RESEARCH

The prevalence of psychiatric disorders among Vietnamese children and adolescents

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ABSTRACT

Objective: To determine the prevalence of psychiatric disorders among Vietnamese children and adolescents living in Perth, Western Australia.

Design, participants and setting: A list of Vietnamese households was drawn from Perth telephone directories. A computer program generated a systematic probability sample of households. All children and adolescents aged 9–17 in these households were invited to participate in the study. Children and their parents were interviewed in their home using the Diagnostic Interview Schedule for Children, version 2.3 (DISC-2.3). The child version (DISC-C) was used for children and the parent version (DISC-P) for adults. The study was conducted between July and December 1997.

Main outcome measures: The prevalence of psychiatric disorders in children and adolescents, based on DISC-C and DISC-P data.

Results: Results were based on the 519 children (89.2%) for whom complete data were available. Twenty-three parents (4.4%) reported that their child had one or more disorders on the DISC-P, 82 children (15.8%) reported one or more disorders on the DISC-C, and 18.3% of children were reported to have a disorder on either the DISC-C or the DISC-P. Parent–child concordance on specific diagnoses was very low (0.6%). The great majority of disorders reported were anxiety disorders, especially simple and social phobias.

Conclusions: The combined prevalence of psychiatric disorders among Vietnamese children aged 9–17 was similar to that found among children in Western Australia's general population. Vietnamese children in our study were much more likely to report symptoms of a psychiatric disorder than were their parents.

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MANY VIETNAMESE IMMIGRANTS have been deeply affected by traumatic post-war and migratory events and the stresses inherent in making the transition between vastly different cultural traditions.[1-3] Such experiences may lead to psychological problems. Studies of psychiatric disorders among children and adolescents in the general Australian population[4-7] report prevalence rates of 14%–21% and suggest higher rates among refugee than non-refugee children.

In our study we sought to determine the prevalence of psychiatric disorders in Vietnamese children and adolescents living in Perth, Western Australia. Such data are needed in order to plan effectively for the mental health needs of this important ethnic minority population.[8]

Two previous studies[2,3] of the prevalence of psychiatric disorders among the children of Vietnamese refugees have produced somewhat contradictory results. Both studies interviewed children but not parents. Krupinski and Burrows[3] reported a prevalence of 18.2% for "definite disorders" and 32.0% for "definite and probable disorders" among a cohort of Vietnamese children, adolescents and young adults newly arrived in Victoria. Initially, these rates were higher than those among native-born Australians. However, two years after resettlement, the rates had fallen to 4.4% and 6.6%, respectively, which were substantially lower than those of the general population.[3]

Holzer et al[2] assessed mental disorders among Vietnamese children aged 10–18 years living in Texas.[2] The study reported a 36.0% prevalence of psychiatric disorders, which was higher than that found in community-based populations of children in developed countries (typically about 20%[9]).

Studies of psychiatric disorders in refugee children from various other countries who have resettled abroad[10-13] generally report a higher prevalence rate of psychiatric disorders in these children than in non-refugee children living in the same countries.

For simplicity, we use the term "children" to refer to both children and adolescents in this article.

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METHODS

Participants and setting

The study was conducted between July and December 1997. A list of Vietnamese households was generated from tele-

1: Descriptive and comparative statistics relating to Vietnamese children aged 9–17 in Perth (*n*=582)

	Proportion of study sample
Demographic and background variables	
Male	51.7%
Born in Vietnam	53.8%
Arrived in Australia before 1980	37.7%
Arrived in Australia between 1990 and 1995	56.9%
Arrived in Australia after 1995	5.3%
Lived in refugee camp	35.8%
Witnessed or experienced traumatic events	5.0%
Parental education	
Primary schooling only	25.2% (father); 34.2% (mother)
Some secondary schooling	26.2% (father); 31.2% (mother)
Completed secondary schooling	24.9% (father); 23.3% (mother)
Post-secondary schooling	19% (father); 5.8% (mother)
Acculturation indices	
Speaks English well or very well	92.2%
School performance	
Upper third of class	40.3%
Middle third of class	57.9%
Bottom third of class	1.7%
Friends	
Mostly Australian	24.6%
Mostly Vietnamese	24.6%
Equal numbers of each	43.3%
Adapted easily to Australian life	95.6%
Health indices	
Excellent or good health	96.5%
Chronic medical problem	3.1%
Activities limited by health problem	1.2%
Taking prescription medication	3.1%
Mental health	
Excellent	40.1%
Good	56.1%
Fair	3.1%
Poor	0.5%
Activities limited by mental health problem	0.9%
Received mental health treatment in past six months	0.9%

phone directories for the Perth metropolitan area, based on the 100 most common Vietnamese names.[2] From this list, a computer program selected a systematic probability sample. (As telephone density in Western Australia is about 94%, this method was judged to offer a relatively unbiased sample of the Vietnamese community.[6])

The households selected were contacted by telephone and asked if they would be willing to take part in the study. Initial approaches were made in Vietnamese. If there were Vietnamese children aged between 9 and 17 in the household, oral and written consent for their participation was obtained.

All children aged 9–17 who were willing to participate were interviewed, as well as their parents. The interviews were conducted face-to-face, in private, in subjects' homes.

Study instruments

Interviews were conducted by bilingual lay interviewers using the Diagnostic Interview Schedule for Children, version 2.3 (DISC-2.3) and a demographic questionnaire modelled on the Western Australian Child Health Survey.[6] The DISC-2.3 is a structured diagnostic interview based on the revised edition of DSM-III (DSM-III-R).[14] It is designed for administration by trained lay interviewers.

The child version of DISC-2.3 (DISC-C) was used for the children and the parent version (DISC-P) for parents.

Cultural and linguistic issues

Before enrolling subjects in the study, the chief investigators met with leaders of the Vietnamese community to enlist their support and cooperation. They were helpful both in suggesting ways to inform the Vietnamese community of the study's objectives and in recommending bilingual, bicultural Vietnamese people to function as lay interviewers. Interviewers were recruited from the Vietnamese community and trained in the use of the DISC-2.3 and the background questionnaire by the chief investigators.

The DISC-2.3 and demographic questionnaire were translated into Vietnamese and back-translated into English to check for accuracy and comprehensibility. A panel of Vietnamese psychologists, a child psychiatrist in Hanoi and an accredited Vietnamese translator and psychologist from Perth reviewed the final translation. The instruments were piloted successfully in Hanoi by lay interviewers trained by the study's chief investigators.

Data analysis

Data were analysed using a scoring program provided by the DISC Study Group at Columbia University. Appropriate *t*-tests and regression analyses of the DISC-P and DISC-C data were conducted. Because of problems related to the scoring program for the schizophrenia-related disorders, these disorders were scored manually.

2: Number of DSM-III-R disorders[14] (%, 95% CI) in Vietnamese children aged 9–17 in Perth, reported by parents (DISC-P) and children (DISC-C) (*n*=519)

DISC diagnosis	DISC-P	DISC-C
Attention-deficit hyperactivity disorder	2 (0.39%, 0.05%–1.39%)	2 (0.39%, 0.05%–1.39%)
Agoraphobia	0	9 (1.73%, 0.80%–3.27%)*
Anorexia	0	2 (0.39%, 0.05%–1.39%)
Avoidant disorder	3 (0.58%, 0.12%–1.68%)	4 (0.77%, 0.21%–1.96%)
Bulimia	0	1 (0.19%, 0–1.10%)
Conduct disorder	0	2 (0.39%, 0.05%–1.39%)
Major depression	0	1 (0.19%, 0–1.10%)
Diurnal enuresis	0	1 (0.19%, 0–1.10%)
Dysthymia	0	1 (0.19%, 0–1.10%)
Generalised anxiety	0	1 (0.19%, 0–1.10%)
Nocturnal enuresis	1 (0.19%, 0–1.10%)	0
Obsessive compulsive disorder	0	3 (0.58%, 0.12%–1.68%)
Overanxious disorder	0	5 (0.96%, 0.31%–2.23%)
Panic and agoraphobia	0	8 (1.54%, 0.67%–3.01%)*
Schizophrenia-related disorders	0	4 (0.77%, 0.21%–1.96%)
Separation anxiety	1 (0.19%, 0–1.10%)	3 (0.58%, 0.12%–1.68%)
Simple phobia	17 (3.30%, 1.90%–5.20%)	40 (7.70%, 5.56%–10.35%)*
Social phobia	1 (0.19%, 0–1.10%)	41 (7.90%, 5.73%–10.56%)*
Total number of diagnoses	25	129
Total number of children with a diagnosis	23/519 (4.40%, 2.80%–6.60%)	82/519 (15.80%, 12.80%–19.20%)*

DISC = Diagnostic Interview Schedule for Children: parent version (DISC-P), child version (DISC-C).
*Difference between DISC-P and DISC-C results statistically significant ($P<0.05$).

Number of disorders reported per child	
DISC-P	**DISC-C**
No disorder, 496 (95.5%); one disorder, 21 (4.0%); two disorders, 2 (0.4%)	No disorders, 437 (84.2%); one disorder, 52 (10.0%); two disorders, 19 (3.7%); three disorders, 7 (1.3%); four disorders, 3 (0.6%); five disorders, 1 (0.2%).

Ethics approval

The project was reviewed and approved by the Ethics Committee of the Princess Margaret Hospital for Children, Perth.

RESULTS

Descriptive and comparative data

Of the Vietnamese households contacted that had children aged 9–17, 283 (93.75%) agreed to participate. The study required a minimum of 450 subjects to identify disorders with a prevalence of 1% or greater. From the 283 participating households, a total of 582 children and adolescents were enrolled. The adults providing information about the children were 64.1% mothers, 28.9% fathers, 6.6% mothers and fathers, and 0.4% others.

Descriptive and comparative data are summarised in Box 1. Over half the children were born in Vietnam and over half arrived in Australia between 1990 and 1995. Almost all were rated by their parents as having adapted easily to Australian life. Almost all parents described their children's health and mental health as excellent or good.

The majority of parents had not completed secondary school. The most common paternal occupations were unemployed, farm and factory work, and self-employed. The most common maternal occupations were homemaker, sewing and factory work.

Psychiatric disorders reported

Of the 582 children in the sample, complete data from the DISC-C and DISC-P interviews were available for 519 (89.2%) (see Box 2).

Based on DISC-P results, 23 parents (4.4%) reported one or more psychiatric disorders in their child, whereas 82 children (15.8%) reported one or more disorders on the DISC-C. Children were thus over three times more likely to report a disorder on the DISC-C than were their parents on the DISC-P.

The great majority of disorders reported by both children and parents were anxiety disorders, especially simple and social phobias. Anxiety disorders accounted for 85% of disorders described by children and 88% of disorders described by parents.

Parent–child concordance on DISC-2.3 diagnoses

For 424 of the children (81.7%), neither the DISC-P nor the DISC-C revealed any psychiatric disorders. For 10 children (2%), both the DISC-P and the DISC-C indicated the presence of a psychiatric disorder, but DISC-P and DISC-C results concurred in the diagnosis for only three of these children (0.6% of the total sample). Thirteen children (2.4%) had a disorder according to the DISC-P but not the DISC-C, while 72 (13.9%) had a disorder according to the DISC-C but not the DISC-P.

No differences were found in the rates of disorder reported for children born in Vietnam, Australia or other countries.

DISCUSSION

The 18.3% combined prevalence (DISC-C or DISC-P) of psychiatric disorders in our study was similar to the 17.9% prevalence of psychiatric problems for the general child and adolescent population of Western Australia.[6] It is also similar to prevalence rates in other parts of Australia[4,5,7] and other Western countries.[9] It is substantially lower than the prevalence of disorders found among Vietnamese children in the Texan[2] and initial Victorian[3] studies. On the other hand, it is much higher

than the rate of disorders found at two years' follow-up in the Victorian study.[3]

Our subjects' more limited exposure to the traumas of war and migration (only 5% had experienced or witnessed traumatic events) and their longer time in Australia may help explain the lower rate of disorders found in our study compared with the Texan study and the Victorian initial sample. Furthermore, our study was conducted about 10 years after the other two. All of the children in the Victorian study and 91% of those in the Texas study were born in Vietnam, compared with 53.8% in ours.[2,3] Only 5.3% of participants in our study had lived in their new homeland for two years or less, compared with 21.3% in the Texan study and 100% in the Victorian study. There appears to be a direct and negative correlation between the length of time Vietnamese children have spent in their new homeland and the prevalence of mental disorders experienced by them.[3]

There are several other possible reasons for the lower rate of psychiatric disorders found in our study. One may have been the relative size of the Vietnamese populations assessed. At the time the Texan study[2] was conducted there were about 51 300 Vietnamese living in Texas.[2] At the time of our study, there were about 9300 Vietnamese living in Perth.[8] Thus, it was more likely that our interviewers would know the people they interviewed, which may have made some parents reluctant to disclose potentially negative information.[1,15-17] Another reason may have been the inclusion of more than one child from each household. Parents had to complete a separate DISC-P for each child, and may have learned that saying "no" to interview queries about symptoms would reduce the amount of time required for each interview. Finally, the inclusion in our study of children less than 11 years of age, for whom the DISC may be less reliable, may have affected prevalence rates.[18]

Given the high rates of disruptive behaviour disorders in Australia (eg, the prevalence rate of attention-deficit hyperactivity disorder is about 7.5%[19]), it is surprising that only two Vietnamese parents and children reported them. There are several possible explanations for this: Vietnamese parents may not want to acknowledge their children's unacceptable social behaviours, they may be more tolerant of children's mental health problems than parents in Western countries,[20] or disruptive behaviour disorders may be less common among Vietnamese children.

Vietnamese parents reported a very low rate (4.4%) of DSM-III-R disorders and an even lower rate (0.5%) of poor mental health in their children. This reinforces previous findings that Vietnamese and non-Vietnamese Australian parents may have different concepts of what behaviours and feelings constitute a "psychiatric problem" in a child.[1]

The very low concurrence between the disorders reported by parents and children in our study is a problem shared with other studies using the DISC-2.3.[21] It is believed to reflect "situation-specific problems, a child's experience of subjective states of distress that is not shared with the parent … [and] differences in value systems and in the threshold for judging a behavior to be abnormal".[21] Unusual, however, is the large discrepancy between child- and parent-reported rates of disorder. This may be related to parental under-reporting. It may also reflect the inclusion of the diagnoses of simple and social phobias — conditions more likely to be recognised and reported by children than parents.

The high rate of anxiety disorders in our study may reflect problems in the DSM-III-R, on which the DISC-2.3 is based.[21] Unlike the later version, DSM-IV, whose diagnoses require significant functional impairment in addition to symptom criteria, the DSM-III-R diagnoses do not, and may lead to an overestimation of the prevalence of anxiety disorders.[21]

Finally, the DISC-2.3 reflects Western concepts of psychiatric disorders. While it has shown considerable utility in cross-cultural populations, it may embody concepts that do not reflect a Vietnamese understanding of child mental illness.[1] Furthermore, the Vietnamese people involved in translating and testing the instruments were almost all urban-dwellers and university graduates, unlike the predominantly rural-origin, non-university-educated Vietnamese who were the parents of our subjects.

Our results suggest several important considerations for clinicians treating the children of Vietnamese refugees and immigrants. The prevalence of psychiatric disorders among them is similar to the rate found among native-born children in Australia and other Western countries. In addition, Vietnamese children are more likely to report anxiety disorders than other psychiatric disorders. Finally, Vietnamese parents are unlikely to recognise, or, if recognised, to report, child psychiatric disorders as they are defined in Western countries. These findings emphasise the need to develop clinical services that are sensitive to Vietnamese cultural traditions that may affect the recognition, reporting and treatment of child and adolescent psychiatric disorders.

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COMPETING INTERESTS

None identified.

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