Assessing the psychological distress and mental healthcare needs of unaccompanied refugee minors in the Netherlands
Bean, T.

Citation

Bean, T. (2006, October 19). *Assessing the psychological distress and mental healthcare needs of unaccompanied refugee minors in the Netherlands*. Retrieved from https://hdl.handle.net/1887/4921

Part I

Assessment of Psychological Distress Among a Heterogeneous URM Population

<p style="text-align:right">Chapter 2</p>

Effects of Traumatic Stress on the Mental Health of Immigrant and Refugee Adolescents: An Exploratory Study

Abstract

This study evaluated the practical feasibility of using self-report instruments in assessing the influence of traumatic stress on the mental health of a culturally heterogeneous group of adolescents. Five samples of adolescents were tested, Dutch native adolescents, second generation immigrants, first generation immigrants, refugees and unaccompanied refugee minors (URM). Reactions of Adolescents to Traumatic Stress questionnaire (RATS) was used to measure the severity of posttraumatic stress reactions and the Stressful Life Events checklist (SLE) to measure the number of self-reported traumatic events. Students participated in their school classes ($N = 579$). URM consistently reported significantly higher scores on the RATS and SLE than all other groups. Girls reported having more posttraumatic stress reactions than boys irrespective of the group they belonged to. The number of reported stressful life events was strongly related to the total score on the RATS. URM appear to be at significant higher risk for posttraumatic stress reactions than refugee adolescents living with a family member, immigrants or Dutch native adolescents.

Introduction

All kinds of immigrants (with or without family), enter foreign countries looking for a better future, a good home, economic security, safety, food, and care. "Voluntary immigrant" minors and their families have a host of obstacles they must overcome, such as: acquiring a

new language, entering into (a different) formal education, making new friends and adjusting to a new culture. Refugees face even more difficulties. They must learn to cope with the "forced" migration, the violence they have experienced or seen and a multitude of other possible traumatic events. The number of refugees in the European Union has increased during the last 20 years (Eurostat, 2002). Previous research that has been done with refugee minors suggests that this group is also at high risk for psychological dysfunction (Mollica, Poole, Son, & Murray, 1997; Papageorgiou et al., 2000) and learning difficulties (Rousseau, Drapeau, & Corin, 1996). Unaccompanied refugee minors (URM) have all of the obstacles that have been already mentioned plus the fact that they are alone in a foreign country at a very vulnerable developmental period in their lives. They do not have the protection or help from parents or family to assist them and shield them from the stress of the acculturation process, in coping with their grief, psychological distress or simply carrying out daily tasks that must be completed to survive. The number of Unaccompanied Refugee Minors (URM) in the Netherlands had increased dramatically until 2001 and is now rapidly decreasing due to new asylum policies (Nidos, 2004). There are approximately 5,000 URM currently living in the Netherlands. Although, there has been little research conducted regarding URM, they have been found to be an especially vulnerable group to develop psychopathology (Felsman, Leong, Johnson, & Felsman, 1990; Sourander, 1998).

Trying to provide adequate psychosocial treatment to young refugees is complex (Hodes & Goldberg 2002). Mental healthcare (MHC) providers and researchers in the Netherlands are often hindered in acquiring accurate information concerning the mental health status of culturally diverse adolescents, due in part to a lack of reliable and valid diagnostic instruments to be used with non-western cultural diverse populations. The complexity of providing adequate MHC is exacerbated due to limitations of refugee adolescents such as the inability to express their feelings in a foreign language and their cognitive inability to process what has happened to them/their families.

Many studies have addressed the prevalence of psychological distress and/or posttraumatic stress reactions in refugee minors all over the world; from Cambodia (Berthold, 1999; Mollica et al., 1997); from Lebanon (Macksoud & Aber, 1996); from Iran (Almquist & Broberg, 1999); from Croatia (Zivcic, 1993); from Bosnia (Becker, Weine, Vojvoda, & McGlashan, 1999); El Salvador (Walton, Nuttall, & Nuttall, 1997); from Tibet (Servan-Schreiber, Lin, & Birmaher, 1998); from Armenia (Miller, Kraus, Semyonova-Tatevosyan, & Kamenchenko, 1993) and from Guatemala (Miller, 1996). The type of violence that a child has experienced or seen, the reactions of the parents, psychological health of the parents and child, age, gender and developmental stage all seem to influence whether a refugee child or adolescent will develop posttraumatic stress reactions to highly stressful experiences (Green et al., 1991; Macksoud & Aber, 1996).

The symptomatology that is classified in the DSM-IV diagnosis of posttraumatic stress disorder (American Psychiatric Association [APA], 1994) does not seem to include all of the symptoms that refugee children and adolescents exhibit after experiencing traumatic events. Depressive symptoms, social problems, somatic complaints, and learning difficulties also seem to be problem areas. There is also high co-morbidity with syndromes such as depression, generalized anxiety, separation anxiety, ADHD, and dissociation (Papageorgiou et al., 2000; Sack & Clarke, 1996; Servan-Schreiber et al., 1998). The similarity in symptomatology of young refugees, suggests a universal bio-psychological reaction to psychological trauma (Ruhkin et al., 2005; Sack et al., 1993).

The present study is a sequel to a previous study done by Vervuurt & Kleijn (1997) with 100 refugee adolescents in The Hague, the Netherlands. Vervuurt and Kleijn found that 56% of the girls and 52% of the boys had scores above the clinical borderline on the Dutch version of the Youth Self Report (YSR) (Achenbach, 1991a) for internalizing problem behavior. These research findings are in sharp contrast to the 2% prevalence rates that have been established for the Dutch population (Verhulst, van der Ende, & Koot, 1997). However, the YSR does not measure posttraumatic reactions and is not validated for a heterogeneous refugee population. Another instrument, the UCLA PTSD Reaction Index for DSM-IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) is frequently used in American studies to assess traumatic stress reactions among children and adolescents. However, as far as known by the authors, this checklist has not been validated for culturally diverse adolescent populations following the five dimensions of equivalence for cross-cultural validation of an

instrument proposed by Flahtery et al. (1988). The five dimensions are (a) Content equivalence which determines whether each item is equally relevant for the culture(s), (b) Semantic equivalence which implies an item-by-item analysis attempting to convey the original meaning of each item in the adapted version(s), (c) Technical equivalence refers to whether the data collection method (e.g., self-report survey, in-person interview) yields comparable results in each culture, (d) Criterion equivalence is when the interpretation of the measurement remains the same when norms are compared in each culture, and (e) Conceptual equivalence refers to whether the same theoretical construct is being measured in each culture. The first three types of equivalence were addressed in this study.

The main objective of this study was to explore the practical feasibility of using self-report instruments in assessing the influences of traumatic stress on the mental health of culturally diverse samples of adolescents such as immigrants, accompanied refugee minors and URM in comparison to a native Dutch adolescent population. For this purpose, several self-report instruments have been developed in order to be able to apply them to cross-cultural groups of adolescents rendering it possible to measure posttraumatic stress reactions of immigrants and refugee adolescents.

Method

Participants and Procedure

The sample was comprised of five different groups, (1) Native Dutch adolescents ($n = 100$), (2) Second generation immigrant adolescents ($n = 82$) born in the Netherlands, but having parents from other countries), (3) First generation immigrant adolescents ($n = 186$), (4) Parental accompanied refugee adolescents ($n = 143$), and (5) Unaccompanied refugee minors ($n = 55$).

The study took place within the context of the Project Newcomers 12-17 years old which is a project developed for the educational system in The Hague, the Netherlands. The Project has provided psychosocial and cognitive support to immigrant and refugee adolescents in international secondary education since 1989. Students were included in the study if they could read in their own language or in Dutch and if they had been enrolled at the school for longer than 8 weeks. The Dutch students were born in the Netherlands and came from a school with a limited number of culturally diverse students.

Letters of informed consent were sent to the parents/caretakers of the students to inform them about the research project. Parents could phone and talk to the school psychologist about the project, if they had questions or did not want their child to participate. The goal and reasons for the study were thoroughly explained to every class in Dutch and in translated letters. The school psychologist also introduced themselves to everyone and made themselves available to the students if the students wanted to talk to them about the feelings and thoughts about the project or in general. Each student was offered the opportunity to refrain from participation at any time. The instruments were filled in anonymously. No attempt was made to assess the students who were absent from a class on the day of the testing. The duration of the testing period was approximately 50 minutes. A school psychologist, teacher, or mentor and the researcher were always present in the classroom during testing to provide emotional assistance to the students if necessary. No students exhibited emotional distress during their participation in this research project.

Measures

Approaching traumatized individuals, from any country, with long psychological interviews can be ethically questionable and can be an obstacle in trying to give help (Saylor, Swenson, Reynolds, & Taylor, 1999). Two brief instruments were adapted for use in this study to try to prevent overburdening potentially traumatized youth. Most refugees and immigrants are apprehensive in divulging information about themselves. School psychologists were interested in having short instruments for psychological assessment purposes because of the limited time they have available for psychological testing. The school psychologists reviewed all items in the questionnaires for relevance and appropriateness before the study was conducted.

The instruments and the demographic questions were available to the students in a bilingual form (Dutch/foreign language) in the thirteen prevalent languages in the school

districts in The Hague; Dutch, English, French, Spanish, Portugese, Somalian, Servo-Croatian, Chinese, Russian, Farsi, Soerani, Arabic, and Turkish. No written back-translations were done in this study. Instead an oral item- by- item analysis took place with trained interpreters from mental health services. The level of difficulty of the vocabulary in the items was assessed using a vocabulary list developed for migrant adolescents. All written forward translations were done by professionally employed translators. Every translation was controlled for grammatical and idiomatic errors on two different occasions by two different translators. The translated questionnaires were reviewed orally with professional interpreters who where regularly involved in treatment sessions of traumatized adult refugees to control the quality of the translations, to ensure that the original meaning was conveyed in the items, and to attempt to achieve semantic equivalence of the RATS and SLE. Both instruments were tested in a pilot study to assess which visual aid was easiest to understand (question form sentences or statement form sentences; colored balls or building blocks). In addition, the adolescents also had the chance to comment on the content of the questions (if the meaning of the item was equivalent in Dutch and the other foreign language) and if they found the questions intrusive.

The following demographic information was gathered; gender, age, language, country of origin, duration at the new school in the Netherlands, year of departure from country of origin, year of arrival in the Netherlands, living arrangements.

The Stressful Life Events (SLE) checklist (Bean, 2000) was used to indicate (twelve) types of traumatic events to which adolescents might have been exposed to and one open question where an adolescent could specify a particular traumatic event. The thirteen questions were worded in the most unobtrusive way possible. There was also a blank for comments. This short checklist can be used to assess if an adolescent meets the criteria A1 (experienced a traumatic event) in the DSM-IV, (APA, 1994) for a diagnosis of Post-Traumatic Stress Disorder (PTSD). These events fall under the following sub-clusters: family, sickness and accidents, disasters, war experiences and other traumatic experiences. This instrument is scored by adding the number of experienced Stressful Life Events as endorsed by a yes/no answer.

Posttraumatic stress reactions were assessed with the Reactions of Adolescents to Traumatic Stress (RATS) (Bean, 2000) questionnaire. The 22 items are derived from the seventeen core symptoms of the B, C, and D clusters for the diagnosis of PTSD as defined by the DSM-IV (APA, 1994). The criteria B3, C1, C5, D1, and D2 have been divided into two items to better measure both symptoms of PTSD that appear in one criterion (for example; criterion D1 is "difficulty falling **or** staying asleep"). Great care was taken in formulating the items so that concepts would be comprehensible to adolescents of whom Dutch was not their first language. The questionnaire is scored using the three clusters of the DSM-IV criteria; intrusion, avoidance/numbing and hyperarousal.

Scores on the RATS can be calculated for severity of posttraumatic stress reactions in general and for the different symptom clusters. The lay-out of the rating scale used colored balls increasing in size, along with words to explain the concept of quantity on a 4-point Likert-scale: not = 1, little = 2, much = 3, very much = 4. Items 1-6 (scoring range; min. 6-max. 24) correspond to the intrusion symptom cluster, items 7-15 correspond to the avoidance/numbing symptom cluster (scoring range; min. 9 - max. 36) and items 16-22 (scoring range; min.7 -max. 28) correspond to the hyper-arousal symptom cluster. Separate sub-scores for PTS reactions can be calculated for each symptom cluster. The total score can be calculated adding the points of all of the 22 items.

Moreover, the combined use of the SLE and the RATS makes it possible to classify a probable PTSD diagnosis based on the A1, B, D, and C 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, D, and C) to meet the criteria requirements. An item qualifies for scoring if it has been scored as "much" or "very much" and then receives a "1". If the item is scored as "not" or "little" then the item receives a "0".

Data Analysis

The purpose of this study was to evaluate the practical feasibility of using self-report instruments in assessing the influences of traumatic stress on the mental health of a very

diverse group of adolescents. The demographic background information of the adolescents samples are presented in Table 1. Differences in age and gender between groups were analyzed with one-way ANOVA's and Chi-Square tests. Gender, Age groups and Sample groups with mean scores and standard deviations for all the scales of the RATS and SLE total scores are presented in Table 2. The internal consistency has been measured with Cronbach's alpha. Analyses of co-variance were used to study group differences controlling for age and gender. Post hoc comparisons were performed using the Games-Howell test, which corrects for unequal group sizes and unequal variances. Pearson's product-moment coefficient correlations were used to assess the association between the total number of stressful life events and PTS reactions. The Chi-Square Test with the odds ratio statistic was utilized to calculate which groups within the total population group seem to be at a greater risk for developing PTS-reactions. Finally, to assess the best predictors of PTSD, a regression analysis (using the stepwise method) was used to measure the strength of associations between demographic variables and PTS reactions.

Results

Background Characteristics

Over 42 different countries were represented in this study. The countries most frequently represented were: the Netherlands ($n = 182$), Turkey ($n = 84$), Morocco ($n = 73$), Iraq ($n = 27$), Somalia ($n = 25$), Afghanistan ($n = 17$), Angola ($n = 16$), Kurdistan area ($n = 14$), Surinam ($n = 14$), China ($n = 13$) and Curacao ($n = 10$). The remaining countries were represented by 5 students or less. If students came from Turkey, Morocco, Curacao, and Surinam they were considered to be immigrants. Students from countries that were engaged in armed conflicts, political unrest and/or economic unstable were considered as being refugees. The mean age of the whole group was 15 (*SD* 1.46). There was just about an equal number of boys ($n = 287$) and girls ($n = 278$) that took part in the study. 43.4% of the 1st generation immigrant and refugee adolescents departed their country of origin in or after 1998. 47.3% arrived in the Netherlands in or after 1998. 63.9% of the students lived with both parents and 9.8% lived without any family member in the Netherlands. There were significant differences in gender and age between the different sample groups. Boys were overrepresented in both the URM and the native sample. Girls were overrepresented in the second generation group. Mean age was the highest in the URM group and the lowest in the native group; the age group 17-19 was lacking in the native group and the age group 11-13 was lacking in the URM group. The assessment took place between April and June, 2000.

Table 1.
Background characteristics of sample groups

	Native	2nd generation	1st generation	Refugee	URM	*p*-value *
Number	100	82	179	143	55	
Females (*n, %*)	43 (43.4)	51 (63.8)	91(50.8)	68(48.6)	21(38.2)	.027
Age (*M, SD*)	13.6 (0.8)	14.7 (1.3)	15.2(1.3)	15.5(1.3)	16.6(1.0)	<.001

* *Note. p*-value for differences between the groups (chi-square tests for gender and ANOVA for age).

Practical feasibility

The practical feasibility, using self-report questionnaires among a very culturally diverse population, was essential to the success of the study. Organizing a research project with students that come from over 40 different countries was very challenging. Several very common research steps became very complicated when working in a classical testing situation with classes of students that speak over 20 different languages. Knowing beforehand where the students came from and what languages they spoke, was imperative to conduct the testing efficiently. Each class was told at the beginning of the assessment period that participating in the study was voluntary. Approximately one student per class declined to take part in the research project. The majority of the students found it interesting to take part in such a study. Ten students found the questions too intrusive and did not wish to finish the screening. The students that did not want to participate still wanted to read the checklists, especially since it

was in their own language. Refugee students were often suspicious of the motives behind the assessment. Reassurance was given to them by emphasizing that the researcher alone would know the results and no one such as the parents, police, teachers, Immigration and Naturalization Agents would read the completed questionnaires. Most of the time reassurance, and the fact that the testing was anonymous, gave them the feeling of security they needed to take part in the study. The rating scale was explained orally (duration 20 minutes) before the class and sometimes needed to be clarified, individually.

It appeared to be practically feasible to carry out classical research using checklists with a culturally heterogeneous population. The greatest majority of the students did not experience the test as being intrusive or upsetting. With the exception of a few students (22), who declined to participate in the research project, most students (96.4%) took part without any difficulties.

Table 2.
Total sample characteristics and total and sub-scale scores

	RATS Total			Intrusion			Avoidance/ Numbing			Hyperarousal			SLE Total		
	n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Gender															
Girls	218	41.40	10.97	257	9.85	3.75	236	17.28	4.30	250	12.50	4.14	234	2.90	2.74
Boys	220	38.23	11.28	261	9.13	3.93	244	16.56	4.11	256	11.34	4.11	223	3.22	2.25
Age group															
11-13 years	71	37.00	8.87	83	8.70	3.08	78	15.87	3.50	76	10.78	3.30	81	2.93	2.18
14-16 years	306	39.47	11.37	306	9.11	3.75	330	16.85	4.22	349	11.89	4.38	310	2.87	2.41
17-19+ years	67	45.16	11.81	67	11.86	4.24	79	18.58	4.48	89	13.20	3.75	73	4.16	2.92
Sample group															
Native	85	36.88	8.35	97	8.68	2.95	92	15.83	3.00	93	10.90	3.39	93	3.00	2.21
2nd generation	66	38.60	12.53	78	8.72	3.93	70	16.40	4.95	74	11.80	4.56	74	2.81	2.45
1st generation	150	40.17	12.49	175	9.36	3.95	160	17.19	4.72	167	11.80	4.54	159	2.38	2.27
Refugee	106	40.58	10.32	131	9.91	3.92	118	17.24	3.89	130	12.13	3.74	106	3.49	2.48
URM	33	48.48	9.13	41	12.63	3.84	43	19.28	3.35	45	14.50	3.92	28	6.46	2.53

Internal Consistency

The Cronbach's alpha values for the RATS (total score, and the subscales intrusion, avoidance/numbing and hyperarousal) are .89, .87, .62 and .76 respectively. Among boys, the alpha for the total score of the RATS was .90 and among girls it was .88. These high alphas show that the total scale of the RATS is very reliable and the sub-clusters are reasonably reliable given this exceptionally heterogeneous population. Alpha's for the total score of the RATS for the different groups ranged from .81 (URM) to .92 (Second generation). Furthermore, for the different language version, the alpha's for the total RATS score ranged from .74 (Spanish version) to .96 (Arabic version).

The relative low internal consistency of the avoidance-numbing subscale needs some comment. The avoidance/numbing cluster contains 3 positively worded items (12, 14, 15) Originally, these items contained a negative wording, so endorsing the item required negation thereof. We thought that double negations might be confusing for adolescents; therefore the negative wording was changed into a positive wording. Unfortunately, it appeared that a positive wording is not always equivalent to a double negation. For instance, not feeling bad does not automatically imply feeling good. So these items were frequently scored wrong by the students if they did not read the question carefully and accurately.

If these 3 positive worded items were answered no, this might result in an error in classifying a PTSD. Therefore, in classifying a possible PTSD diagnosis, (based on the A1, B, C, and D criteria established in the DSM-IV), we used four instead of three items from the avoidance/numbing cluster. So a student qualified for a PTSD diagnosis only if he or she had endorsed four instead of the recommended three avoidance/numbing items. This is a precautionary measure for this study that would not be necessary in an individual testing

situation. These three items will need to be changed back to negatively worded items in future studies.

Posttraumatic stress reactions: interaction of gender and age
Interactions of age and gender Using a 3 (age group) by 2 (gender) analysis of variance, the effect of gender and age on RATS total mean scores was examined. Gender did not have a significant main effect (F (1,435) = 3.67, p = .06), however age group did (F (2,435) = 9.26, p <.001). There was no significant interaction effect of age and gender on RATS mean scores (F (2,435) = 1.20, p =.30). These results imply that the older age groups (17-19 years) reported more PTS reactions than the younger age groups did, irrespective of gender.

Interaction between sample group and gender on RATS scores, controlling for age
An ANCOVA was performed to assess the main effects of sample group and gender and their interaction effect on the RATS total score. Age was controlled for by including it as a covariate, as the preliminary analysis had revealed significant age effects on the RATS scores. There was a main effect for group, (F (4,427) = 2.91, p < .05) and for gender (F (1,427) 6.12, p < .01). The URM group reported significantly (p <.01) higher scores than all of the other groups. Girls reported significantly higher mean RATS scores than boys (p <.01). The interaction between sample group and gender was not significant. It may be therefore concluded that the differences between sample groups and between gender regarding PTS reactions are independent from each other, remaining significant after controlling for age.

Stressful Life Events: interaction of gender and age
Interaction effects of age and gender on mean number of SLE. There was only a main effect of age on the mean number reported on the SLE (F (2,455) = 5.49, p < .01) older adolescents reported to have experienced more SLE's. Gender did not have a significant effect (F (1,455) = 2.46, p = .12). In addition there was a significant interaction effect of age and gender on mean number of SLE (F (2,455) = 3.32, p < .05) implying that older boys reported the highest number of stressful life events.

Interaction between sample group and gender on SLE scores, controlling for age
An ANCOVA was performed to assess the main effects of sample group and gender and their interaction effect on the SLE total score. Age was controlled for by including it as a covariate, as preliminary analyses had revealed significant age effects on the SLE scores. There was a main effect for group, (F (4, 447) = 16.34, p <.001) but not for gender (F (1,447) = 3.11, p = .08). The 1st generation of immigrants reported having experienced significantly less SLE's than the Native group (p <.05). In addition, the URM sample reported to have experienced significantly more SLE's than all other sample groups (p <.001) The Refugee group reported having experienced significantly more SLE's than the 1st and 2nd generation immigrants samples (p <.001). The interaction between sample group and gender was not significant. The difference between sample groups regarding the number of stressful life events remains significant after controlling for age.

Intermeasure correlations
The total score on the SLE correlated significantly and strongly with the total score on the RATS (r (n = 383) = .60, p <.01). The subscales; intrusion (r (n = 452) = .58, p <.01), avoidance/numbing (r (411) = .45, p <.01), and hyper-arousal (r (434) = .51, p <.01) also correlated significantly and strongly with the total SLE score. These correlations signify that the number of stressful events a student has experienced is strongly associated with PTS reactions.

Odds Ratio
The Chi-Square Test with the odds-ratio statistic was utilized to calculate which groups within the total population seem to be at a greater risk for being classified as receiving a PTSD diagnosis (see Measures section for a description of classifying a PTSD with the SLE and RATS). The risk estimate for a PTSD for different demographic variables can be found in Table 3. Girls have a 1.7 larger chance of being classified with a PTSD diagnosis than boys. URM seem to be at a greater risk for developing PTSD than any other group. The oldest age

group has a chance of being classified as having PTSD that is 2 times as large as that of the youngest age group. Dose-response relationship was evident between experiencing any of the stressful life events and being classified with a PTSD, meaning the more stressful life events reported, the higher the risk of a PTSD diagnosis.

Table 3.
Risk Estimate for a Possible PTSD Diagnosis

Chi-Square Test and Odds Ratio Statistic	X^2	Odds Ratio Value	95% Confidence Interval	
			Lower	Upper
Boy /Girl	4.24*	1.71	1.02	2.87
Test groups Native / 2nd Generation	4.68*	4.00	1.05	15.30
Test groups Native / 1st Generation	11.44***	6.40	1.90	21.51
Test groups Native / Refugee	6.52*	4.53	1.29	15.92
Test groups Native / URM #		8.00	2.09	30.61
Age groups; (11-15) / (16-19)	6.92**	1.94	1.18	3.19
Total Number of Stress Life Events; (1-3) / (4-12)	55.79***	7.33	4.12	13.04

Note. NS not significant , # 1cell (25%) has expected count less than 5; the Fisher's exact test was used.
* $p < .05$; **$p < .01$; ***$p < .001$

Regression Analysis

Finally a regression analysis, (method stepwise) was carried out to select the best predictors of traumatic stress reactions. The total score on the RATS was the dependent variable, and gender, age and the total number of SLE's were used as independent predictors (Table 4). The overall multiple correlation was $R=.63$ or 39% of the total variance in RATS mean scores can be explained by the predictors. The total score on the SLE appeared to be the only robust predictor, explaining 36% of the variance alone in RATS total scores.

Table 4.
Regression Analysis; Predicting Posttraumatic Stress Reactions

Total RATS score					
Step 1	B	SE B	β	*Adj. R^2*	*F(df)*
Total Score Stressful Life Events	2.77	.19	.60***	.36	209.68 (1,373)***
Step 2					
Total Score Stressful Life Events	2.70	.19	.59***	.38	113.74 (2,373)***
Age	1.16	.34	.14***		
Step 3					
Total Score Stressful Life Events	2.68	.19	.58***	.39	81.40 (3,373)***
Age	1.17	.33	.14***		
Gender	3.07	.94	.13***		

Note. Potential predictors: gender, age, and total number of experienced stressful life events; Adj., Adjusted .
***$p <.001$

Discussion

The objective of this study was to assess the practical feasibility of using self-report questionnaire with a very heterogeneous cultural population of adolescents. The findings of this study indicate that it is feasible to use self-report questionnaires that have been modified for a culturally diverse group of adolescents in a classical research setting. URM had consistently significant higher scores on the total scores of the RATS and the SLE than other study groups. This means that URM suffer the most from PTS reactions and have experienced the most stressful life events. Moreover, URM also had a 1.8 higher chance of meeting the

criteria of the DSM-IV for PTSD than the Refugee group. Findings in this study support the supposition that URM's are at great risk for developing emotional problems (Sourander, 1998).

Refugee adolescents living with at least one family member in the Netherlands had significantly lower total scores on the RATS and SLE than the URM group. This finding was unexpected since all of the adolescents came from politically unstable countries and have all been at risk for experiencing traumatic events. It seems, however, that the presence of at least one family member living in the Netherlands has a protective effect on the mental health of adolescents. This finding supports the suggestion that reunification of the family should be a primary directive in alleviating the psychological distress of URM, if possible (UNHCR, 1995). If reunification is impossible, a personal guardian should be appointed to an URM in host countries to protect their emotional development.

Girls seem to be at a greater risk of psychological distress than boys because they reported significantly more PTS reactions. A girl, in this study, had a 1.7 higher chance of being classified with a PTSD diagnosis than a boy. This is not an uncommon finding. It has been repeatedly documented that girls report more symptoms of psychological distress and PTSD than boys (Green et al., 1991). Foreign (immigrant and refugee) students had a higher chance of meeting the criteria for a possible PTSD diagnosis than Dutch native adolescents. The negative stressful reactions to immigrating such as; acculturation stress, language difficulties, loss of a social network should lessen over time as a young person is able to adjust to the new situation. However, the effect of time can only be properly assessed in a longitudinal study.

This study provides useful information for clinicians who treat URM. It is very clear that from all of the immigrant adolescents groups, URM can be considered as the group with the highest risk of experiencing psychological distress. PTS reactions seem to be predominant in this population. The period of time that a student had been living in the Netherlands was found to be a protective factor, along with being a boy and being in the age group of 11-13 years. Becker et al. (1999) found that PTS symptoms decreased over time with 10 Bosnian adolescents that were relocated in the United States. Other researchers suggest that the environment and lack of familial support of the adolescents played a crucial role in the development of PTSD symptoms (Beckham, Braxton, Kulder, Feldman, Lytle, & Palmer, 1997; Green et al., 1991; Macksoud & Aber, 1996).

Preventive and curative measures should be taken to provide a broad range of intervention programs and psychosocial support in low-threshold MHC services (in schools, community activities) so that the coping skills and personal resources of the adolescent could be strengthened. Adequate guidance and supervision that is culturally sensitive would be of the utmost importance in relieving some of the acculturation stress, which Sack et al. (1996) found to be strongly related to PTSD symptomatology and other forms of stress, which could have adverse effects on the mental health of adolescents.

The uncertainty and the chaotic environment in which all refugees live can contribute to high stress levels and lead to the high amounts of psychological distress that has been recorded in this study. Further investigation is needed to evaluate if the instruments that were used in this study will be able to help MHC professionals screen culturally heterogeneous adolescent populations for psychological dysfunction. It is crucial that groups of adolescents that are at high risk for the development of psychopathology are detected in an early stage, so that psychological distress is minimized and appropriate therapeutic interventions can be made. The psychosocial needs of immigrant and refugee adolescent populations should be accurately and adequately addressed to promote healthy integration into the community of host countries.

This study was conducted using newly developed psychological instruments. Although the initial evaluation of the instruments shows that they appear to be reliable with multicultural adolescents, further investigation into their psychometric properties is necessary. There was no translated and reliable standardized diagnostic interview available in the languages of the students to assess the criterion validity of the RATS and the reporting of trauma on the SLE was retrospective with no independent corroboration of the alleged traumatic event(s). The only available source of information in determining the severity of psychopathology of the adolescents was the adolescents themselves. In addition to standardized interviews, information about the behavior and mental health status of the

adolescents from parents, caregivers, teachers and other sources could be useful in the validation process.

Furthermore, the results have not been compared to scores of clinical populations. Such a comparison could have provided insight into the question whether the URM were experiencing equally severe or even more severe symptoms than native adolescents that have been or are currently under treatment for severe trauma-related psychopathology. The groups were not of equivalent size. The 1st generation immigrant group was almost 3 times as large as the URM group. The Dutch population group, having a mean age of 13, was also very young in comparison to the URM group and the other groups, having a mean age of 15. Therefore, results dealing with age should be interpreted with caution. Finally, this study was cross-sectional. Only a longitudinal study can provide more insight into the effect of time, treatment or interventions on the mental health and posttraumatic stress reactions of refugee adolescents.