American Journal of Orthopsychiatry
2003, Vol. 73, No. 3, 255–265


0002-9432/03/$12.00 DOI: 10.1037/0002-9432.73.3.255

# Posttraumatic Stress Disorder in Adopted Children From Romania

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This follow-up study of 80 Romanian children showed that 16 (20%) of the children exhibited posttraumatic stress disorder (PTSD). The same children got scores in the clinical range on the Child Behavior Checklist (CBCL). These PTSD children could be differentiated from the remaining children by psychosocial but not by physical health variables. Children showing characteristics of PTSD stood out from the other subjects because of their scores on the Externalization dimension and excessive attention-seeking on the CBCL. The findings indicated that these Romanian adoptees exhibited survivor behavior. A substantial number of these adopted children require aftercare by adoption specialists from the time they arrive in Dutch families. It seems plausible that the high incidence of PTSD characteristics was related to extreme physical and social neglect occurring in the orphanages.

The need for prevention of posttraumatic stress disorder (PTSD) in adopted children has been noted among clinical practitioners. According to Terr (1991), PTSD (Type 1) can apply when a child or adult is exposed to any unexpected traumatic event, such as separation from one or both parents, a serious accident, experience of violence, a natural disaster, or sudden death. PTSD (Type 2) refers to recurrent extreme events, such as (sexual) abuse, violent experiences in war situations, and neglect. Studies on the consequences of Type 1 trauma in children have a long history. Spitz (1945) reported results of a study in orphanages and made a film about children's stay at the hospital, *Grief: A Peril in Infancy* (Spitz, 1947). This film showed the serious consequences of separation from the mother. Even a brief time of separation for a stay in the hospital transformed happy and normally behaving babies into fretful, irritated, unhappy children who avoided contact.

Shortly prior to and after WWII, effects of abuse, long-term neglect, and other recurrent traumatic events were investigated. These studies were conducted in relation to the syndrome of attachment disorders (Bowlby, 1971, 1983), with symptoms like indiscriminate friendliness to strangers (Levy, 1937) and mental retardation (Brezinka, 1961). Rutter (1979) started a longitudinal study in the 1970s that charted the effects of neglect on young children.

PTSD as a consequence of Type 1 or Type 2 traumas was first included in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III;* American Psychiatric Association, 1980) in 1980 (Scott & Stradling, 2001). However, we consider PTSD only as a consequence of Type 2 trauma return when we describe the broader *DSM-IV* (American Psychiatric Association, 1994) concept of "a traumatic event," which also includes the frequency of events such as unfulfilled basic needs, torture, abuse, and threats, which lead to certain fear, helplessness, or horror.

The diagnostic criteria for PTSD are, according to the *DSM-IV* (American Psychiatric Association, 1994, pp. 217–218):

> The person has experienced an event that is outside the range of usual human experience and that would be markedly distressing to almost anyone, e.g., serious threat to one's life or physical integrity; serious threat or harm to other close relatives and friends. During the event they responded with fear, helplessness, or horror and since the event they showed the following symptoms for more than one month.
>
> Reexperiencing of the trauma: The traumatic event is persistently reexperienced in at least one of the

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We thank the Institution "Child and Future," Institution Janivo, the Ministry of Justice, and the Gasunie for their financial support.

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following ways:

1. Recurrent and intrusive distressing recollections of the event
2. Recurrent distressing dreams of the event
3. Acting or feeling as if the traumatic event were recurring
4. Intense psychological distress at exposure to cues that symbolize or resemble aspects of the event
5. Physiological reactivity on exposure to cues that symbolize or resemble aspects of the event.

Avoidance and numbing: Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness as indicated by at least three of the following ways:

1. Efforts to avoid thoughts, feelings, or conversations associated with the trauma
2. Efforts to avoid activities, places, or people that arouse recollections of the trauma
3. Inability to recall an important aspect of the trauma
4. Diminished interest or participation in significant activities
5. Feeling of detachment or estrangement from others
6. Restricted range of affect
7. Sense of foreshortened future.

Arousal: Persistent symptoms of arousal as indicated by at least two of the following:

1. Difficulty staying or falling asleep
2. Irritability or outbursts of anger
3. Difficulty concentrating
4. Hypervigilance
5. Exaggerated startle response.

## Diagnosis and Treatment of PTSD

Since the introduction of the *DSM-III* in 1980, the diagnosis of PTSD has been the subject of several general studies (see, e.g., Aarts & Visser, 1999; Blake et al., 1995; Davidson & Foa, 1991; Scott & Stradling, 2001; Yule, 1999); specific studies were conducted involving PTSD in war veterans/victims and persons involved in traffic accidents. Moreover, the appropriate forms of treatment were investigated (Valent, 1998, 1999).

In addition, possible PTSD patients were studied, such as survivors of the holocaust (Kuch & Cox, 1992); Vietnam war veterans (Card, 1987); and victims of earthquakes (Madakasira & O'Brien, 1987), of traffic accidents (Brom, Kleber, & Hofman, 1993; Hickling, & Blanchard, 1992), of fires (Perry, Difede, Musngi, Frances, & Jacobsberg, 1992), of rape (Foa, Rothbaum, Riggs, & Murdock, 1991), and of (sexual) assault/abuse (Houskamp & Foy, 1991; Rothbaum & Foa, 1992). Finally, children who witnessed the murder of a parent were observed so that the presence of PTSD could be diagnosed (Malmquist, 1986).

It was questioned which were the appropriate theoretical interpretations and the most effective therapeutic approaches to PTSD (Brom, Kleber, & Defares, 1986; Everett & Gallop, 2001; Lyons & Keane, 1989; Marquis, 1990; McFarlane, 1994; Stephen, Williams, & Yule, 1997; Valent, 1998, 1999; Van der Kolk, McFarlane, & Van der Hart, 1996; Williams & Banyard, 1999; Yule, 1999).

PTSD became a relevant concept for the diagnosis and treatment of patients with serious behavioral disturbances. In 1992, Herman proposed that one might, in addition to PTSD, also speak of posttraumatic stress reaction complex (PTSRC) to express the complexity and intensity of the behavioral disturbances of adults who had been victims of extreme forms of abuse. According to Herman, PTSRC could be included in the next revision of the *DSM*.

## PTSD in Adopted Children

The situation of many adopted children renders it plausible that PTSD Types 1 and 2 apply. Many of these children experienced psychologically distressing events—some experienced alone, such as rape, torture, or assault, and some experienced in the company of a group of people, such as natural disasters and consequences of war activities. In particular, children who have spent years in an orphanage run the risk of experiencing traumatizing events (e.g., starvation of playmates and torture of other children; Federici, 1998; Hoksbergen, Baarda, Bunjes, & Nota, 1979; Sorgedrager, 1988; Verhulst & Versluis-den Bieman, 1989).

Adoption as a significant life event (Type 1) with risk of developing behaviors consistent with the diagnostic category PTSD has not been studied thus far, and, consequently, data about traumatic consequences of neglect and abuse in adoptees from foreign countries (Type 2) are lacking.

### *Type 1 PTSD in Adopted Children*

The assumption of an increased risk of showing behaviors consistent with the diagnostic category PTSD in adopted children as a result of Type 1 trauma was initially put forward because of personal and therapeutic concerns (Carlini, 1997; Hoksbergen, 1996; Lifton, 1994; Verrier, 1993). Verrier was an adoptive mother and therapist. She described the effects of

separation from the mother in the case of adopted children and named this separation the "primal wound," resembling the Type 1 trauma. According to her, acknowledging the effects of separation would help adoptive parents and service providers to understand adopted children. Lifton, who was adopted herself, also pointed to the effects of the separation from the mother. She spoke of "cumulative adoption trauma," which started with the separation from the mother and could be reinforced later as the adoptee realized that he or she was separated from his or her family and that he or she would probably never know this family (Lifton, 1994, p. 7). The Mexican psychiatrist Luis Feder (1974) first used the terminology of "adopted child pathology" and "adoption syndrome." He spoke of "traumatic vicissitudes" of adoption, which could cause pathology in the adoptee. However, these professionals, Lifton and Feder, have not done any specific diagnosis of PTSD so far, and they seem to restrict themselves more or less to the Type 1 trauma most probably caused by the separation from the mother.

### *Type 2 PTSD in Adopted Children*

Verhulst, Althaus, and Versluis-den Bieman (1992) described the relationship between emergence of behaviors consistent with the diagnostic category PTSD and traumatic experiences of children adopted from a foreign country (Type 2 trauma). They referred to this type of trauma as an explanation of adoptees' problem behaviors. These children might already have been attached to their parents or other caregivers and would experience separation as a traumatic event (Type 1). Moreover, they probably were party to other negative experiences. These relationships and explanations were, however, not empirically investigated. Without reference to PTSD, Wolters (1991) pointed to violence and sexual abuse of children adopted from foreign countries in particular and to long-term effects on their behavior. Brodzinsky, Schechter, and Henig (1992) discussed the case of a 13-year-old Indian girl adopted from El Salvador by an American couple. The girl often saw before her scenes from her war-ravaged youth. Federici (1998), an American neurologist and father of four adopted children, emphasized behavioral disturbances of adoptive children from an orphanage in Eastern Europe. Like Cline and Helding (1999), he referred to a "post-institutionalized syndrome" and concluded that children who had remained in an orphanage for 2 or 3 years would have the risk of developing PTSD. In his clinic, Federici treated many adopted children from Eastern Europe. He reported that children from postinstitutionalized settings have struggled through many traumatic events because of a dysfunctional or violent home and/or physical, sexual, and emotional abuse. "The outcome is often PTSD—children experience a constant state of fear, insecurity and feelings of abandonment" (Federici, 1998, p. 46). Federici's observations convinced him that diagnosis and treatment required highly specialized knowledge. The behavioral disorders of these postinstitutionalized children refer to several pervasive developmental disorders. Most often we first have to think of a differential diagnosis. Subsequently, we would like to emphasize the relevance of the diagnosis PTSD as a serious possibility.

Until now, empirical studies are lacking that examine whether the behavioral problems of children adopted from foreign countries are behaviors consistent with the diagnostic category PTSD. For that reason, it cannot be decided definitively whether the observed behaviors in the adoptive children can be fully diagnosed as PTSD. A complete diagnosis would require more information about the time the children had spent in Romania and in the adoptive family. Other diagnoses, such as reactive attachment disorder, separation anxiety disorder, generalized anxiety disorder, or anxiety disorder not otherwise specified could also apply. There certainly is overlap among these (behavioral) disorders. The reason why we prefer so far to think of diagnosing PTSD is based on the facts that all adoptees are separated from their mothers and there is a high chance of experiencing the aforementioned stressful events.

However, we should also warn against too quick conclusions. We only had the possibility to investigate the symptomatic behavior of the children through the judgment of their adoptive parents. Knowing more about the past of these children in Romania might have given us a better opportunity to differentiate between the causes of behavioral disorders: due to neglect, and as the consequence of being traumatized.

## Method

### *Study Aims*

Since 1990, children have come from Eastern Europe for adoption in the Netherlands. Our Romanian Study was designed as a follow-up study with two objectives: (a) to study the prevalence of those behavioral problems of Romanian adoptees in the Netherlands that could point to PTSD, and (b) to examine which psychosocial factors are related to these behavioral problems.

## Subjects

All 83 children from Romania who arrived in the Netherlands during the period from 1990 through the first quarter of 1997 were studied twice. The first time (1999), 74 of the 83 participated (86%; see Hoksbergen and the Romanian Adoption Research Team, 1999). The 74 composed a representative cross-section of the population of Romanian children who stayed in residential settings.

In 2000, two experienced researchers and a master's student conducted interviews with 72 parents who had adopted 80 Romanian children (83%). Parents gave full cooperation at both times of the study.

## Instruments

First, a trauma questionnaire was developed using (a) *DSM-IV* symptoms and (b) a perusal of the trauma literature of Federici (1998), Pynoos (1991), Sanders-Woudstra, Verhulst, and de Witte (1996), Wolters (1991, 1999), and Yule and Canterbury (1994). The questionnaire contained 35 items (Rijk, 2000). The answer categories (0 = *does not apply,* 1 = *applies sometimes/slightly,* and 2 = *clearly/often applies*) were borrowed from the Child Behavior Checklist (CBCL; Verhulst, 1996). Second, in 1998 an extensive interview with both parents took place. Third, Achenbach's (1991) CBCL was used to compare the results of the Romanian adoptees with results of a Dutch norm group (Verhulst, 1996) and with results of subjects in studies conducted abroad, in which parents of Romanian adoptees also completed the CBCL. The CBCL is used to assess child psychopathology and as a diagnostic tool in clinical and residential settings (Verhulst, 1996). This is a thoroughly investigated and standardized instrument in the Netherlands. The correlations between the American and Dutch syndrome scales vary between .80 and .98. The factor structures of the Dutch ($n$ = 2,033) and the American samples were similar. The reliability (test–retest) varied from good to satisfying, and the interjudge agreement was good. Validity research showed that it is not an impressionistic method, because 114 of the 118 problems items differed significantly between normal controls and subjects who were referred to an institution for professional help (Verhulst, Koot, Akkerhuis, & Veerman, 1990). This is not to say that the CBCL has no limitations. It cannot be used as a diagnostic instrument, and it is not appropriate to assess the child's strengths and ability to recover.

The scoring of the CBCL results in separate scores for Total Problems and for eight syndromes: withdrawal, physical complaints, fearfulness/depression, social problems, cognitive problems, problems with concentration, delinquent behavior, and aggressive behavior. These eight syndromes are organized in two dimensions: Internalizing, a combination of withdrawal, physical complaints, fearfulness/depression; and Externalizing, a combination of delinquent and aggressive behavior. The borderline score indicates the line between an individual functioning in the normal range and an individual functioning in the clinical range. Scores in the clinical range point to behavioral problems that usually require professional assistance. The CBCL was standardized for the Netherlands, using a random sample of 2,076 children (Verhulst, 1985). In this study, 47 items of the CBCL were selected to assess symptoms of PTSD in the subjects.

## Procedure

The interviews were taken with the parents at home, and parents were asked to fill out the trauma questionnaire and the CBCL. It took between 1.5 and 2 hr. The cooperation was excellent, because these parents were eager to tell about their adopted children.

# Results

## The Trauma Questionnaire

Principal-components analysis of the CBCL items and of the added questions about trauma showed a first component explaining 26% of the variance. Thirty-five of the total of 50 items had loadings greater than .40 on this component and resulted in a Cronbach's alpha of .93. The removal of no single item generated a higher alpha. These 35 items are referred to as the Trauma Questionnaire (see Appendix).

## Characteristics of the Families: Parents and Children

Seventy-two families and their 44 boys and 36 girls cooperated in this study. Twenty-three families were composed of two parents and one child. The remaining families consisted of two or more children. Of these parents, 29 (36%) had, in addition to at least one Romanian child, one or more biological child. It is known that about 80% to 85% of adoptive parents are infertile (Hoksbergen, 2000).

With the exception of one family, all parents lived in single-family dwellings, and one third lived in a detached residence. On arrival, the adoptive children were, on average, 2.10 years (2 years and 10 months). During the period of this study, they were, on average, 8 years, ranging from 4 to 15 years. The children had been in the adoptive family for over 5 years on the average. The ages of boys and girls did not differ.

## Behavioral Problems of Romanian Adoptees

Compared to the borderline score of the 90th percentile of the Verhulst (1985) sample, a significantly

Table 1
*Comparison of Percentages of Romanian Child Adoptees to the Dutch Norm Group on CBCL Scores in the Clinical Range*

| CBCL dimension | Romanian adoptees | | Dutch norm group: Boys ($n$ = 579) and girls ($n$ = 593) |
|---|---|---|---|
| | Boys ($n$ = 44) | Girls ($n$ = 36) | |
| Total Problems | 17 (39%)*** | 12 (33%)*** | 10% |
| Internalization | 8 (18%)*** | 5 (14%)*** | 10% |
| Externalization | 14 (32%)*** | 13 (36%)*** | 10% |

*Note.* The percentages of Romanian children who scored in the clinical range are compared to the Dutch norm percentage of 10% using the chi-square test. CBCL = Child Behavior Checklist.
*** $p < .001$, two-tailed.

larger part of the total group of Romanian adoptees scored in the clinical range of the CBCL (see Table 1).

These percentages are significantly higher than in groups of adoptees coming from more than 10 other countries (Verhulst & Versluis-den Bieman, 1989). In the group of children who were, on their arrival in the Netherlands, 2 years of age and older ($n$ = 1,085), 22% of the boys and 15% of the girls scored in the clinical range for Total Problems. These percentages also differed significantly from the norm group percentages. In our study, 39% of the boys and 33% of the girls scored in the clinical range. Moreover, our group was younger at the moment of placement in the adoptive family than the Verhulst and Versluis-den Bieman group: 2.10 years versus 4.2 years, respectively.

## *PTSD in Romanian Adoptees*

All 16 (20%) PTSD children scored in the clinical range. Of the remaining 64 (80%) children (hereafter referred to as the *others group*), 13 had scores in the clinical range. The relationship between the CBCL scores for Total Problems and the Trauma Questionnaire is depicted in Figure 1.

Figure 1 shows that up to the T-score of 65,[1] the trauma scores increased from 0 to approximately 20 (maximum 70). Above that point, the trauma score increased considerably. If a subject scored high on Total Problems, he or she also scored high on the trauma items. The overlap was, however, incomplete. In order to select children exhibiting behaviors consistent with the diagnostic category PTSD, a borderline score of 20 on the trauma items was chosen. Nine boys (20%) and 7 girls (20%) were involved. This group was named the PTSD group. In Table 2, the PTSD group is compared with the others group. With a maximum score of 70, the PTSD group reached a much higher average (30.5) than the others group (6.3, $p < .001$; see Table 2).

## *Psychosocial Factors*

The two groups did not differ in their family compositions. The average age on arrival in the Netherlands was 3.1 years in the PTSD group and 2.8 years in the others group. This difference was not significant. At the time of the study, the PTSD group had an average age of 7.8 years, and the others group had an average age of 8.1 years. At the moment of their arrival, the two groups did not differ in physical health. The PTSD group had been 9 months less in their adoptive family than the others group (*ns*). PTSD boys were about 1 year older than girls ($p < .05$).

## *Comparisons of PTSD Group With Others Group and the Two Norm Groups*

In order to investigate the relationship between PTSD symptoms and psychosocial factors, the PTSD group was compared with the others group and with the clinical and nonclinical norm groups (see Table 3).

Table 3 shows that boys and girls of the PTSD group differed significantly from those of the others group on almost all syndromes except physical complaints. In comparison to the clinical norm group, PTSD boys and girls showed more Total Problems; Externalizing dimension, social, thought,

[1]The T-scores of the CBCL are normalized standard scores, which facilitate comparison of the subscales.

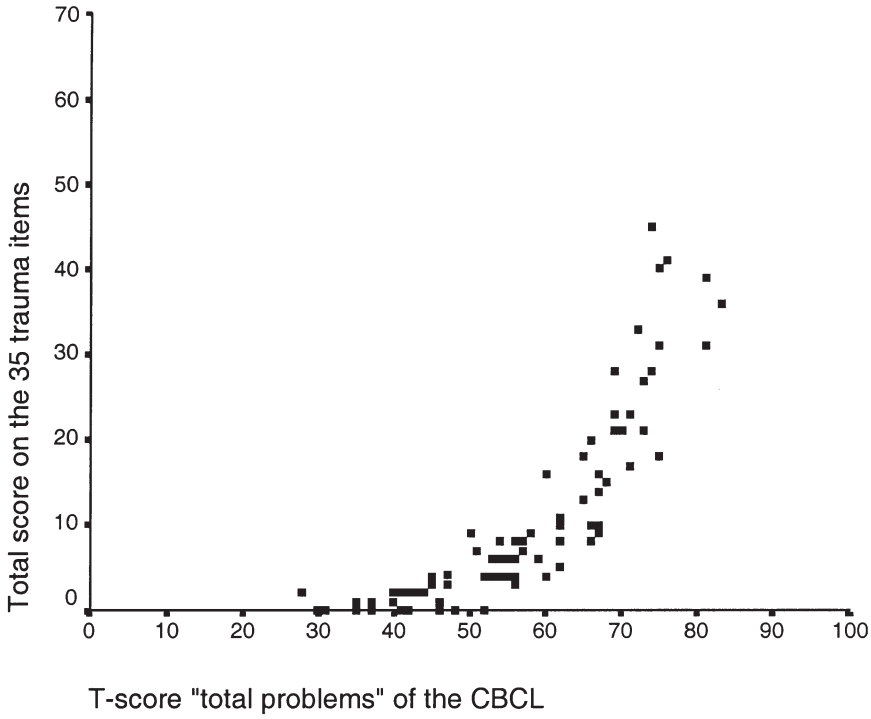


*Figure 1.* Shows how the T-score on Total Problems of the Child Behavior Checklist (CBCL) is related to the total score on the 35 Trauma Questionnaire items. The T-score on Total Problems ranges from 1 to 100; the total score on the Trauma Questionnaire items ranges from 0 to 70.

and attention problems; and aggressive behavior. PTSD girls showed fewer physical complaints than the clinical norm group, as did boys, but not significantly.

Table 2
*Numerical Comparison of the PTSD Group With the Other Romanian Adoptees on Total Score on the 35 Trauma Items*

| Total score | PTSD group ($n$ = 16) | Other Romanian adoptees ($n$ = 64) |
|---|---|---|
| 0–5 | 0 (0%) | 33 (52%) |
| 5–10 | 0 (0%) | 20 (31%) |
| 10–15 | 0 (0%) | 4 (6%) |
| 15–20 | 0 (0%) | 7 (11%) |
| 20–25 | 5 (31%) | 0 (0%) |
| 25–30 | 3 (19%) | 0 (0%) |
| 30–35 | 3 (19%) | 0 (0%) |
| 35–40 | 2 (12%) | 0 (0%) |
| 40–45 | 3 (19%) | 0 (0%) |
| Average score | 30.50 | 6.29 |

*Note.* Maximum score was 70. PTSD = posttraumatic stress disorder.

## *Comparison of the Remaining Group of 64 (80%) With the Two Norm Groups*

The others group (boys and girls) showed lower values than the clinical norm group on all syndromes. In comparison to the nonclinical norm group, boys from the others group had lower scores on the withdrawn syndrome. On Total Problems, cognitive problems, excessive attention-seeking, and aggressive behavior, their scores were higher. Girls exhibited lower values on the Internalizing dimension, withdrawn, and physical complaints but higher values on social problems and excessive attention-seeking.

## *Comparisons at Item Level of the Trauma Instrument*

With a high score defined as a value of, on average, greater than 0.50 on the 0–2 scale, the results for the various items are as follows: “High pain threshold” (boys = 0.70; girls = 0.61); “Stubborn, sullen or irritable” (boys = 0.61; girls = 0.67); “Cannot get certain thoughts out of his/her head, obsessions”

Table 3
*Comparison of the PTSD Group, Other Romanian Child Adoptees, the Clinical Group, and the Dutch Norm Group on CBCL Scales for Boys and Girls Separately*

| | PTSD | | Others | | Clinical | | Dutch norm group | |
|---|---|---|---|---|---|---|---|---|
| CBCL scale | Boys ($n$ = 9) | Girls ($n$ = 7) | Boys ($n$ = 35) | Girls ($n$ = 29) | Boys ($n$ = 944) | Girls ($n$ = 478) | Boys ($n$ = 579) | Girls ($n$ = 593) |
| Total problems | 75.9 | 68.9 | 28.1*** | 23.6*** | 53.2** | 48.2** | 21.3* | 19.2 |
| Internalization | 13.7 | 13.4 | 4.1*** | 3.5*** | 13.2 | 14.3 | 4.5 | 5.2 |
| Externalization | 26.4 | 22.9 | 10.8*** | 8.7*** | 19.8* | 15.0* | 8.3 | 6.0 |
| Withdrawn | 5.0 | 6.1 | 1.1*** | 1.1*** | 4.9 | 5.1 | 1.6 | 1.8 |
| Physical complaints | 1.4 | 0.9 | 0.9 | 0.5 | 1.8 | 2.5 | 0.7 | 1.0 |
| Fearful/depressed | 7.4 | 7.0 | 2.2*** | 1.9*** | 7.0 | 7.3 | 2.2 | 2.5 |
| Social problems | 8.4 | 6.1 | 2.2*** | 2.4*** | 4.8** | 4.2* | 1.3 | 1.2** |
| Cognitive problems | 5.3 | 6.0 | 1.0** | 0.7*** | 1.6** | 1.6** | 0.4* | 0.5 |
| Excessive attention-seeking behaviors | 14.0 | 12.3 | 5.6*** | 5.3*** | 8.7* | 7.2** | 3.2*** | 2.5*** |
| Delinquent behavior | 4.7 | 2.7 | 1.3*** | 1.3* | 3.5 | 2.5 | 1.3 | 0.9 |
| Aggressive behavior | 21.8 | 20.1 | 9.5*** | 7.4*** | 16.3* | 12.5* | 7.0* | 5.1 |

*Note.* The PTSD group has been compared with the other Romanian adoptees and the clinical norm group. The differences between the PTSD group and Dutch norm group are significant on all dimensions, except physical complaints. The others group has been compared to the Dutch norm group. PTSD = posttraumatic stress disorder; CBCL = Child Behavior Checklist.
*$p < .05$. **$p < .01$. ***$p < .001$, two-tailed.

(boys = 0.61; girls = 0.56); "Clings to adults or is too dependent" (boys = 0.61; girls = 0.53); "Fears certain animals, situations or places" (boys = 0.68; girls = 0.44); "Has angry outbursts or is easily angered" (boys = 0.56; girls = 0.59); "Is nervous or tense" (boys = 0.58; girls = 0.47); and "Has few friends" (boys = 0.57; girls = 0.42).

A difference of at least 1.0 (with maximum of 2.0; minimum of 0) between the PTSD group and the others group was found on the following items: "Strange or bizarre behavior," "Cannot get certain thoughts out of his/her head, obsessions," "Has few friends," "Destroys his/her own property," "Has little interest in extra-curricular activities," and "Clings to adults or is too dependent."

### *Comparison With Peers*

Parents were asked to compare the development of their adopted child with his or her peers at three times: first, at the moment of arrival of the child (average age: 2.10); second, at the moment of the first interview (6.8 years); and third, at the moment of the second interview (8.0 years). Information was collected about six aspects: general, physical, motor, language, emotional development, and interactions with peers. According to the parents, at none of the three times was there any significant difference in physical development between the PTSD group and the others group. On arrival of the child in the family, there was a significant difference between the PTSD group and the others group in language development and interaction with other children. Both groups differed significantly at the second and third measurement occasion on all other developmental aspects ($p < .000$).

## Summary and Discussion

Both the boys and the girls in the group of 80 Romanian adoptees more often showed scores in the clinical range of the CBCL than did the children in the norm group (Total Problems: boys = 39%, and girls = 33%). Normally, these families need some sort of professional care. Results in the study of Verhulst and Versluis-den Bieman (1989) suggested that almost all adoptive families of children who had spent some time in an orphanage should be offered professional assistance. The differences were most striking in Externalization; on this dimension even more girls than boys scored in the clinical range (Table 1).

According to the Trauma Questionnaire, two groups of children were conspicuous. Nine boys (20%) and 7 girls (20%; $M$ = 30.5) differed significantly from the remaining children ($M$ = 6.3). The group of 16 (20%) children clearly exhibited behavior consistent with the diagnostic category PTSD. At the item level we discovered significant differences

between the PTSD group and the others group on items that seemed to be consistent with the diagnostic criteria "Avoidance and numbing," "Has little interest in extra-curricular activities," "Has few friends," and "Clings to adults, or is too dependent." The "Strange or bizarre behavior," "Cannot get certain thoughts out of his/her head, obsessions" and "Fears certain animals, situations and places" might be partly consistent with the criterion "Reexperiencing of the trauma." The "Arousal" we hypothesize to be in the large difference between the PTSD group and the others group on the items "Outburst of anger" and "Extremely alert." Further investigation and a more thorough diagnosis should be done to support our hypothesis.

The two groups did not differ with respect to gender, age, and health on arrival, physical development, family composition, and length of time staying in the Netherlands. This rendered the major difference on the Trauma Questionnaire even more noteworthy, because it could not be attributed to these background variables. However, much further assessment would be necessary for the complete diagnosis of PTSD. It has also to be taken into account that in foreign adoptees, data from an anamnesis could be unreliable and sometimes not available.

The PTSD group scored significantly higher on all CBCL syndromes (except physical complaints) than both the others group and the Dutch norm group. Compared to the clinical norm group, the differences were in the same direction but not significant on internalization and delinquent behavior. This suggests survival behavior of the adoptees. Acting out, excessive attention-seeking, and indiscriminate friendliness to strangers are responses that give institutionalized children a better chance of receiving attention from adults and, hence, a better chance of surviving than shy and withdrawn reactions to neglect and abuse. This was supported by the fact that the others group scored significantly lower on Internalization than the clinical norm group and somewhat lower than the general norm group as well.

Behavioral problems were present, as evidenced by the high scores of boys on Total Problems, and excessive attention-seeking and aggressive behavior of girls. There was no difference from the norm group on social problems with both the boys and the girls, and the differences on cognitive problems and delinquent behavior were negligible. The children in the others group were 2.8 years at arrival, and all had been hospitalized for the greater part of the initial period of their lives. Social problems, including a disturbed relationship with peers, have long been known to be a consequence of hospitalization (see, e.g., Federici, 1998; Zeahnah, 2000).

The introduction of the concept of survivor syndrome to the revised *DSM-IV* could be relevant for foreign adoptees. These children seemed to be "survivors," as evidenced from their scores on physical complaints. Both of the groups of Romanian children had lower values than the two Dutch norm groups; with the girls from the others group scoring significantly lower even than the nonclinical group. The PTSD group did not differ from the others group on physical development. The PTSD group, mainly children who had been in their families for, on average, approximately 5 years, showed much more negative scores on the remaining developmental aspects than did the others group. Apparently, PTSD interfered in the development of young children.

Neglect also appeared to have neurophysiological consequences. The total group of adopted children scored highest on the item "Has a high pain threshold." The relationship between PTSD and a relatively low sensitivity to pain was also found in American Vietnam veterans. In experiments in which neutral video images were alternated with realistic combat scenes, a significant reduction in sensitivity to pain was found among veterans with PTSD. An increase in pain sensitivity was confirmed among veterans without PTSD (op den Velde & Van der Kolk, 2000). Research involving both adults (war veterans) and children (Romanian child adoptees) suggests that traumatic experiences could have neurological consequences.

## Concluding Remarks and Recommendations

Behavioral problems consistent with the diagnostic category PTSD were noted frequently among the Romanian children adopted in the Netherlands. These were isolated behavioral problems and bore no relationship to psychosocial factors such as gender, age, family composition, and length of time staying in the Netherlands. On the item level of the trauma instrument, the major differences between the PTSD group and the others group were "Strange, bizarre behavior," "Cannot get certain thoughts out of his/her head," "Few friends," "Little interest in extra-curricular activities," "Angry outbursts," and "Nervous, tense."

Adoptees were at risk of both Type 1 and Type 2 traumas. The effects of Type 1 trauma had been studied extensively in many groups of children and adults. Thus far, little is known about the relationship between Type 2 trauma and the occurrence of PTSD.

Remedial educationalist and researcher Lamers-Winkelman (2000) concluded that neglect "is the most ignored form of child abuse, from both the academic and the therapeutic point of view. Nevertheless it is becoming increasingly clear that neglect can have serious consequences for the development of children" (p. 376).

Without assistance or intervention, an adult with a history of neglect may not be able to break the cycle of continuing abuse of his or her own children or partner (Hunter & Kilstrom, 1979). There were also protective factors present, of which the adoptive family is one example. The presence of an emotionally supportive adoptive/foster parent or family member had been conducive in giving mothers who had been psychologically impaired in their youth by abuse the opportunity to break the cycle of violence with respect to their own children. Adoptive parents will often serve as the "guardian angels" (Lamers-Winkelman, 2000).

With regard to the others group, positive remarks can be made, even though these individuals showed high scores on Total Problems (boys), social problems (girls), and excessive attention-seeking behaviors (boys and girls). Notwithstanding their history of neglect, they scored not much higher on some other dimensions of the CBCL. They scored even a bit lower on Internalizing. Perhaps we can conclude that a large number of these Romanian adoptees have a strong capacity to recover.

More research with foreign adoptees in other countries will establish a better picture of the behavioral problems, the resultant stress on adoptive families, and the capacity of these foreign adoptees to recuperate. This would allow us to test whether there is only a relatively small group of foreign adoptees with serious behavioral problems, perhaps PTSD, at the moment of placement and later on, that negatively influence total scores on the CBCL and so the negative picture of large groups of foreign adoptees. A small number of children (the PTSD group) have a markedly negative effect on the average CBCL scores. Among the Romanian adoptees, the very high CBCL scores of 20% of the adoptees heavily influenced the results of the total group of Romanian adoptees.

To confirm this hypothesis it would be necessary to see that all foreign adopted children are tested at the moment of placement in the adoptive family. Then adoptive parents should receive appropriate services after children are placed in their homes. After some time, probably 3 to 5 years, the adoptees should be tested again. In addition, more information about the circumstances in Romanian orphanages would be necessary, because we have to reconstruct the past of the adoptees. Only general information of the living conditions of the adoptees was available. Nevertheless, it seemed plausible that the high incidence of problem behavior consistent with PTSD was related to these circumstances of social and physical neglect and abuse. We should also mention the policy of moving all children to another children's home when they are 3 years of age.

Specialized assistance seems required immediately after placement of the adoptive child in the family and later on. However, this assistance is not provided to the parents. It is undesirable that seriously damaged toddlers and young children be placed with adoptive families with virtually no guidance and support.

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## Appendix

### Trauma Questionnaire

| Item |
|---|
| We used the following CBCL items: 9, 11, 12, 16, 18, 20, 21, 25, 26, 29, 33, 35, 42, 45, 50, 57, 69, 70, 80, 84, 86, 95, 103, and 111, and the following Trauma Questionnaire items: |
| While playing the child repeats a significant recollection of an event in Romania again and again that apparently made an important impression on him/her. |
| Is fearful of women. |
| Is fearful of not being allowed to remain in the family. |
| Refuses to talk about adoption. |
| Exhibits little interest in extracurricular activities such as playing with other children, sports and hobbies. |
| High pain threshold. |
| Is extremely alert/watchful. |
| Has few friends. |
| Does not want to go to school/hates school. |
| Has recurrent memories/flashbacks. |
| Has memory problems. |

*Note.* CBCL = Child Behavior Checklist.

Received December 27, 2001
Revision received April 1, 2002
Accepted December 2, 2002 ■