Assessing the psychological distress and mental healthcare needs of unaccompanied refugee minors in the Netherlands
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Chapter 10

Adaptation and Psychological Distress Among

Unaccompanied Refugee Minors

Abstract

The objective of this study is twofold; first to examine to what extent the level of psychological distress of recently immigrated adolescent Unaccompanied Refugee Minors (URM) ($n = 582$) influences their adaptation and attitudes in their host country and second to investigate the way in which comorbidity of severe internalizing distress and externalizing behavioral problems with traumatic stress reactions affects their adaptation. The results of the present investigation indicate that in spite of overwhelming adversity and high levels of psychological distress, the majority of adolescent URM are working on age appropriate developmental tasks such as planning their futures and receiving an education. However, 56.6% of the URM (at baseline and/or 12-months follow-up) were classified as fulfilling the diagnostic criteria for a diagnosis of post-traumatic stress disorder of which more than half also reported elevated levels of externalizing maladaptive behaviors and/or internalizing distress. Moreover, especially comorbid psychopathology appears to be negatively associated with adaptation and attitudes of URM living in the Netherlands. The discussion calls attention to the possible adverse effects of trauma exposure and psychological distress on the development and adaptation of URM.

Introduction

Biological, psychological, and social systems undergo vast changes during adolescence (Spear, 2000). During this period, wherein the possibility for internal and external conflict is quite high (Cicchetti & Rogosch, 2002), a developmental psychopathology perspective

becomes a constructive framework for clinicians and researchers. This framework has also been found to be able to incorporate the complex interplay of biological, psychological, and social factors in the development of traumatic stress reactions among children and adolescents (Lester, Wong, & Hendren, 2003; Pynoos, Steinberg, & Piacentini, 1999).

It is well established that experiencing undesirable life events is a risk factor for mental health (e.g., Cuffe, McKeown, Addy, & Garrison, 2005; Macksoud & Aber, 1996; Tiet et al., 1998). Experiencing one or more adverse life event (s) such as a catastrophic disaster (Green, 1991; Udwin, Boyle, Yule, Bolton & O'Ryan, 2000), war or political unrest (Rothe et al., 2002; Sack et al, 1993), physical/sexual maltreatment (Briggs & Joyce, 1997; DeBellis et al., 1999; Roth, Newman, Pelcovitz, van der Kolk, & Mandel, 1997) or a combination of daily stressors, relational and financial problems (Chan, 1998; Elgar, Arlett & Groves, 2003; Kendler, Karkowski, & Prescott , 1999) can lead to severe psychological distress. In addition to experiencing adverse life events, refugee adolescents that immigrate to host countries must also adapt their former lifestyle and culture to their new surroundings. The adaptation process to a new culture has been shown to take many years and to be very stressful (i.e., Vinokurov, Trickett, & Birman, 2002; Sonderegger & Barrett, 2004) which may disturb the already frail emotional stability of new immigrant refugee adolescents (Nwadiora & McAdoo, 1996).

Unaccompanied refugee minors (URM) must above all the other misfortune in their lives, endure separation (and/or loss) from parents and extended family that could have provided them with support and care in such difficult circumstances. Without the positive support of adults (which has been repeatedly found to be one of the most fundamental protective factors for mental health of children and adolescents) (e.g., Cuffe et al., 2005; Luthar, 2003; Masten, Best, & Garmezy, 1990; Macksoud & Aber, 1996; Miller, 1996), URM are per definition at a high risk for the development of emotional psychopathology and poor adjustment.

High levels of traumatic stress reactions and/or internalizing distress have been found in previous studies among refugee adolescents (e.g., Kuterovac, Dyregrov, & Stuvland, 1994; Relamuto et al., 1992; Smith, Perrin, Yule, Hacam & Stuvland, 2002; Thabet & Vostanis, 1999), URM (Felsman, Leong, Johnson, 1990; Masser, 1992; Sournader, 1998) or studies assessing the psychological distress among (western) youth living in foster care (Hukkanen, Sournader, Bergroth, & Piha, 1999; McMillen et al, 2005; Shore, Sim, Prohn & Keller, 2002). The studies reported above, all found that a high degree of traumatization was strongly associated with high levels of psychological distress reported in their samples. Furthermore, the degree of psychological adaptation of refugee adolescents appears to be negatively associated with high levels of (traumatic) stress reactions (Halcon et al., 2004; Goodman, 2004; Vizek-Vidovic, Kuterovac-Jagodic, & Arambasic, 2000). Elevated levels of (traumatic) stress reactions among all of these groups differ to a great extent from the low levels (3%-6.3%) reported among normative populations (Cuffe et al., 1998; Giacona et al., 1995).

In addition, externalizing problems have also been found to be associated with the expression of traumatic stress among western adolescent (Deykin & Buka, 1997; Famularo, Fenton, Augustyn, & Zuckerman, 1996; Wozniak et al., 1999). Behavioral problems before the age of 15 have been found to predict the development of PTSD among Vietnam veterans (Heltzer, Lee, Robbins, & McEnvoy, 1987). The literature concerning conduct problems of refugee adolescents is very limited (Raboteg-Saric, Zuzul, & Kerestes, 1994). Allwood, Bell-Dolan, and Husain (2002) found a strong association between the witnessing of organized violence and exhibiting aggressive behavior. Jensen and Shaw (1993) suggest that adolescents who have witnessed or taken part in a war are more likely to show delinquent or anti-social behavior. This opinion is however, not supported by the results of the few empirical studies concerning this topic. Four studies evaluated the delinquent and aggressive behaviors exhibited by refugee adolescents and found no evidence of excessive behavioral problems in this population group (Raboteg-Saric et al., 1994; Mollica et al., 1997; Rousseau, Drapeau, & Corin, 1998; Sourander, 1998).

The traditional higher-order latent structure of internalizing (inhibition or over controlling of emotions) and externalizing (impulsivity or under controlling of emotions) disorders has for many years been useful in ordering how professionals in developmental psychopathology have viewed emotional distress and maladaptive behaviors of adolescents (e.g., Achenbach & Edelbrock, 1984; Southam-Gerow & Kendall, 2002; Rammstedt, Rieman, Agleitner & Borkenau, 2004). There is also recent evidence that these dimensions of

psychopathology endure through time (Rogosch & Cicchetti, 2004; Visser, van der Ende, Koot, & Verhulst, 1999). In recent years, Krueger and colleagues (2001) have also (factor-analytically) confirmed the usefulness of the dichotomy in explaining the covariance among adult mental health and personality disorders. Moreover, Miller and colleagues (2003, 2004) have proceeded to put forward an internalizing/externalizing model to explain the reactions of traumatic stress among adult combat veterans. In the model of Miller et al. traumatic stress reactions (i.e., posttraumatic stress disorder) can be expressed two –dimensionally, either as externalizing behavior (i.e., substance related disorders and/or antisocial personality disorder) or as internalizing distress (i.e.,unipolar mood and anxiety disorders), depending upon the combination of the personality dimensions - negative and positive affectivity and constraint. It is important to note that although Miller et al. do not indicate that there is comorbidity between the internalizing and externalizing expression of traumatic stress, this relationship has been repeatedly documented among adolescents (e.g., DeBellis et al., 1999, Saigh Yasik, Oberfield, Halamandaris, & McHugh, 2002). Nonetheless, a broadband (Axis I) internalizing/externalizing model would seem to provide an adequate construct in which the expression of traumatic stress reactions and/or (comorbid) psychopathology could be understood among adolescents.

At-risk adolescents (such as URM) for the development of psychological distress seem to have difficulty with emotional regulation and psychosocial adaptation (Rogosch & Ciccheti, 2004; Southam-Gerow & Kendall, 2002). Consequently, before the emergence of a (diagnosed) psychological disorder, there are usually indications of adaptational compromises or failures of adolescents due to inadequate skills in managing the high demands that are made on not-fully developed extrinsic and intrinsic processes. Several authors have explained that if children and adolescents have an insufficient ability to regulate (i.e., cope with or adapt) their emotions, the development of psychological symptoms is very likely (i.e., Ciarrochi, Scott, Deane, & Heaven, 2003). However, others have found the reverse to be true, that high levels of psychopathology also can lead to the inability to adequately adapt and incompetence in the regulation of emotions (Galaif, Sussman, Chou, & Willis, 2003; Seiffge-Krenke, 2000).

A secure attachment relationship with parents is an important condition for the development of the capacity to internalize objects of attachment which in turn is a necessary prerequisite for the capacity to regulate emotions and affect. Empathetic parental reactions to and containment of child emotions, parent-child discussion of emotion, and parental expression of modulated emotions have been proposed by Eisenberg and colleagues (1998) as three ways in which parents teach their children emotional regulatory techniques. Due to the fact that URM have been separated from their parental caregivers (sometimes for long periods), they do not receive parental assistance in regulating their emotions and the high levels of anxiety and stress that they experience due to the adverse life events that they have been subjected to in their country of origin, their flight to refuge, or the problems they have to face in the host country. A lack of social support (important social supporting relationships) in working through traumatic experiences has time after time been found to be a crucial risk factor of mental health (e.g., Brewin, Andrews, & Valentine, 2000).

Social and emotional competence (effective emotional management, accurate expression of emotion, emotional awareness, and (social) problem solving skills) (Ciarrochi, Scott, Deane, & Heaven, 2003) have been found to be associated with resilience and mental health in adolescents (Masten et al., 2004). URM would seem to be at a great disadvantage in learning diverse positive emotion regulation strategies that would lead to adequate management of intense emotions, recognition of emotional distress, building trusting, supporting social networks, and competent adaptation to their surroundings (becoming social and emotional competent). This disadvantage is further enlarged due to receiving limited adult supervision/care in large-scale reception centers in host countries such as in the Netherlands.

The first objective of this study was to report on the adaptation and attitudes of URM to their current life residing in the Netherlands and how internalizing distress, externalizing behavior and traumatic stress reactions are expressed in liaison with their adaptation and attitudes. Furthermore, the adaptation of URM is examined to see if it has been compromised due to high comorbid severity levels of internalizing distress and/or externalizing behavior with traumatic stress reactions. To be able to make this examination, it was necessary to first

construct the comorbidity groups through statistically differentiating URM which reported comorbidity of traumatic stress reactions with each of the individual subtypes of broadband psychopathology, internalizing distress and externalizing behavior, as well as the simultaneous presence or absence of both psychopathology subtypes. In addition, possible socio-demographic differences between the URM target groups were considered and analyzed.

Method

Sample

Approximately 4,000 URM were randomly selected from the total population of 12,000 recorded by the Central Registrar of Nidos in 2002. Information about the study and permission waivers (available in translated versions) were sent to the guardians to discuss with the URM. Both the minor and his/her guardian gave written permission for the URM to participate. Prior to the conduction of the project, crisis intervention mental health care was arranged at facilities throughout the Netherlands in the case that an URM would experience severe emotional distress because of filling in the questionnaires. Fortunately, it was not necessary to use this mental health care network. Roughly 2,300 URM permission waivers were returned; 1300 (57%) wished to participate, 15% refused, 12% did not participate for a wide range of practical reasons, 9% were transferred, and 7% turned out to be untraceable. A total of 920 URM participated in the first assessment of the study. The final sample was representative in all of the main characteristics (age, gender, country of origin and type of residential setting) of the total URM population aged 12 to 18 year old in 2002 in the Netherlands. The second assessment wave took place approximately 12 months after the first assessment. From the 920 URM that participated in the first assessment (TI) 9.2% of the URM were listed in the Nidos Registrar as "missing – residence unknown". 16.5% of the 920 URM did not want to take part in the second assessment period. 9.7% of the URM did not respond to the 3 invitations that were given to them (through the post or telephone) by the researchers and guardians to take part in the study for a second time (1.6% of the URM did not take part for a range of practical reasons). Finally, 582 (63%) of the URM took part in the second assessment. In this study, only information from the 582 URM that took part in both the first and the second assessment will be analyzed.

Procedures

Ethical approval to conduct the study was given by the Medical Ethics Committee of the Leiden University Medical Center, Leiden University. There is one foundation that has the legal guardianship of all of the unaccompanied minors that reside in the Netherlands, the Nidos Foundation. This foundation has offices throughout the entire country and has almost 20 years of experience in working with unaccompanied minors. Two information packages (one for guardian and one for teacher) were sent to the supervisors of each regional office for each guardian that was responsible for one of the 920 unaccompanied minors that took part in the study. The actual testing of URM usually took place in small groups at school (10-25 young people) during school time. The URM were assessed at schools, if possible. Approximately 20% of the URM were not tested at schools. Because many URM did not attend schools or were frequently absent, URM were also assessed (in groups of 10) at the regional offices of Nidos, reception centers for refugees and residential settings. During the second assessment it was sometimes necessary to make appointments individually with the URM because of frequent transfers to other locations and wide distribution in the Netherlands. Demographic information on the URM in the Netherlands was supplied by the Nidos Foundation. In addition to the questionnaires, an interview regarding mental healthcare was individually administered. Three research assistants administered the questionnaires during one hour among a group of ± 10 URM. Refreshments (T1) and a gift certificate for the cinema (T2, worth 7.50 euro) were given to the URM during or after the administration of the instruments as a token of appreciation for their participation.

Questionnaires

The HSCL-37A, SLE, RATS and A&A questionnaires (see below) were translated into the 19 prevalent languages of URM in the Netherlands. The careful translation process and

modification of the instruments for multicultural adolescents has been described elsewhere (Bean, Derluyn, Eurelings-Bontekoe, Broekaert, & Spinhoven, in press).

The *Hopkins Symptom Checklist-37 for Adolescents* (HSCL-37A) (Bean, Derluyn, Eurelings-Bontekoe, Spinhoven, 2004a) measures internalizing distress (anxiety and depression symptoms) and externalizing behavior (trauma-related "acting-out"). The psychometric properties have been investigated among a culturally diverse adolescent population and appeared to be satisfactory to good (Bean et al., 2004a). Internal reliability for the URM sample for the total scale, internalizing distress and externalizing behavior subscales was respectively .91, .92, and .69. Twelve-month test-retest reliability for the total scale was .63 (p <.001). Mean internalizing and/or externalizing scores falling on or above the 80th percentile of URM population were classified as being "severe"(Bean et al., 2004a).

The *Stressful Life Events* (SLE) checklist was used to assess the number and type of stressful event(s) that was experienced. The SLE consists of 12 dichotomous (yes/no) questions and an open question on the occurrence of stressful life events of relevance for adolescent refugee minors (e.g., "Have you ever experienced a war or an armed military conflict going on around you in your country of birth?" or "Has someone ever hit, kicked, shot at or some other way tried to physically hurt you?"). Experiencing a traumatic event is the first criterion of cluster A1 of the DSM-IV for PTSD (American Psychiatric Association, 1994). The overall average total score of 6.5 of the SLE for URM has been replicated in 5 independent studies (Bean, et al., 2004b).

The *Reactions of Adolescents to Traumatic Stress* (RATS) is a self-report questionnaire developed to assess 22 posttraumatic stress reactions defined in the DSM-IV (APA, 1994) with culturally diverse adolescents. The psychometric properties have been thoroughly investigated among culturally diverse adolescent populations and per language version of the RATS and appear to be satisfactory to good (Bean et al., 2004c). Internal reliability for the URM sample for the total scale, and intrusion, numbing/avoidance and hyper-arousal subscales was respectively .88, .85, .69, and .73 Twelve-month test-retest reliability for the total scale was .61 (p <.001). The combined use of the SLE and the RATS makes it possible to classify a probable PTSD diagnosis based on the A1, B, C and D criteria of the DSM-IV. One needs to have experienced at least one stressful life event (A1; SLE), one intrusion item, three avoidance/numbing items and two hyper-arousal items (RATS; B, C, and D) to meet the criteria requirements. An item qualifies for scoring (receives a 1) if it has been scored as "much" or "very much". If the item is scored as "not" or "little", the item receives a "0". A total sum score of 7 (at least 1 stressful life event (T1 and/or T2; only 12 cases reported having experienced at least one stressful life events at one assessment period and not both), 1 intrusion item, 3 avoidance/numbing items, 2 hyperarousal items) is the minimal score needed for a possible classification of PTSD.

The Adaptation and Attitude questionnaire (A &A) was only administered at the second assessment. This questionnaire was utilized to explore how URM were adapting to life (their adjustment to the current situation in the Netherlands) and to assess their attitudes about their current living situation. The questionnaire has 23 items in total: 2 open questions and 21 with answer possibilities (literal and visual using colored circles) of yes (1), sometimes (2) , no (0), and uncertain (3). The first 19 questions can be found in Table 1. Questions 20 and 21 are discussed in the text. Open question 22 asks the URM what her/his three most important wishes are (only Wish 1 was answered by 90% of the URM) and question 23 asks how the URM pictures his/her life in 10 years.
In order to investigate whether it would be possible to analyze the A & A questionnaire in a more comprehensive way without losing too much information, explorative factor-analyses were performed. A factor-model analysis was performed using the Diagonally Weighted Least Squares estimation method on the polychoric correlation matrices and the asymptotic covariance matrices with the LISREL 8.71 program for structural equation modelling (Jöreskog & Sörbom, 1996). Three items were a priori excluded from the analyses because the content of the questions was not an attitude (question 20, 21) or could not be affected by an attitude (question 15- URM are in principal not allowed to work when seeking

asylum). Question 6 was also excluded during the analysis because it behaved erratically in the model. The other questions between 1-19 were entered as binary variables (1= yes). Due to the content of questions 3 and 5, these questions were scored reversely.

Wish 1 for the A & A scale was coded "1" for either professional/future or altruistic oriented wishes. Question 23 was coded "1" if an URM had answered with mentioning a positive future or indicating that he did not know but relied on God. A one-factor model did not fit the data well. Therefore, it was necessary to refine the model into three factors (general adaptation, security, and work attitudes) which were theoretically based. The model, after refinement (no errors were allowed to freely correlate) fits the observed data (A & A three-factor model, Santorra-Bentler-χ^2(149) = 420; AGFI = .94; PNFI = .82; CFI = .96; RMSEA = .06). The internal consistency (Kuder-Richardson 20) was respectively for the total, general adaptation, security, and work attitudes scales of the A&A scale; .70, .48, .68, and .61. Because the general adaptation subscale had unacceptable low reliability this scale will not be further used in the analyses.

The total A&A score (minimum 0- maximum 19) can be calculated by counting if the adolescent reported "yes" on questions 1, 2, 4, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, "not yes" on questions 3 and 5, reported with respect to wish 1 a wish pertaining to future professional goals or altruism, and thought that his/her life would be better in 10 years. Using the same scoring method describe above, the security (questions 8, 9, 10, 11, and 12), and work attitudes (questions 14, 16, 17, 18, and 19) subscales can be scored.

Statistical Analysis

Descriptive statistics were used to give endorsement percentages of the answers of URM on the A & A questionnaire (Table 1 and 2). First the individual items on the A &A questionnaire were investigated and then the scales. T-tests for independent samples were used to investigate differences with respect to the severity of T2 self-reported internalizing, externalizing problems, and traumatic stress reactions between URM who endorsed "yes" or "not yes". The magnitude of the significant differences was presented in effect sizes (*d*) (Cohen, 1988). The target groups were constructed using the Chi statistic (prevalence and confidence intervals reported) and the ratio that represents the factor by which comorbidity exceeds chance expectations was calculated by taking the observed prevalence and dividing it by the expected prevalence. After classifying URM into target groups one way AN(C)OVA's or chi-square analyses were used to compare the groups with respect to age, gender, total number of reported stressful life events and A & A (sub)scales mean scores. Post hoc comparisons were calculated pairwise using the Least Significant Differences (LSD) test. A maximum of ten percent of missing items was allowed to still be able to extrapolate the total or subscale scores. The Statistical Package for the Social Sciences (SPSS) version 12.0 was applied for the data analyses.

Results

Descriptives of the URM Sample

The URM in the T2 sample came from more than 43 different countries. 43.3% of the URM came from Angola. The remaining URM came predominantly from China (9.5%), Guinea (7.6%), Sierre Leone (8.6%), and Eritrea/Ethiopia (2.8%). The mean age of the follow-up sample at T2 was 16.5 (SD 1.5, range 10-21). 72.9% of the sample was male. 37.9% of the sample at T2 had followed more than 5 years of formal education and 29.9% had another family member living somewhere in the Netherlands. 30.5% had been transferred (at least 1 time) to another regional office sometime in the year proceeding T2. Furthermore, the majority of the follow-up sample lived independently (29.7%), in small living units (35.6%) and 19% lived in large scale reception centers. 40.9% of the sample had received a temporary residential status until their 18th birthday. Approximately 56% of the URM reported wanting to receive mental healthcare (emotional help) for the psychological distress and/or maladaptive behaviors that they had reported. Finally, the mean for the total number of experienced stressful life events reported by URM at T1 and T2 was 6.2 (SD 2.5) which is twice as high as the mean of 3.0 reported by a Dutch reference group (Bean et al., 2004b).

Adaptation and Attitudes

In Table 1, the endorsement percentages are reported for each of the first 19 closed questions. For the question 20 "I would leave my country again if I knew that I would end up in the same situation" 53% reported yes, 12.2% answered no, 29.9% answered uncertain and 4.8% answered sometimes. URM answered with more uncertainty about question 21 "I would come to the Netherlands again if I knew that I would end up in the same situation", 42.4% reported yes, 9.0% answered no, 42.0% answered uncertain and 6.6% answered sometimes. Perhaps the most striking finding from Table 1 is that 69% of the URM do not wish to return to their country of origin while 65% of the URM reported being afraid of having to return to their country of origin. In addition, only 48% of the URM felt safe when they go outside.

Table 1.

Endorsement percentages for the Adaptation & Attitude questionnaire

n = 550	Percent Endorsed			
	No	Yes	Sometimes	Uncertain
1. I want to learn to speak Dutch.	0.5	95.6	3.7	0.2
2. I like living in the NL.	1.3	74.5	21.1	3.2
3. I think that living in the NL is difficult.	27.3	17.8	48.7	6.2
4. I want to live in the NL.	6.5	79.0	5.9	8.6
5. I want to go back to my own country.	69.2	4.5	11.8	14.5
6. I want to move to a different country. Which one?_____	73.1	7.7	5.1	14.1
7. I think that I will be able to stay in the NL.	2.7	47.3	15.5	34.5
8. I am afraid that I will be sent back to my own country.	11.0	65.3	16.5	7.2
9. I feel safe where I am living (house, reception center, etc.).	7.7	72.2	17.6	2.3
10. I feel safe at school.	6.1	77.6	14.8	1.4
11. I feel safe when I am walking around outside.	15.1	48.0	32.0	4.9
12. I am satisfied with the way AMA's are cared for in the NL	9.5	61.6	23.8	5.0
13. I am satisfied with the way I am cared for in the NL	6.6	68.8	21.0	3.6
14. I want to work in the NL.	1.2	83.4	7.7	7.7
15. I already have a job in the NL.	87.7	6.1	2.7	3.4
16. I am learning a trade/going to school in the NL.	8.5	87.5	2.7	1.3
17. I want to get an education. Which education?:_____	2.4	90.9	2.0	4.6
18. I want to learn a trade. Which trade?:_____	2.9	88.5	1.3	7.3
19. I think that I am going to learn a trade.Which trade?:_____	3.6	77.9	4.0	14.4

URM at the end of the questionnaire (question 22) could write down (in their own mother tongue) which three wishes they have at this moment. All answers were translated back into Dutch by professional interpreters. 90% of the 582 URM gave only one wish, 74% gave two wishes, and 65% gave three wishes. No examples of wishes were given beforehand or mentioned on the questionnaire so that their wishes would not be influenced in anyway. The three wishes have been classified in 7 categories (see Table 2) for conciseness. Cleary, for all three wishes of the URM the most important wish was "wants to have profession/a good future". Having relationships with important others (past, present, future) was consistently the second most important and "getting a residence permit for the Netherlands or another country" was the third most important.

The answers of the URM to question 23, "How will your life look like over 10 years ?" was also back translated into Dutch from the language of the URM. The answer to this question was quite evident. 51% of the URM did not have any idea how their lives will turn out in the future. In addition, 29% of the URM indicated that their future would be getting better over the next 10 years (positive attitude). A very small minority, 3%, reported that their future would get worse than what it currently is (negative attitude). Moreover there was a group of URM (5%) that reported that they did not know how their future will turn out, but they trusted in God (Allah) that everything would turn out alright. 12% of the URM did not answer this question.

Table 2.
Endorsement percentages for all three wishes

	Percent Endorsed		
	Wish 1	Wish 2	Wish 3
1. Normal life /emotionally feel better	10.9	9.1	14.1
2. Relationships (past [deceased], present, future)	17.1	21.5	21.5
3. Residence permit	24.0	9.3	7.4
4. Professional goal /good future	26.3	43.0	37.1
5. Uncertain	10.7	1.6	2.4
6. Materialistic	4.8	5.8	7.2
7. Altruistic	6.3	9.6	10.3

Relationships between internalizing distress, externalizing behavior, traumatic stress reactions and adaptation

For the first 19 questions in the A & A questionnaire individual t-tests were calculated for T2 HSCL-37A Externalizing and Internalizing and RATS scores using two groups; (1) URM that answered "yes" and (2) URM that had answered "no", "uncertain", or "sometimes". There were 7 questions (3, 7, 9, 10, 11, 13, 14) for which significant differences for internalizing mean scores were found and effect sizes were of medium magnitude ($d > .40$). URM that thought life was difficult ($t(537) = 4.24$, $p < .001$), were afraid that they would be repatriated ($t(532) = 4.98$, $p < .001$), felt unsafe at home ($t(538) = 6.13$, $p < .001$), school ($t(530) = 5.02$, $p < .001$), and on the street ($t(535) = 5.44$, $p < .001$), were not satisfied with the way they were cared for in the Netherlands ($t(534) = 5.30$, $p < .001$), and did not want to work in the Netherlands ($t(539) = 3.87$, $p < .001$) all reported significantly higher Internalizing mean scores than URM which did not feel or think this way. In addition, URM that did not want to learn Dutch (question 1; $t(549) = 2.26$, $p < .05$), did not feel safe at school (question 9; $t(537) = 4.21$, $p < .001$), did not want to work in the Netherlands (question 14; $t(532) = 2.86$, $p < .01$) and did not want to learn a trade (question 18; $t(507) = 2.92$, $p < .01$) reported significant higher mean Externalizing scores (effect sizes $> .40$) than URM that thought or felt the opposite.

In regards to the Traumatic stress reactions (RATS questionnaire), there were only three questions for which significant differences were found (effect sizes $> .40$) between the URM that had answered "yes" and "not yes" on the A& A questionnaire. URM who reported that life is difficult in the Netherlands ($t(536) = 4.93$, $p < .001$), did not feel safe at home ($t(537) = 4.08$, $p < .001$), and did not feel safe at school ($t(529) = 4.31$, $p < .001$) reported significant higher RATS scores than URM who reported the opposite.

In addition, the seven answer categories of Wish 1 were examined to see if reporting a certain type of wish was connected to reporting internalizing distress, externalizing behavior, and traumatic stress reactions. In Table 3, the results of the ANOVA's are presented. URM who wished that they wanted to feel emotionally better/have a normal life reported significantly more emotional distress (INT) and traumatic stress reactions (RATS) than URM that reported wishes pertaining to professional goals (INT $d = .42$; RATS $d = .47$), materialistic needs (INT $d = .58$; RATS $d = .90$), altruistic goals (INT $d = .68$; RATS $d = .71$), and that were unsure what they wanted to wish for (INT $d = .48$; RATS $d = .45$) . URM that wished for a residence permit, also reported significantly lower traumatic stress reactions than URM who wanted a normal life/to emotionally feel better ($d = .43$). Moreover, URM wishing for a sort of relationship (past, present, future) reported significantly higher emotional distress and traumatic stress reactions than URM that had materialistic needs (INT $d = .42$; RATS $d = .42$) or altruistic goals (INT $d = .48$; RATS $d = .42$) as wishes. URM that wished for altruistic goals reported significantly lower externalizing behavior than URM that wished for a normal life ($d = .58$), a relationship ($d = .51$) or were unsure what they wanted to wish for ($d = .40$).

The four answer categories of question 23 were examined in regard to internalizing distress (INT), externalizing behavior (EXT), and traumatic stress reactions (RATS). URM that had filled in that they expected to have a negative future reported significantly higher mean scores for internalizing distress and traumatic reactions (INT - $F(3,489) = 3.15$, $p < .05$,

range d = .90 - .78; RATS - $F(3,488)$ = 2.82, p < .05, range d = .98 - .74) than minors who filled in that they did not know, did not know but trusted God/Allah, or were positive about what would happen to them in ten years. The largest differences were between URM reporting a negative future perspective and those who trusted God/Allah to guide them in the future. Smallest differences were found between URM reporting a negative future and those who were unsure.

Classification of a possible PTSD diagnosis comorbid with internalizing distress and/or externalizing behaviors

25 URM had incomplete data leaving 557 URM that could be further divided into target groups. Figure 1 shows the prevalence rates for each type of psychopathology (possible PTSD, elevated internalizing distress and elevated externalizing distress) and the overlap between these types of psychopathology. 36.4% (95% CI 34.6-38.2) of the URM could not be classified as having a PTSD or reported experiencing high severity levels of internalizing or externalizing problems (internalizing or externalizing scores $> = 80^{th}$ percentile). In addition, 7% (95% CI 6.7- 7.3) of the URM who did not fulfill the DSM-IV criteria for a PTSD reported experiencing severe internalizing and/or externalizing psychopathology, however, the expected percentage based on chance was 16.7% (95% CI 15.9 - 17.5) resulting in a observed/expected ratio of .42.

There were 315 URM that had been classified for a possible PTSD at one or both assessment periods (56.6 % [95% CI 53.8-59.4]; see Figure 1.). In addition, there were 155 URM (27.8 % [95% CI 26.4-29.2]) that had reported high levels of internalizing distress and 122 URM that had reported externalizing behavior (21.9%[95% CI 20.8-23.0]) at one or both assessments (internalizing or externalizing scores $> = 80^{th}$ percentile). To assess to what extent there was a higher degree of comorbidity than expected between the three kinds of psychopathology, the Chi-square statistic was used to calculate the association between URM that could be or not be classified as fulfilling the criteria for a PTSD and URM that had or had not reported high severity levels of internalizing distress and/or externalizing behavior at one or both assessments. The results of this test were clear (χ^2 (3) = 115.62, p < .001): the observed values differed from the excepted values. The observed comorbidity of the URM that were classified as having a possible PTSD, and also reported high levels of externalizing problem behavior as well as internalizing emotional distress was 10.1% (95% CI 9.6-10.6). The expected percentage of comorbidity based on chance was 6.4% (95% CI 6.1- 6.7). The observed/expected ratio was 1.58 (95% CI 1.50-1.66). 15.6% (95% CI 26.3-29.1) of the URM that were classified as fulfilling the PTSD criteria reported only high levels of internalizing distress at one or both assessment periods, whereas 5.7 % (95% CI 5.4-6.0) of the URM that were classified with a PTSD also reported high externalizing problems at one or both assessment periods, the observed/expected ratio's for these two forms of psychopathology were respectively; 1.68 (95% CI 1.60-1.76) and 1 (95% CI .95-1.05). Finally, 25.1% (95% CI 23.8- 26.4) of the URM that were classified as having a PTSD did not report having high levels of externalizing or internalizing problems at one or both assessment periods.

Figure 1.
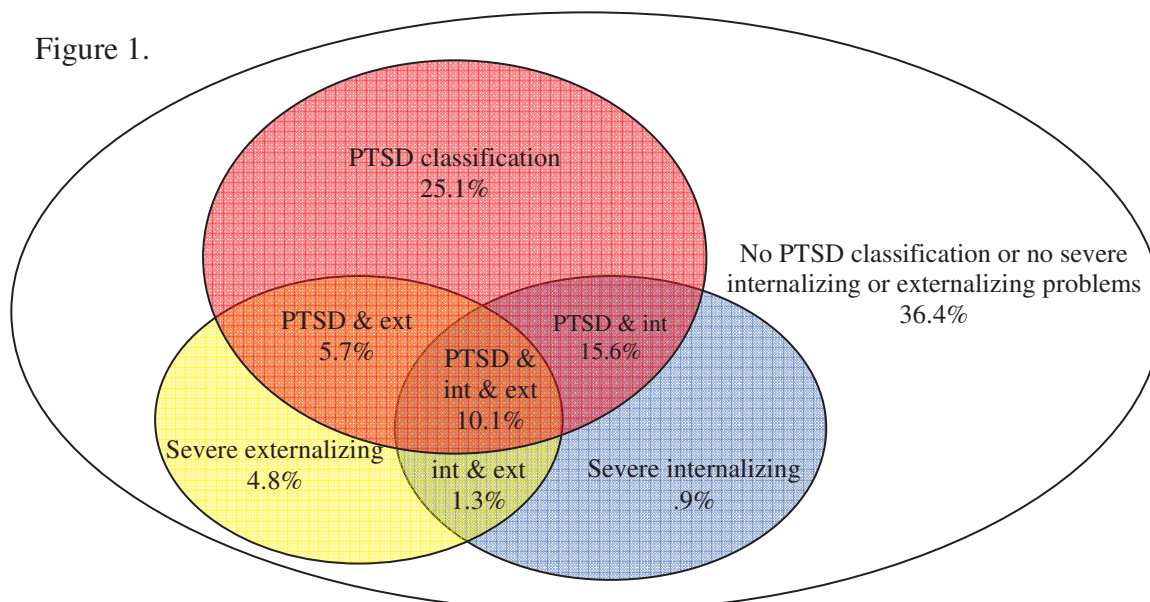
Differences between target groups on gender, age, and adverse life events
There were five target groups which emerged from the classification process reported above; (a) No PTSD classification or other subtype of psychopathology ($n = 203$) , (b) PTSD classification & no cormorbidity ($n = 140$) (T1 and/or T2), (b) PTSD classification & severe externalizing scores ($n = 32$) (T1 and/or T2), (c) PTSD classification & severe internalizing scores ($n = 87$) (T1 and/or T2), and (d) PTSD classification & both severe internalizing and externalizing scores ($n = 56$) (T1 and/or T2). These five target groups were chosen for further analyses regarding the adaptation of URM because; (a) the first group is distinct in consisting of URM who appear to be resilient to the development of psychopathology, (b) the second group embodies URM which seem to experience traumatic stress reactions without added comorbidity with severe internalizing and/or externalizing psychological difficulties, and (c) the last three groups can provide unique information concerning how comorbidity of the two subtypes of broadband psychopathology with (post) traumatic stress reactions (the most prevalent form of psychopathology reported among URM) influences the adaptation of URM. The other (3) groups which consisted, in total, of 39 URM who did not report being resilient or could not be classified as having a possible PTSD were not further used in the subsequent analyses because they per definition would not provide information on how traumatic stress reactions and/or comorbidity with other forms of psychopathology influence the adaptation of URM (the second objective of this study) and because of the small sizes of the individual subgroups.
Among the five target groups described above there were significant gender (χ^2 (4) = 10.10, $p < .05$) and age ($F (4,513) = 8.16, p < .001, d$ range .27 - .62,) differences between the five target groups at T2. Girls were more prevalent than expected in the PTSD & severe internalizing, PTSD & severe externalizing, and PTSD & severe internalizing, and externalizing problems groups, but under represented in the remaining two groups.The mean age of URM in the PTSD & severe externalizing and No PTSD classification groups was significant lower than of the URM in the remaining three groups.
Finally, URM in the No PTSD classification group reported experiencing significantly fewer stressful life events (T2) than all other target groups ($F (4,513) = 17.87, p < .001, d$ range .93 - .57) with the largest difference between URM with no PTSD classification and URM with a PTSD group with both severe internalizing and externalizing behavior.

Adjustment amidst high severity levels of traumatic stress reactions, internalizing distress and/or externalizing behavior.
In this section, the adaptation and attitudes scale scores of URM are examined with analyses of variance to see if adaptation has been compromised due to high comorbid severity levels of internalizing distress and/or externalizing behavior with traumatic stress reactions. First, there were no significant differences found for gender, age or number of reported stressful life events for the A & A total, security attitudes, or work attitude scales.
To examine differences in the ability of URM to adjust to their current environment an analysis of variance was carried out using all five target groups outlined above. Although the groups differed in size, they did not differ in variance. The analysis compared the A & A score of URM that were not classified as having a PTSD with the four PTSD groups. The results of the ANOVA (small to medium effect sizes .29-.49) show that the PTSD & both severe internalizing-externalizing, PTSD & severe internalizing and PTSD & severe externalizing groups had significantly lower adjustment & attitude mean scores than URM in the other two groups (Table 4). For the security attitude scale, the No PTSD classification group had significantly higher scores than the four PTSD groups (effect sizes ranging from .49 to .43). Moreover, the PTSD & both severe internalizing and externalizing group had significantly lower security attitude scores than the PTSD no comorbidity group ($d = .23$). There were no differences found between the target groups for the work attitude scale.

Table 3.
Analyses of variance for Wish 1:Internalizing, Externalizing problems, and Traumatic stress reactions

	Internalizing distress (n = 507)		Externalizing behavior (n = 514)		Traumatic stress reactions (n = 504)	
	M(SD)	*F(df)*	*M(SD)*	*F(df)*	*M(SD)*	*F(df)*
1. Normal life /emotionally feel better	56.1(14.7)	2.48(6,500)*	16.8(4.1)	2.02 (6,507)	53.3(11.1)	3.44(6,497)**
2. Relationships (past, present, future)	53.2(13.1)		16.5(3.7)		50.6(11.8)	
3. Residence permit	51.5(14.4)		15.8(3.4)		48.3(11.7)	
4. Professional goal /good future	51.0(12.7)		15.7(3.1)		47.8(11.7)	
5. Uncertain	49.4(13.6)		15.9(2.9)		47.8(13.2)	
6. Materialistic	47.7(14.2)		15.5(3.0)		43.9(9.2)	
7. Altruistic	47.6(8.4)		14.8(2.6)		45.7(9.9)	

*$p < .05.$ **$p < .01.$

Table 4.
Mean Comparisons between the five target groups and the Adaptation and Attitude scales

Variable	No PTSD classification $n=203$ M (SD)	PTSD classification & no comorbidity $n=140$ M (SD)	PTSD classification & externalizing $n=32$ M (SD)	PTSD classification & internalizing $n=87$ M (SD)	PTSD classification & int. - ext. $n=56$ M (SD)	ANOVA $F(df)$	ANCOVA Main effect groups $F(df)$
Total adaptation & attitudes	13.6 (3.4)	13.1 (3.5)	11.9 (4.0)	12.1 (4.0)	12.1 (3.6)	3.85(4,513)*	2.98(4,517)*
Security attitude	3.5 (1.4)	3.0 (1.7)	2.9 (1.5)	2.8 (1.7)	2.6 (1.8)	5.98(4,513)***	3.42(4,517)**
Work attitude	4.0 (1.3)	4.1(1.3)	3.8 (1.7)	3.9 (1.3)	3.9 (1.3)	.97(4,513)	1.21(4,517)

Note. *** $p < .001.$ ** $p < .01$ * $p < .05$

Since significant differences were found between the five groups for the variables gender and age, it was necessary to control for these variables when investigating the possible differences between the five target groups in regards to their A & A scale scores. ANCOVA's were performed to assess the main effects of target group and gender on the A & A scales controlling for age. Again, although the groups differed in size, there were no significant differences detected between the variances of the groups.There were no main effects for age and gender for all A & A scales and no interaction effects for the, security and work A & A scores. Only for the total A & A scale there was a significant interaction effect found between gender and group ($F(4,517) = 2.53$; $p < .05$); girls in all four PTSD groups reporting consistently higher adaptation scores than boys and boys in the No PTSD classification and no comorbidity group reporting higher adaptation scores than girls. The effect of group on A & A scores remained significant (Table 4).

Post hoc comparisons showed that the PTSD & both severe internalizing-externalizing, PTSD & severe internalizing and PTSD & severe externalizing groups had significantly lower adjustment & attitude estimated marginal mean scores than URM in the other two groups (range $d =.23-.39$). For the security scale the main effect of group remained significant in the ANCOVA (see Table 4). Post hoc comparisons showed that the three PTSD comorbid groups reported lower security attitudes estimated marginal mean scores than URM in the other two groups (range $d = .20-.56$). Again, there were no differences found between the target groups for the work attitude scale.

Discussion

The present investigation attempted to investigate the adaptation of recently immigrated Unaccompanied Refugee Minors in association with their reported psychological distress and to what extent the adaptation of URM is compromised due to high comorbid severity levels of internalizing distress and/or externalizing behavior with traumatic stress reactions.

The results of this study indicate that in spite of overwhelming adversity and high levels of psychological distress, the majority of adolescent URM are working on age appropriate developmental tasks such as planning their futures and receiving an education. However, 56.6% of the URM (at T1 and/or T2) were classified as possibly fulfilling the diagnostic criteria for a PTSD of which 56.8% also reported high levels of externalizing maladaptive behaviors and/or internalizing distress.

Additionally, the high severity levels of psychopathology appear to be associated with the adaptation and attitudes of URM living in the Netherlands. More specifically, impaired mental health of URM was associated with not feeling secure and having negative attitudes about the current living situation. This held true predominantly for internalizing and externalizing psychological problems but less for the reporting of traumatic stress reactions. URM which had reported more externalizing behavioral problems were not motivated to work on gaining knowledge of the Dutch language or working on long-term goals (learning a trade). Externalizers have been often found to have difficulty with impulsivity and completing long term goals. It appears that the two dimensions of psychopathology, internalizing and externalizing, are both linked with the problematic adaptation of URM to their situation. This finding emphasizes that adolescents who have experienced great adversity in their lives, do not all respond to traumatic stress/ psychopathology in a uniform way. Masten (2004) has formulated this concept as follows: "common endpoints and final pathways can emerge from diverse beginnings (equifinality) and individuals who start down the same path can end up going down many different roads over time (mulitifinality)"(pp. 311). This concept implies that prevention and treatment approaches should try to utilize appropriate individual-tailored strategies aimed at building competence (social and emotional) in unaccompanied refugee adolescents (Rogosch & Ciccheti, 2004).

A substantial number of URM (34.6%) showed resilience to the development of psychopathology and positive adjustment in the face of experiencing multiple (cumulative) stressful life events (separation from parents, loss (of family), physical and sexual maltreatment), acculturation to a new culture, and fulfilling developmental tasks. Resiliency of this level and hardy character has been previously found among Holocaust survivors (Sagi-Schwartz et al., 2003), western adolescents (Werner & Smith, 1992; McMillen, et al., 2005), immigrant adolescents (Garcia-Coll & Vazquez Garcia, 1995), and refugee adolescents

(Miller, 1996; Realmuto et al., 1992; Sack et al, 1993) attesting to the strength and restoration abilities of the human mind and spirit. Some have come to view this initial hardiness as a defensive "steeling effect" or "inoculation" to adversity in life, with possible adverse long term effects on emotional development. Only a longitudinal study which spans several developmental levels will be able to properly assess if the hardiness among URM is temporary or enduring.

Despite the hardiness of this population, almost 57% URM could be classified with a possible PTSD diagnosis. It also appears in the present study to be useful to distinguish between URM reporting traumatic stress reactions alone or in junction with high severity levels of internalizing distress and/or externalizing maladaptive behaviors

Girls appear to be more susceptible to comorbid psychopathology. In several studies, adolescent girls are found to be more vulnerable to comorbid anxiety (as well as PTSD) and depression related psychological problems than adolescent boys (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Seng, Graham-Bermann, Clark, McCarthy, & Ronis, 2005). The results of this study are therefore in line with the expectation that girls tend to report more psychological distress than boys. While URM with a younger age report more severe comorbid externalizing behavior (with traumatic stress reactions), older URM reported more traumatic reactions and/or internalizing distress. Not surprisingly, URM that had reported experiencing the most adversity (i.e., stressful life events) also reported the most severe comorbid psychopathology. Finally, the URM that were classified as having a possible PTSD and reported high levels of broadband psychopathology reported the poorest attitudes and adaptation to their current situation.

The results of the present study signifies that adolescents which can be classified as having a PTSD and report high levels of severe comorbid psychopathology (internalizing and/or externalizing) are at an enlarged risk for compromises in their adaptation and functioning. A PTSD classification alone was not severe enough to cause problems in adaptation among URM, comorbidity needed to be present to influence adaptation. Furthermore, this study calls attention to the fact that 34.6% of URM remain resilient to the development of psychopathology under extremely difficult circumstances. Nevertheless, the majority of URM suffer from traumatic stress reactions to multiple (cumulative) adverse life events that they have had to endure which has an accumulative effect. Since this is a cross-sectional study, it remains unknown whether high severity levels of psychological problems have led to adaptational compromises or whether compromises in adaptation have led to high severity levels of psychological problems. It is possible that a third factor, such as certain personality trait may underlie both the reporting of internalizing or externalizing psychopathology and type of attitudes and adaptation difficulties. Longitudinal studies measuring personality variables and the development of psychopathology and adaptation over time are needed to address this issue.

The effects of traumatic stress have been found to affect biological, psychological, and social levels of well-being and development in complicated ways (De Bellis., 1999, Pynoos et al., 1999). It is imperative to the well-being of this at-risk population that they receive low-threshold mental health care services (counseling, training in social skills, psycho-education) to be able to manage the overwhelming(negative) emotions that they experience. Since these young people do not have the privilege of learning these skills from their parents, care should be given by their foster parents or residential staff workers in their living environments to ensure that URM will be able to become emotional competent in managing their psychological distress and socially competent in building support networks and dealing with problems.

One of the largest limitations of this study is that only a limited number of questionnaires could be utilized in this study to assess the mental health and level of adjustment due to (a) the short attention spans of the refugee adolescents, (b) the amount of time needed to explain and administer the questionnaires (getting the right language version to the right adolescent), (c) the substantial amount of time and effort used by the refugee adolescents to complete only four questionnaires, and (d) the ethical issue of administering long instruments to severely traumatized individuals which might induce emotional distress. This limitation is unfortunate because only a small amount of data could be collected on the internalizing and externalizing psychological problems and adaptation of URM. A variety of measures, such as used in the Miller et al. studies (2003, 2004), could have provided more

support for the results found in the present study. Finally, this study only investigated self-reports of URM. Objective information on the mental health of URM from caregivers and other significant adult in the lives of URM could have been helpful in establishing to what extent the apparent daily functioning of URM has been compromised due to psychopathology.

It was not feasible to administer a diagnostic interview in the current study for the main reason that there was no validated psychiatric diagnostic interview available in all of the languages of (refugee) adolescents who took part in this study. Furthermore, the use of diagnostic interviews in cross-cultural studies invokes itself a host of methodological issues such as classifying culture-specific disorders and ensuring "the semantic and psycholinguistic equivalence of psychiatric symptoms across cultures"(Cheng, 2001).

This study examined the adaptation and attitudes and psychological distress of a culturally diverse population. With this amount of diversity, some discussion concerning validation of measures is required. The HSCL-37A, SLE and RATS questionnaires have been thoroughly examined and data supporting their validity and reliability with diverse adolescent populations have been collected (See Questionnaire section for a list of references). The A & A questionnaire was used for the first time for the present study to measure the adaptation and attitudes of URM residing in the Netherlands. The instrument was a first attempt to make standard comparisons on how individual URM perceive their current situation. To do this, the questions and rating scale were carefully formulated to be concrete and relevant for this specific population. Although, the preliminary psychometric results suggest that the instrument has acceptable validity and reliability, caution should be used when using this questionnaire for the following reasons.

A more refined analysis of the validity and reliability of the A &A after division into individual language versions could not be carried out because of the small sample numbers. A few questions are quite specific to the situation of URM in the Netherlands and might not be conceptually relevant for URM staying in other host countries. Additional questions pertaining to aspects such as social network, leisure activities, and individual ways of dealing with adversity might have shed more light on the positive adaptation of URM in this study. Furthermore, the internal consistency of the A & A questionnaire was only acceptable for the total, security and work scales, the internal consistency of the general adaptation scale of the A & A was unacceptably low. It is not clear how this low reliability might have influenced the results of the study. For future studies, the questions should be refined, especially for the general adaptation scale, to improve the reliability. Moreover, it seems that URM that had a clear positive answer, differed repeatedly from URM with an uncertain or negative answer. A dichotomous answer category might be more helpful in future investigations in clarifying the answers of URM. For this present study the post hoc answer categories for theWish question (22), appear to provide useful information in defining risk groups of URM. However, only one researcher categorized the wishes of the URM ruling out the possibility to examine the inter-rater reliability of the categorization of wishes into the seven categories that were used. Future research will need to examine if the scoring of the wishes into seven post hoc categories as established in this study can be replicated.

In conclusion, the adaptation of one third of the Unaccompanied Refugee Minors residing in the Netherlands seems to be compromised due to comorbid psychopathology in relation to traumatic stress reactions. Moreover, another third (34.6%) seem to be resilient to the development of psychopathology albeit that they have experienced great adversity in their short lives. Future investigations will need to examine if the emotional resiliency and adaptation compromises found in this study are temporary or are enduring among URM. It is also important to distinguish if untreated comorbid severity levels of internalizing distress reported among URM evolve into externalizing behavior or visa versa. Finally, it is crucial that the long-term effect (e.g., integration, repatriation, reception settings, and asylum procedures) of governmental policies on the mental health and adaptation of refugee minors be thoroughly examined to be able to tease out the causes of psychological distress and adaptation compromises among these youth in their host countries.