfort to the parent's behavior and remain engaged with the parent (e.g., Moss, Cyr, & Dubois-Comtois, 2004). Teti (1999) argues that in preschool there are two subgroups of children with disorganized attachment: Those who develop an identifiable control (caregiving or punitive) strategy, which he sees as organized; and those who exhibit behavioral markers of disorganization. It is likely that children with disorganized attachment exhibit unpredictable, frightened, or overwhelmed behavior patterns as well as the most adjustment problems and problematic behavior related to learning (Moss & St-Laurent, 2001; Moss, Cyr, & Dubois-Comtois, 2004; O'Connor & McCartney, 2007; Teti, 1999). Stacks and Oshio (2009) showed that infants with insecure attachment who experience a breakdown in coping strategies may not be ready to begin school. Many metaanalyses supported these findings (see e.g. Groh et al., 2012; 2014; Pallini, Baiocco, Schneider, Madigan, & Atkinson, 2014; see also Leuzinger-Bohleber, Neubert, Baumann, Teising, & Fischmann, in press).

Overall, children with attachment insecurity face greater risk of poor scholastic, social, and cognitive development than children with secure attachment. In the EVA sample, we expect to find a large number of children with attachment insecurity, stressing the need for prevention programs for such children.

2.2 Need for prevention programs for children at risk in Germany

In Germany many prevention programs offer support to children at risk as young as preschool age; however, not all children are reached, as many families, for example those with a migration background, often are unaware of such programs (e.g., Friedrich & Siegert, 2009). Therefore, exploring ways to prevent violence, encourage prosocial behavior, and support social integration were the main objectives of several prevention studies conducted by the SFI in cooperation with the AFI and the municipal education authority. Results of the representative Frankfurt Prevention Study, which was conducted in 14 ECCCs in Frankfurt am Main from 2003 to 2006, indicated that aggressive and anxious behavior of children and hyperactivity in girls was reduced significantly through implementation of a psychoanalytically-based early intervention program (Leuzinger-Bohleber, 2007). The

EVA study, being a replication of the Frankfurt prevention study⁴, compares differential effects of two established prevention programs – *Early Steps* and *Faustlos* (Without Fists). Considering one of the major findings of the Head Start program (Emde, 2014), the main hypotheses of the EVA study is that for children at great developmental risk (e.g., with a disorganized attachment pattern) the standardized, not individualized, *Faustlos* program is insufficient for improving social integration, whereas the more elaborated, individualized *Early Steps*⁵ program will show long-lasting positive effects on such children’s social behavior.

3. The EVA study

The EVA study was conceptualized as a longitudinal cluster randomized study, where the ECCCs are all located in socioeconomically deprived neighborhoods. It is a good example for early intervention. The trial involved 298 children aged 3 to 4. Children’s attachment behaviors were assessed in 14 ECCCs in socioeconomically deprived neighborhoods using a diversity of different measurements, among them the Manchester Child Attachment Story Task (MCAST).

3.1 Representativeness of the sample

Representativeness of the sample was verified with a baseline survey of all public ECCCs in Frankfurt am Main (114 centers with a total of 5,300 children) conducted in 2003 by the *Sigmund-Freud-Institut* (Leuzinger-Bohleber & Fischmann, 2010). First, the levels of aggression, hyperactivity and anxiety of the children attending the ECCCs were assessed using the Observation Questionnaire for Pre-School Children (German: *Verhaltensbeobachtungs-Fragebogen für Vorschulkinder*⁶, VBV) (Döpfner, Berner, Fleischmann, & Schmidt, 1993). Next, the social structure of all ECCCs was assessed and the ECCCs were clustered accordingly (see Table 1). The ECCCs were randomly chosen from the 10 clusters.

4 We are replicating the study in order to further test the external validity of the psychoanalytical intervention program.

5 *Early Steps* is a psychoanalytically-based prevention program including supervision, consultation of parents and teachers by psychologists who spend one day a week in the kindergartens and, if needed, offer psychotherapy at the institutions. In the second year of the prevention the *Faustlos* program is added to the *Early Steps*-prevention (see chapter 3.7).

6 This instrument was employed (even though it may be considered somewhat outdated) to compare the data of EVA to the data of former prevention studies.

Table 1: ECCC's and related clusters

	Social structure more problematic	Social structure more unproblematic	Total
Hyperactivity high, Aggression high	Cluster 1: 12 ECCC's (5 with high anxiety scores), 6 selected for randomization	Cluster 2: 10 ECCC's (4 with high anxiety scores)	22
Hyperactivity high, Aggression low	Cluster 3: 12 ECCC's (9 with high anxiety scores)	Cluster 4: 9 ECCC's (8 with high anxiety scores)	21
Hyperactivity low, Aggression high	Cluster 5: 5 ECCC's (2 with high anxiety scores), 2 selected for randomization	Cluster 6: 14 ECCC's (5 with high anxiety scores), 1 selected for randomization	19
Hyperactivity low, Aggression low	Cluster 7: 14 ECCC's (9 with high anxiety scores)	Cluster 8: 10 ECCC's (2 with high anxiety scores)	24
Not specified	Cluster 9: 12 ECCC's 4 selected for randomization	Cluster 10: 16 ECCC's 1 selected for randomization	28
Total ECCC's	55	59	114

Seven ECCC's were randomly chosen for the EARLY STEP intervention and seven for the *Faustlos* intervention (mainly from clusters 1, 3 and 5, see Table 2).

3.2 Power analysis

The sample calculation and power analysis were based on alpha = 0.05, power of 0.8, and an estimated effect size of 0.5. Given these parameters an adequate sample would consist of $n = 63$ children per arm, given a simple randomized controlled trial. However, for a clustered randomized design with unequal cluster sizes, the sample size estimation of $n = 60$ has to be adjusted, using the formula by Eldridge, Ashby, and Kerry (2006). This formula provided a good conservative estimate of sample size requirements for trials using cluster-level analyses weighting cluster size:

$$n^* = \{ 1 + [(1 + CV^2) \times m - 1] \times ICC \} \times n . \quad (1)$$

The formula for the corrected sample size n^* consisted of the coefficient of variation (CV) for trials with unequal cluster sizes (i.e., unequal sizes of each ECCC) and the intra-class correlation coefficient (ICC) within the clusters and the mean cluster size m .⁷

Again, using the findings of the Frankfurt Prevention Study, the estimated CV was 0.467 and the estimated ICC (based on the pre-post-differences including the CV) was 0.0465. We expected a mean cluster size of $m = 20$ or at least $m = 17$ children. The corrected sample size for the first scenario would be $n^* = 131.44$ (if

⁷ If all clusters were of equal size, then CV would become zero and the simple common formula $n^* = \{ 1 + [m - 1] \times ICC \} \times n$ would be applicable.

$m = 20$) divided by 20 = 6.57; in the second scenario $n^* = 120.73$ (if $m = 17$) divided by 17 $n^* = 7.10$. For both scenarios, seven ECCCs per treatment should be selected.

3.3 Sample

Data from the pre-treatment phase of the EVA study are analyzed in this paper. CRCT baseline information for each group given at individual and cluster levels is presented in Table 2. A baseline information analysis indicated no significant differences between the two groups (age: $T = -.551$; $p = .582$; $n = 298$; sex: $\chi^2 = 2.380$; $p = .123$; $n = 298$) and confirmed that the sample was one of high risk in terms of social structure, neighborhood deprivation, and aggression. Written consent was obtained from each participant family; the study was approved by the Ethic Review Commission of the Federal Chamber of Child and Adolescent Psychotherapists (LPPKJP Hessen, Germany).

Table 2: Baseline information for each group at individual and cluster levels

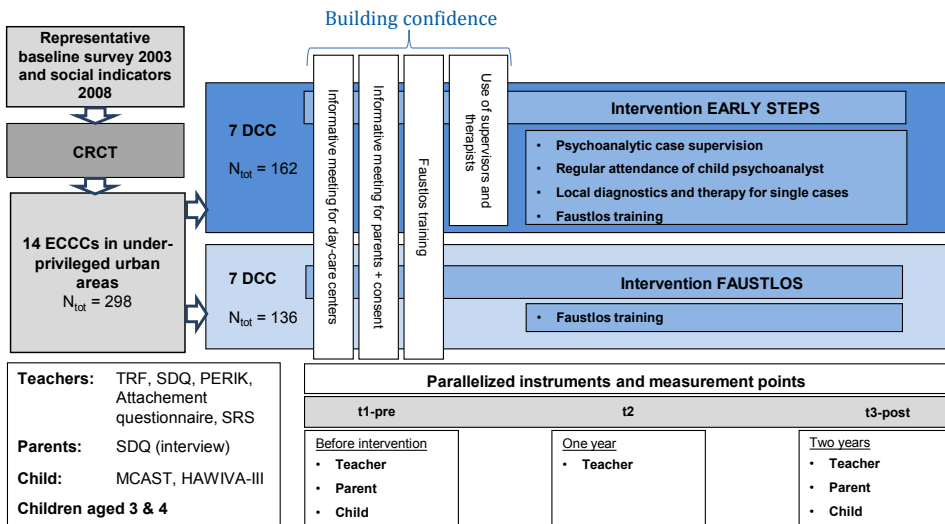
	EARLY STEPS	FAUSTLOS
<i>ECCC factors at baseline</i>		
<i>N</i>	7	7
social structure – problematic	6	6
Aggression – high	5	4
hyperactivity – high	3	3
Anxiety – high	2	3
socioeconomically deprived neighborhood	6	6
<i>Child factors at baseline</i>		
<i>N</i>	162	136
mean age in months (SD)	44.75 (7.6)	44.15 (9.7)
boys (%)	86 (53.1)	60 (44.1)

Analysis of dropout revealed a sample size of 241 children aged 3 and 4. The missing data of 57 children (19 %) was due to poor language skills (39 children), refusal to participate in the actual test situation (16 children), and repeated absence due to illness or holiday (2 children).

3.4 Study design

A detailed outline of the study design could not be provided within the framework of this paper.⁸ Methods of self-assessment and external assessment of children, caretakers, and parents as well as a newly designed instrument for the evaluation of attachment classifications named MCAST (see chapter 3.7) were added to the original multi-perspective design of the Frankfurt Prevention Study (see instruments in Figure 1).

Figure 1: Study design



Note. Assessment by: C-TRF: Teachers' Report Form; HAWIVA: Wechsler Preschool and Primary Scale of Intelligence III Assessment; MCAST: Manchester Child Attachment Story Task; PERIK: Positive Development and Resilience in Daycare Center's Daily Routine; SDQ: Strengths and Difficulties Questionnaire SRS: Self-Reflective Functioning Scale.

3.5 Interventions

The EVA research group provides traumatized children, their parents, and caretakers in institutions in socially challenged neighborhoods with psychoanalytically based early interventions. Unlike former approaches, especially within the field of psychoanalytic education, the approach of the EVA research group is to provide *outreach psychoanalysis (Aufsuchende Psychoanalyse)*, where psychoanalysts go to institutions of early education to help the teachers better understand the complex, mostly unconscious processes underlying children's idiosyncratic behavior towards them and other children. Extremely traumatized children show various af-

8 See www.sigmund-freud-institut.de or contact EVA2@idea-frankfurt.eu for further information.

fects, counter-transference reactions, projections and projective identifications, as well as fragmentations in their relationships, for example, with their early childhood teachers. To understand these typical emotional reactions evoked by the traumatized children's problematic "working models", it is assumed that these working models are a presupposition the early childhood teachers adopt so that they can control their desire to exclude these children from everyday work in the ECCCs. The self-critical reflection of such reactions seems to be a key requirement for adequate, professional, and "containing" behavior in such challenging professional situations (for detailed cases studies, see Leuzinger-Bohleber, Fischmann, Göppel, Läzer, & Waldung, 2008a; Leuzinger-Bohleber, 2010c; Leuzinger-Bohleber et al., 2011). We thus offered two different early prevention programs, one of them psychoanalytically based:

Early Steps – This prevention program is characterized by its approach to understanding the individual child and his/her family, and considers each child and each family as unique (Leuzinger-Bohleber, 2007). Support is deemed most effective when the specific skills and resources of an individual child are taken as a starting point (Emde & Leuzinger-Bohleber, 2014). Hence, child behavior is not seen as dysfunctional but rather as the expression of a hidden (unconscious), reasonable, mental event. Thus, the specific and perhaps eye-catching behavior of a child first needs to be deciphered carefully before trying to change it. The aim of the supportive measures is to facilitate more positive self-experiences and more positive experiences of the attachment figures so that the child may develop his/her talents in an optimal way. The *Early Steps* program involves the following:

- Bi-weekly case supervision of the ECCC team;
- Weekly counselling and training of the teachers and parents in the ECCC by experienced psychotherapists for children and adolescents;
- in individual cases, therapy for children and their parents in the facilities;
- Implementation of the *Faustlos* prevention program at the earliest in the second year of the project⁹; and
- if required, individual mentoring by student teachers for children transitioning from kindergarten to primary school.

Faustlos – This violence prevention program is based on an American program called Second Step, which was developed by the Committee for Children in Seattle and is now widely used and scientifically well-founded (Cierpka & Schick, 2006). The aim of the program is to promote empathy, and teach impulse control and anger management. With the help of images of various emotional states, awareness of messages delivered through the mimicry and body language of other children and

9 Theoretical considerations were the reason for including *Faustlos* in the *Early Steps* prevention program. Our hypothesis was that *Faustlos*, which has been considered effective for "normal children" in many studies, has to be supplemented by other modules (such as supervision, consultation with parents) in order to help children at risk. Therefore, we compared *Faustlos* (I) and *Faustlos* plus supervision and consultation (II).

of oneself is developed. Images portray conflict situations which are discussed and re-enacted in role-play.

3.6 Objectives and hypotheses

The objective of the EVA study is to investigate the differential efficacy of the two intervention programs in a high-risk population. The first hypothesis is that the *Early Steps* program, which addresses the individual child's particular needs, will be more effective than the standardized *Faustlos* program in preventing aggressiveness, hyperactivity and anxiety. The second hypothesis is that the more restricted approach of *Faustlos* might better meet the teachers' demand for structure in some ECCCs depending on the institutional setting. Therefore, investigating the effectiveness of the two programs in relation to their actual fit to the needs of the institution is a primary goal. The third hypothesis is that a subgroup of children in the *Early Steps* program will exhibit a change in their insecure attachment representation towards one that is more structured or secure.

3.7 Attachment assessment and preliminary results

Attachment was assessed using the Manchester Child Attachment Story Task (MCAST) (Green, Stanley, Smith, & Goldwyn, 2000), a narrative story task which reveals attachment patterns in pre-school-aged children through the use of doll play scenarios. In the baseline play scenario the researcher models for the child the procedure of the task. During the demonstration the examiner shows the child how to use the dolls and dialog to tell a story. The assessment then begins with four story stems to create mood induction and arouse mild attachment distress. The play scenarios include a nightmare, an injured knee, a tummy ache and being lost in a shopping center. The examiner prompts the child to describe what the child doll and the caregiver doll were thinking and feeling.

Picture 1: MCAST – doll house used to assess attachment in young children



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This procedure enables an assessment of the child's behavior during a dangerous situation activating the attachment system. A child is able to explore his/her surroundings (hence: To learn) only if he/she feels safe. The moment he/she perceives danger, the child deactivates his/her exploration behavior and activates his/her attachment system, seeking safety in the proximity of his/her primary caregiver. The MCAST is a validated method of identifying a child's attachment behavior. Following an initiating sequence, the child is confronted with four dangerous or stressful situations that he/she might experience (a nightmare, an injured knee, a tummy ache, and losing his/her mother at a shopping center). Four different attachment classifications are defined by the child's conduct within this hypothetical situation:

- A *securely attached child* will seek out his/her primary caregiver with great matter of course. As an example: If he/she is woken by a nightmare, he/she will call for his/her mother, who will then comfort him/her (Type B).
- An *avoidant-attached child* has learned to comfort himself when in danger. As an example: He/She will apply a bandage to an injured knee by himself/herself (Type A).
- An *ambivalently attached child* is neither capable of comforting himself when in danger nor is equipped with the inner feeling of security that he/she will receive help from his/her primary caregiver. Alternately, he/she often is overcome with aggression and despair upon losing his/her caregiver (Type C).
- A *disorganized attached child* has not been able to develop any consistent attachment pattern due to his/her own history of grave traumatization or grow-

ing up with traumatized caregivers: When in danger he/she will become highly confused and flee into a seemingly uncontrolled state towards his/her surroundings (Type D).

Administration of the MCAST requires a private place where there will be no disturbances, a large doll-house, and a video recorder so that the behavior can be reviewed and coded. Approximately 20 to 30 minutes is needed for administration of the MCAST and an additional 40 to 60 minutes for coding.

The four play scenarios are coded and used for attachment classifications. The 33 coding scales fall into four general dimensions:

- attachment-related behaviors (e.g., proximity seeking, caregiver's sensitivity, warmth and assuagement strategies);
- narrative coherence, including quality, quantity, relevance, and manner;
- mentalization skills (i.e., the child's awareness of the states of mind of characters in the story and in his/her metacognition);
- disorganized phenomena (including five disorganization facets: Chaos; no identifiable strategy; use of multiple and incompatible strategies; episodic disorganization, i.e., narrative disruption; control of caregivers, i.e., either solicitous or coercive; and finally presence of bizarre themes without resolution).

Each play scenario is categorized in the standard four-way classifications: Insecure-Avoidant (A), Secure (B), Insecure-Ambivalent (C) and Insecure-Disorganized (D). The four play scenario categories are then combined to determine the child's overall attachment classification. If two or more play scenarios receive the same attachment classification, this becomes the child's overall attachment classification.

Each MCAST coder passed the reliability examination as part of his/her training. This means that he/she rated 10 play scenarios successfully and on 68 randomly selected MCAST tapes from the current sample (28.2 %, $n = 241$), blindly rated by two certified coders, the percentage of agreement for the overall classification "secure" vs. "insecure" was 91.1 % (Cohen's Kappa = .80) and for the four-way classification (A/B/C/D) 73.3 % (Cohen's Kappa = .64) respectively.

4. Preliminary Results

Preliminary results at baseline indicate that the EVA study taps a high-risk population: An alarmingly high proportion of the sample (66 %) showed attachment-insecurity, of which 43 % showed insecure-avoidant or insecure-ambivalent and 23 % insecure-disorganized attachment patterns. The baseline attachment classifications indicate that there were no significant differences between the two groups before the intervention ($\chi^2 = 5.147$; $p = .161$; $n = 241$; see Table 3).

Table 3: Results of MCAST at the beginning of the EVA Study

<i>Region</i>	N tested	Avoidant Type A	Secure Type B	Ambivalent Type C	Disorganized Type D
Western Europe (various samples) ^a	510	28 %	66 %	6 %	Not yet investigated
USA (21 samples) ^b	1584	21 %	67 %	12 %	Not yet investigated
Israeli Cities ^c	758	3 %	72 %	21 %	3 %
<i>EVA Study Frankfurt</i>	241	34 %	34 %	9 %	23 %

Note. Comparing attachment styles as reported in previous studies conducted on children without any specific risk and those found within the EVA study at baseline. The EVA figures clearly show a lower number of secure attachments (Type B). Comparison figures of “normal populations” from various countries may be found in van Ijzendoorn & Sagi-Schwartz (2008).

^avan Ijzendoorn & Kroonenberg, 1988

^bvan Ijzendoorn, Frenkel, Goldberg, & Kroonenberg, 1992

^cSagi, Koren-Karie, Ziv, Joels, & Gini, 2002

The following two recordings of participants’ performance of tasks in the EVA study exemplify the kinds of attachment behavior the children exhibited:

Mohammed (4 years old) is telling the story “A child has a bad tummy ache” (MCAST vignette 2): The Mohammed doll cries out for his mother. She enters immediately and asks: “Oh, where does it hurt?” – “Here in my tummy – it really hurts ...” – “I’ll make you some tea and a hot-water bottle, and it’ll get better right away. Go lie down – You’re staying home today. I’ll read you a story and you’ll forget all about your tummy-ache ...”. All of Mohammed’s stories show a similar structure. He is a securely attached child.

Ali (3 years old) tells stories that indicate a disorganized attachment pattern: Upon reuniting with the mother doll after losing her at the mall, the Ali doll is beaten by her. Then the Ali doll beats the mother doll and gradually loses control. He deranges the entire doll house and impulsively buries the mother doll underneath a pile of furniture “so that she is finally dead ...”. Ali is not able to escape from his aggressive destructive mood: For the following 15 minutes he is preoccupied with killing his mother.

When one member of the research team confronted Ali’s mother with the fact that he had shown these destructive aggressive outbursts not only during the testing but also at the ECCC, she talked about similar incidents at home and she agreed to have her son participate in child therapy and to have her family participate in family therapy at the institution, which was covered by her health insurance. Ali’s mother was an immigrant who had left her second alcoholic and physically abusive husband and was living in a psychologically and psychosocially desolate situation. She has profited from the professional sessions with an experienced, Turkish-speaking children’s therapist from the Institute of Analytic Children’s and Adolescent’s Therapy.

The team at the ECCC was relieved to see the mother accepting professional support. Within six months a change in Ali’s behavior became noticeable, which

suggests a change in his attachment type to a secure attachment. This can be seen as a protective factor, being that findings from meticulous empirical studies (Fonagy, 2007) have indicated that the prognosis for three-year-olds such as Ali who experience aggressive breakouts due to separation situations are very negative: Many of the delinquent adolescents interviewed by Fonagy (2007) had shown similar early childhood mannerisms and a disorganized attachment pattern. It remains to be seen whether it can be empirically proven that *Early Steps* helps children like Ali to transform their problematic attachment type (C or D) into a secure one and therefore increase their chances of a creative psychic and psychosocial development.

5. Discussion

In this article an overview is given of some recent psychoanalytic studies in the area of prevention and early intervention as well as of two psychoanalytically based prevention programs which have been evaluated in the EVA study. The trial involved 298 children aged 3 to 4. Children's attachment behaviors were assessed in 14 ECCCs in socioeconomically deprived neighborhoods using a diversity of different measurements, among them the Manchester Child Attachment Story Task (MCAST). Preliminary results showed that the study indeed tapped a high-risk population, a large proportion of which exhibited attachment insecurity (66 %), among them 34 % with insecure-avoidant, 9 % with insecure-ambivalent and 23 % with disorganized attachment patterns.

In accordance with psychoanalytic resilience research the major aim of the EVA study is to enable early childhood teachers to provide traumatized children (especially the 23 % with disorganized attachment) in their institutions with alternative and supportive object-relationships, which can be paramount to a child's positive future development. Hauser, Allen, and Golden (2006), to name one example, have shown that 17 % of the children in their study, who had developed extreme psychic and psychosocial symptoms during their adolescence and had to be hospitalized in child psychiatry for several years, developed surprisingly well during late adolescence. All of them had been victims of neglect, violence, and other traumatic experiences in their early childhood relationships. One unexpected finding from the extensive interviews with those former adolescents as young adults (who had developed surprisingly well) was that they all remembered at least one emotionally positive relationship in their early childhood (e.g., with a grandparent, a neighbor, an early childhood teacher). This positive relationship was probably an inner source of hope and trust which enabled these children at risk not to give up completely, but rather to take their lives into their own hands in spite of the trauma experienced in their childhood.

In this sense one of the two prevention programs of the EVA study, the *Early Steps* program, aims to strengthen the professional relationship between early

childhood teachers and traumatized children in their institutions. Deeper understanding of these children, despite the daily workload and the often frustrating institutional structures, builds a foundation for the bi-weekly supervision sessions. Such sessions encourage professional self-reflection and an open and thorough view of individual children and their specific (trauma-) history.

A second dimension of outreach psychoanalysis in the *Early Steps* program is the weekly work of an experienced children's therapist in the ECCCs. In the exchanges with the ECCC team and the parents the therapists try to communicate their professional perception and methods for critical self-reflection as well as their broad psychoanalytic knowledge of early development, dysfunctions, traumatization, migration, and their possible short-term and long-term effects. In some cases child therapy is offered directly within the frame of the institutions, and includes regular consultations with parents, since these families at risk seldom find their way to the private offices of psychoanalysts. A new, albeit challenging, opportunity to offer direct psychoanalytic support and develop social competences through therapy for children and parents in kindergartens in socially challenging regions is thus ascertained.

Another aim of the *Early Steps* program is to establish an on-going working relationship between early childhood teachers, who fulfil their educational duties and social responsibilities (e.g., contacting the youth and child welfare department when deemed necessary), and therapists, who provide psychoanalytic supervision and treatment. These professionals work closely together and share their specific expert knowledge and skills to understand better an individual child's psychic and psycho-social situation and determine how best to support the child and his/her family.

Our preliminary results show that such professional collaboration and intervention enabled some of the traumatized children in our study to change their disorganized attachment pattern into a less problematic one (Leuzinger-Bohleber et al., in press). Moreover, as Hartmann (2015) showed, the professionalism of early childhood teachers improved over their three years of participation in the EVA study. Further analyses of the data are needed to support these preliminary findings (see also Leuzinger-Bohleber et al., in press).

Acknowledgments

We would like to thank the Psychoanalyst Robert Emde who was one of the supervisors in charge of the Head Start and Early Head Start projects in the USA for his enthusiastic and knowledgeable advice. For several decades he has been very committed to prevention projects. We are extremely lucky that he has decided to support our prevention projects as a scientific advisor. Furthermore, we would like to thank Henri Parens who also worked with fringe groups for several decades mainly in Philadelphia for his support of our *ERSTE SCHRITTE* project by providing us with all his material and supervision of our project.

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