Brief Reports

English Language Skills in a Group of Previously Traumatized Khmer Adolescent Refugees

Clinical and research work with Cambodian refugee populations over the past decade (Kinzie and Sack, 1991; Mollica et al., 1987; Sack et al., 1993; Westermeyer et al., 1983) has repeatedly underscored the importance of the cultural relevance of interview questions and the language skills of the refugee subjects in understanding what one hears. The interpreter is a central person in this communicative process. Issues of training and the use of interpreters has been well described (Freed, 1988; Rechtman, 1992; Westermeyer, 1983). As acculturation proceeds and the refugee subjects become conversationally fluent in English, the question of whether or not to include an interpreter in the interview encounter becomes relevant. In addition, the effect that severe trauma may have on cognitive functioning itself in children and adolescents has only recently been raised (Pynoos, 1987; Terr, 1983). This pilot effort, a separate pretest study for a larger epidemiological survey on the effects of trauma in the lives of Cambodian youth (Sack et al., 1993), addressed issues germane to all cross-cultural inquiries:

1. Is fluency in conversational English reflected in scores on standard cognitive tests of language ability?
2. Do adolescent refugees who have suffered both severe trauma and associated malnutrition as children show residual brain impairment on a screening neurological assessment?
3. Does having a clinical diagnosis of posttraumatic stress disorder (PTSD) affect one's ability to acquire new language skills in another culture?

Methods

Subjects. Thirty-nine Khmer subjects with a mean age (± SD) of 17.7 ± 3.6 years at present and 11.4 ± 4.4 years old at the time of entry into the United States formed a sample of convenience. Both nonclinical and clinical youth were recruited through the schools and from the university psychiatric refugee clinics.

Instruments. Interviews took approximately 3 hours and were conducted in English. In addition to the instruments and data reported here, these subjects also received a number of other instruments reported previously (Sack et al., 1993). Master's level Caucasian clinicians were trained by the authors (G. N. C. and W. H. S.) to a symptom reliability level of Kappa ≥ .80 on two consecutive practice interviews prior to conducting study interviews. A Cambodian interpreter was always present.

A lifetime prevalence diagnosis of PTSD was generated using the corresponding section of the adolescent version of the Diagnostic Instrument for Children and Adolescents (Weldner et al., 1987). Eighteen subjects (46.2%) were diagnosed with either a full DSM-III-R (American Psychiatric Association, 1987) diagnosis of PTSD, or with five or more PTSD symptoms. The remaining 21 did not receive a diagnosis of PTSD. The prevalence of PTSD in this sample is similar to other samples reported by us (Kinzie et al., 1986; Sack et al., 1993). Of these subjects, 13.6% also met DSM-IV-R criteria for major depression. However, depression was not examined in this report.

To measure intelligence, subjects were administered the Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn and Dunn, 1981) and the Vocabulary subtest of the Stanford-Binet Test of Intelligence (Thorndike et al., 1986). The PPVT-R consists of 175 nonverbal multiple-choice items designed to assess receptive vocabulary aptitude. While the complete Stanford-Binet Vocabulary subtest consists of 46 total items arranged in order of increasing difficulty, only the latter 32 words were employed in the present investigation, representing the starting point for nominal subjects aged 7 to 8 years old. Both scales are normed to have a population mean of 100.

To screen for evidence of organicity, subjects were administered the Trails A and B tests (Reitan and Davison, 1974; Rourke and Finlayson, 1975). The Trails tests consist of two connect-the-dots series of randomly located circles on a standard piece of paper, presenting first an alphabetic series in Trail A (e.g., A, B, C, etc.), and then an alternating alphabetic and numeric series in Trail B (A, 1, B, 2, etc.). Subjects are instructed to draw a line connecting the circles in the appropriate sequence, touching each circle in turn. This test is scored both for time and number of sequencing or drawing errors.

At the end of the diagnostic interview, the Master's-level clinician made a global rating of the amount of the interview that had been conducted in English (1 = 0% to 5 = 100%), representing English language fluency.

Results

The mean (± SD) estimated PPVT-R ratio IQ score for this sample was 49.7 ± 22.4. The mean full scale Stanford-Binet IQ score, estimated from the Vocabulary subtest, was 75.2 ± 20.1. Table 1 presents the results of the Trail A and B tests for the Cambodian sample; for comparison purposes, norms are also provided for a normal group of Caucasian adolescents, ages 15 to 20, from Yeudall et al. (1987). The Trails A and B test did not significantly correlate with time in the United States, the Stanford-Binet Vocabulary subtest, the PPVT-R, English language usage ratings, or total PTSD symptoms.

As expected, the Stanford-Binet and PPVT-R were highly intercorrelated (r = .92). The Stanford-Binet Vocabulary and PPVT-R scores were also positively correlated with time in the United States (r = .79 and r = .82, respectively) and the interviewer English language rating (r = .69, r = .71, respectively).

*Because the PPVT-R scoring key does not provide scaled deviation IQ scores for the low range of raw scores obtained from the Khmer subjects, a ratio PPVT-R IQ score was calculated by generating mental age (MA) scores from the PPVT-R manual, dividing mental age by the subject's chronological age (CA), then multiplying the result by 100 (ratio IQ = MA/CA × 100).
respective). All correlations were significant at the \( p < .0001 \) level. Time in the United States was also positively correlated with English language rating (\( r = .62, p < .001 \)).

Finally, the relationship of IQ and the subjects’ PTSD diagnostic status was examined. Subjects diagnosed with PTSD received a mean PPVT-R ratio IQ score of 38.7 ± 18.5, significantly lower than the mean PPVT-R ratio IQ score of 57.5 ± 22.2 obtained for subjects without a PTSD diagnosis (\( t(27) = 2.40, p < .05 \)). However, this finding was not replicated with the Stanford-Binet Vocabulary subtest. Subjects without PTSD received a mean English language rating of 4.57 ± .7 significantly higher than the mean rating of 3.78 ± 1.5 reported for subjects with PTSD (\( t(37) = 2.06, p < .05 \)).

**Discussion**

The central finding is the low scores these Khmer adolescents obtained on generally accepted tests of intelligence. While many seemed relatively fluent in conversational English, only three subjects had IQ scores on the PPVT-R approaching the normative mean. Seventy-five percent scored below an IQ of 70, frequently employed as a criterion for mental retardation. While there was a strong correlation between the interview rater and scores on the PPVT-R and Stanford-Binet Vocabulary subtest, a discrepancy remained in the “distance” between the two: Interviewers were always inclined to interpret language abilities decidedly higher than the formal tests showed.

While the high intercorrelation of the PPVT-R and Stanford-Binet Vocabulary subtest suggests that they are measuring the same construct, clearly these tests cannot be interpreted solely as measures of intelligence, but rather as measures of proficiency in English language and acculturation. Although the PPVT-R was selected as a measure of intelligence that would be relatively language-free, it is apparent that the picture cards are not culture-free (or culture-fair). They contain representations of objects unfamiliar to Cambodian youth.

No evidence was obtained from the results of the Trail Making tests A and B to suggest that residual organic brain damage was contributing to the results of the cognitive tests of intelligence. It was reassuring that the finding of the Trail A and B tests appeared to be measuring a different construct than the PPVT-R and the Stanford-Binet Vocabulary subtest. Thus it would appear that the earlier war trauma and malnutrition had not weakened the overall cognitive skills of this sample. It is possible that more subtle intellectual impairments may have gone undetected by this screening instrument, and could have influenced the low IQ scores. A more comprehensive neurological assessment would be needed to pursue that issue.

It is more difficult to interpret the inconsistent relationship between language abilities and a diagnosis of PTSD. It is possible that a number of other factors play heavily into this finding. In an earlier study, a significant relationship between the prevalence of PTSD and time in the United States was found (Sack et al., 1993). Having PTSD may inhibit or isolate a young person from participating in acculturation activities and hence in acquiring language skills. More study in this area is needed.

The functional status of this sample has been measured, but the results are not yet fully analyzed. Nevertheless, our overall impression is that this is a relatively high-functioning group, remarkably free of comorbid psychopathology other than depression (Kinzie et al., 1986; Sack et al., 1993).

This study has a number of shortcomings that dictate caution in interpreting findings. First, the sample is both small and nonrandom. Thus, findings may not, for instance, easily generalize to the entire Cambodian adolescent refugee community. Subjects from clinical settings may be better able to acknowledge symptoms. The cognitive instruments used were not tested for their reliability over time or between interviewers. Likewise, since no independent measures of these constructs exist, no validity studies could be done. Nevertheless, this is the first empirical data we know of that attempts to quantify English language abilities in a group of Cambodian adolescent refugees. These findings will require subsequent replication in a larger random sample. It would appear to have clinical relevance for mental health professionals working with this group, as well as research implications for those planning future studies with Khmer and other Asian youth. The data do suggest that one must exercise caution in prematurely removing interpreters from the interview encounter with Southeast Asian refugee adolescents.

**References**


The Relationship of Intrusive and Avoidant Thoughts about a Stressor to Daydreaming Styles

This report presents the results of a preliminary study of the relationship of intrusive and avoidant thoughts about a stressor to daydreaming. Intrusive memories of a traumatic event, and avoidance of these memories, are common experiences following exposure to severe stressors. Current research is examining whether either plays a role in prolonging the response to trauma (Baum, 1990). Horowitz (1976; Horowitz et al., 1979) has suggested that avoidance involves general numbing and constriction of thought, while intrusion involves a state of mind characterized by repeated vivid thoughts, pangs of emotion, and hypervigilance. An important question is: What relationship may exist between having or avoiding specific reminiscent memories and more general states of mind such as those described by Horowitz?

Daydreaming, as defined by Singer and Antrobus (1970), is any conscious train of thought, imagery, or interior monologue that may occur as attention shifts away from an ongoing task or the external perceptual situation. Self-report of daydreaming, therefore, provides a measure of general, as opposed to trauma-related, spontaneous conscious imaginal processes. Daydreaming has been found to be more vivid in Vietnam combat veterans (Brett, 1991), but it has not been studied extensively or across diverse subject populations. This study examined whether intrusive and avoidant thought were related to daydreaming in a normal population. Of special interest was whether intrusion or avoidance were related to daydreaming vividness, how real daydreams seemed, the affective tone of daydreams, and the function of daydreaming.

**Method**

Forty subjects (21 men and 19 women) were recruited through newspaper advertisements for a study of cognitive processes. The subjects completed the following well-validated self-report scales: the Impact of Events Scale (IES); the Imagination Processes Inventory (IPI); the Multiple Affect Adjective Checklist (MAACL) depression, anger, and fear subscales; and the Taylor Manifest Anxiety Scale (Taylor). They were then correlated. The IES was developed and validated by Horowitz and his colleagues (1979) on both normal and clinical populations (Zilberg et al., 1982). Subjects rate how frequently each of a set of statements reflecting intrusive or avoidant thoughts had occurred to them in the last week with reference to a specific stressor. In our study, subjects were instructed to choose any significant personal stressor.

The IPI is a 344-item self-report measure of the content, affective tone, and formal characteristics of daydreams, as well as of attentional processes related to daydreaming (Singer and Antrobus, 1970). Giambra (1980) later factor-analyzed the IPI and validated the 33 independent subscales he found on a sample of over 1300 people. For this study, a subset of Giambra's factors that seemed most relevant to stress responding were selected, including subscales measuring vividness of imagery, affective tone of imagery, absorption in imagery, attentional control, and function of imagery.

For the MAACL (Radloff and Helmreich, 1966), subjects are instructed to rate whether each of 67 adjectives describing moods characterize their feelings "today." Depression, anger, and fear subscales were used here. The Taylor Manifest Anxiety Scale (Taylor, 1953) measures trait anxiety.

**Results and Discussion**

Intrusive and avoidant thoughts about a specific stressor correlated with general daydreaming styles, but did so differentially. The IES measures of intrusion and avoidance correlated (all reported correlations, unless otherwise noted, are significant, p < .05) with different daydreaming subscales. As IES-avoidance scores increased, subjects rated themselves on the IPI as more easily bored (r = .40), more likely to spend greater amounts of time daydreaming (r = .27), and less likely to solve problems in their daydreaming (r = .25, p = .059). Thus, consistent with Horowitz (1970), avoidance of a specific stressor was associated with measures suggesting general tendencies to avoidance experience.

Intrusive thought was not correlated with any of these measures. Instead, intrusive thought correlated with vivid