

International Journal of Social Psychiatry

<http://isp.sagepub.com>

Estimating Mental Distress in Vietnam: the Use of the SRQ-20

Lisa K. Richardson, Ananda B. Amstadter, Dean G. Kilpatrick, Mario T. Gaboury, Trinh Luong Tran, Lam Tu Trung, Nguyen Thanh Tam, Tran Tuan, La Thi Bui, Tran Thu Ha, Tran Duc Thach and Ron Acierno

Int J Soc Psychiatry 2010; 56; 133

DOI: 10.1177/0020764008099554

The online version of this article can be found at:
<http://isp.sagepub.com/cgi/content/abstract/56/2/133>

Published by:



<http://www.sagepublications.com>

Additional services and information for *International Journal of Social Psychiatry* can be found at:

Email Alerts: <http://isp.sagepub.com/cgi/alerts>

Subscriptions: <http://isp.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.co.uk/journalsPermissions.nav>

Citations <http://isp.sagepub.com/cgi/content/refs/56/2/133>

ESTIMATING MENTAL DISTRESS IN VIETNAM:
THE USE OF THE SRQ-20

LISA K. RICHARDSON, ANANDA B. AMSTADTER, DEAN G. KILPATRICK,
MARIO T. GABOURY, TRINH LUONG TRAN, LAM TU TRUNG,
NGUYEN THANH TAM, TRAN TUAN, LA THI BUOI, TRAN THU HA,
TRAN DUC THACH & RON ACIERNO

ABSTRACT

Background: Community-based estimates of psychopathology prevalence in developing countries such as Vietnam, are needed to reduce presumed significant burden of poor mental health.

Aims: This study derived population-based prevalence estimates of mental distress, as measured by the SRQ-20, in a community sample of 4,981 adults living in Vietnam. This study also examined correlates of mental distress based on SRQ-20 caseness indications. Risk and protective factors were identified in terms of their unique contribution to caseness.

Results: Using a cut-off of 7/8, 19.2% of the sample was considered to be a probable case ($n = 954$), with females endorsing more items than males. Marital status and employment status were not associated with mental health distress. Higher wealth, endorsing religious affiliation, and self-reports of good health were associated with lower SRQ-20 scores. Age and being female were associated with higher SRQ-20 scores.

Conclusions: A single item was as adequate a measure of wealth as multi-item rating scales. Our estimate of mental distress using the SRQ-20 is much greater than that of other studies, and in contrast to western prevalence studies, age was not a protective factor in this study. The SRQ-20 is a brief, cost-effective and reasonably valid measure of both community and individual mental distress.

Key words: community estimate, mental distress, mental health, Self Reporting Questionnaire 20, SRQ-20, Vietnam

INTRODUCTION

Community-based estimates of psychopathology prevalence in developing countries such as Vietnam are needed to inform social policy and reduce the presumed significant burden of poor mental health to global morbidity (Harpham *et al.*, 2003; Patel, 2007). It is estimated that less than 1% of the total health budget in Vietnam is spent on mental health problems (Patel, 2007), the extent

of which are largely unknown (Harpham & Tuan, 2006). The World Health Organization (WHO) developed the Self Reporting Questionnaire 20 (SRQ-20), as an effective and low-cost screening measure of mental health, deliverable to populations with low literacy and low infrastructure (WHO, 1994). This measure has been validated in two studies of community mental health in Vietnam, and the WHO formally recommends the use of the SRQ-20 as a valid and adaptable method for evaluating mental distress (WHO, 1994).

Estimates of mental health disorders in Vietnam

A Vietnamese language National Institute of Mental Health study has estimated the prevalence of general mental disorders in Vietnam at 10–15%, with higher rates reported in urban areas (Nghì, 2004 in Giang, 2006). A WHO face-to-face, multi-site intervention study on suicidal behaviour in Hanoi, Vietnam, has also estimated that lifetime prevalence of suicidal ideation was approximately 20% (Thanh *et al.*, 2006).

Giang (2006) used the SRQ-20 to estimate the prevalence of mental health problems, self-reported illness and alcohol use of 3,423 randomly selected persons living in the Bavi rural province of North Vietnam. The optimal cut-off point for the SRQ-20 has been generally reported to be 7/8 (Harpham *et al.*, 2003; Sartorius & Janca, 1996; WHO, 1994). In this study, a score of 6/7 was considered optimal and produced 85% sensitivity and 61% specificity. The overall presence of 'mental distress', on the Vietnamese version of the SRQ-20 was 3.9% for men, 6.8% for women and 5.4% overall. This was a much lower estimate of mental health concerns than anticipated, based on previously reported 10–15% national prevalence estimates (i.e., Nghì, 2004 in Giang, 2006) or estimates from Indonesia of 20% (Patel & Kleinman, 2003).

Age, gender, exposure to conflicts and disaster, major physical disease and poverty are predictive of poor mental health in other countries (WHO, 2001), however their relationship to poor mental health in a Vietnamese population is less clearly established. For example, in many western studies, older age is a protective factor against psychiatric diagnoses, with increased prevalence of mental disorders in younger age groups (e.g. Kessler *et al.*, 2003; 2005), and age is consistently protective against developing emotional problems secondary to exposure to potentially traumatic events (Acierno *et al.*, 2006). In Giang's (2006) study, mental distress increased with age, but only significantly for women. In addition, illiterate men were eight times more likely to suffer from mental distress compared to men who had high school or higher education (OR = 8.0; CI: 1.3–48.5). After controlling for other background factors, longer length of employment also offered protection against mental distress for men.

Use of the SRQ-20

The SRQ-20 is a self- or interviewer-administered measure of 'psychological distress'. It does not provide, nor is it a substitute for, a clinical diagnosis, but it can provide general prevalence estimates of mental health problems. It is also an effective screen for determining the likelihood of psychiatric disturbance in an individual (Harpham *et al.*, 2003). Tuan *et al.* (2004) completed the first reliability and validity study of the SRQ-20 in Vietnam based on a double-blind assessment of 66 rural women of Vietnam, using a standardized 'in-depth neurotic appraisal' psychiatrist interview as the referent. Using Receiver Operating Characteristic (ROC) analysis, probability of correctly diagnosed cases was 79%, with mean sensitivity of 73% and specificity of 82% when cut-off was optimized at 7/8. The area under the ROC curve (AUC), which is used as an indicator of test performance, was calculated at average as 0.86 (95% CI 0.75 to 0.94), indicating that the validity of the SRQ-20 was acceptable in comparison to in-depth interviews as a screen.

Giang and colleagues (2006) also reported on the reliability/validity of a Vietnamese version of the SRQ-20 with a psychiatrist's CIDI diagnosis as the validity criterion. In a district hospital sample ($n = 52$) the optimal cut-off score was 5/6 with a sensitivity of 85%, a specificity of 46% and an AUC of 0.74 (95% CI 0.59 to 0.89). In the community sample ($n = 485$) cut-off was 6/7 with a sensitivity of 85%, specificity of 61% and AUC of 0.86 (95% CI 0.81 to 0.93). The SRQ-20 performed better in terms of AUC for the youngest adult groups and those who were single compared to widowed or divorced people, but required a higher threshold to identify probable cases in the younger adult group. Although the Giang *et al.* (2006) study represents the largest validation study of the SRQ-20 in a Vietnamese population, the optimal cut-off points reported were inconsistent between the rural community and hospital samples, and also by age group. Harphams *et al.*'s (2003) study by contrast, represents a smaller validation study. However, the optimal cut-off point of 7/8 is consistent with the bulk of SRQ-20 research in developing countries (for review see Harpham *et al.*, 2003; WHO, 1994), and achieved higher specificity (and therefore lower likelihood of misclassification).

The purpose of the present investigation was to derive population-based prevalence estimates of mental distress, as measured by the SRQ-20, in a community sample of 4,981 adults aged 18 years and older in Da Nang and Khanh Hoa, Vietnam. This study also examined correlates of mental distress associated with case estimates based on SRQ-20 caseness indications. Finally, risk and protective factors were identified in terms of their unique contribution to caseness.

METHODS

Data collection and sample

In August 2006, 1,914 households in the Da Nang and Khanh Hoa provinces of Vietnam were surveyed by trained lay interviewers on behalf of the Da Nang Department of Health and the Khanh Hoa Health Service with the purpose of establishing prevalence estimates of mental health problems and associated mental health service needs of individuals in these two provinces. The provinces are located on the central coast of Vietnam and represent both metropolitan and rural communities. Interviewers received six days of training to ensure standardization of assessment implementation. Interviewers visited selected households to conduct in-person interviews, lasting several hours. Response rates were 100% for the selected households. All available individuals 11 years and older participated in the study. However, for the purposes of this study, only data on individuals 18 and older are reported. Information collected included demographic characteristics, social capital (household and female), general health, adult mental health, and child mental health, if applicable.

The sample was selected through a four-stage cluster sampling strategy. First, 30 rural and urban communes were randomly selected from each province. Second, at each selected commune three hamlets were randomly selected. Third, at each chosen hamlet 30 households were randomly selected, and finally, all household members aged 11 and older were chosen. The final sample included 4,981 adults ages 18 years or older. The average number of individuals per household was 4.08 ($SD = 1.66$, range 1–13) (Table 1).

Study instruments and variables

This study represents one component of a larger multi-component needs assessments survey. Participants engaged in a structured interview that, in addition to collecting SRQ-20 data, assessed demographic information.

Demographics included age, gender, marital status, ethnic group, religious affiliation and education.

Wealth of the household in the present study was measured and operationalized using a slightly modified version of the Wealth Index Measurement Tool, originally developed by the World Bank and Macro International and cited in the UNICEF Multiple Indicator Cluster Surveys. Participants were asked a series of questions relating to social capital and their responses were coded, following WHO standards, to yield a number between 0 and 1 to represent an environmentally appropriate index of wealth. The present index has three components:

1. *Housing quality*: the average of floor, roof and wall quality (household is scored 1 for each if it has finished material floor, sturdy roof, brick/plastered wall, and scored 0 if it does not have them).
2. *Consumer durables*: the scaled sum of the eight consumer durable dummies (i.e. bicycle, motorbike, black and white television, colour television, VCD/DVD player, washing machine, landline or cellular telephone, refrigerator/freezer) (household is scored 1 for each if having any of the working item items and 0 if not having any item).
3. *Services* of drinking water, electricity, toilet and fuel, all of which are dichotomous 0/1 variables.

Two items are also included that provide a third-party global assessment of the families' socio-economic status. One item records the interviewer's assessment of global status on a five-point Likert scale from poorest, poor, average, better-off and rich. The second item is a dichotomous variable that asks respondents whether their household is considered a poor household by the community authority.

Additionally, participants were asked to rate their overall physical health – i.e. 'In general, would you say your health is excellent, very good, good, fair, or poor?'

The SRQ-20 is a 20-item self-report measure of mental health that can be administered via interview or via paper/pencil questionnaire (WHO, 1994). Items are marked dichotomously (YES = 1, NO = 0) over a 30-day recall period to obtain a maximum score of 20. According to the WHO SRQ-20 manual (1994), items do not stand for themselves but are representative of several mental health constructs, and are not intended to be reported separately. Results are recommended to be reported as a dichotomous 'case' or 'non-case'. However, the contribution of individual items to this measure of 'caseness' may be suggestive of the particular category of mental disorder they represent. Based on the recommendations of the literature (e.g. Harpham *et al.*, 2003; Tuan *et al.*, 2004), a cut-off of 7/8 (i.e. 7 = probable non-case; 8 = probable case) has been chosen for this study. It has been commonly reported in a range of studies conducted in developing countries and is recommended by WHO (for a review see Harpham *et al.*, 2003; Sartorius & Janca, 1996; WHO, 1994). The SRQ-20 has been found to be reliable and valid in Vietnamese studies (Giang, 2006; Tuan *et al.*, 2004), and high internal reliability was found in the present sample (Chronbach's $\alpha = 0.87$).

Data analytic plan

The association between SRQ-20 total score and demographic variables was examined via correlation analyses. Next, all variables significantly correlated with SRQ-20 score (*a priori* *p* value of 0.05) were examined in terms of their relative risk in a linear regression.

RESULTS

The sample was composed of slightly more women than men (53.9% vs. 46.1%) (Table 1). Participants were on average 41.53 years of age ($SD = 16.30$, range 18–96 years). Most participants endorsed being Kinh (94%), being married (70.6%), not having a religious affiliation (68.5%) or being Buddhist (21.3%). Approximately one quarter of participants either had no schooling or had not completed primary school (25.5%). Another quarter had completed primary education (27.7%), another near-quarter completed secondary education (22.3%), and the final approximate quarter of participants completed further education (23.8%). About half of the sample worked as a farmer (21.2%), a market vendor (20.4%), or a housewife (9.1%).

The average number of items endorsed on the SRQ-20 was 3.85 ($SD = 4.08$, range 0–20). When using a cut-off of 7/8, with 8 and above being considered a probable case, 19.2% of the sample were considered probable cases ($n = 954$). Not surprisingly, females endorsed more symptoms on the SRQ-20 than did males ($t = -8.41$, $df = 4979$, $p < 0.001$).

Most variables were significantly associated with SRQ-20 total score (Table 2). However, marital status and employment status were not associated with mental health distress and therefore all variables, with the exception of marital and employment status, were entered into the linear regression as predictors.

Results of linear regression indicated a significant overall model ($F(10, 4919) = 253.00$, $p < 0.001$). This model accounted for 34% of the variance in SRQ-20 score. All variables entered, with the exception of education, contributed significantly to the predictive power of the model (Table 3). This analysis revealed that all estimates of wealth (Wealth Measurement Tool, interviewer assessment, and community authority assessment) predicted mental distress in that higher wealth was associated with lower SRQ-20 scores. The single item third-party interviewer assessment of wealth ($t = -5.77$, $p < 0.001$) and the single-item self-report assessment of wealth ($t = -5.39$, $p < 0.001$) were just as effective as the multi-item wealth assessment tool to predict mental distress ($t = 3.43$, $p < 0.01$), with the single items reaching greater significance. Similarly, endorsing religious affiliation and reporting good health was also associated with lower SRQ-20 scores. Variables associated with higher scores on the SRQ-20 included gender (female) and age.

DISCUSSION

This paper describes the findings of the largest epidemiological study of adult mental health in Vietnam to date. In conjunction with earlier large-scale studies, it supports the conclusion that mental health is a significant issue in Vietnam, with probable mental health problems present in nearly one in five (19.2%) adults; approximately 15.7 million people. This 20% finding of mental distress is echoed in the studies of Tuan *et al.* (2004) reporting on 2,000 post-partum Vietnamese women. Our estimate of mental distress using the SRQ-20 is much greater than the findings of Giang *et al.* (unpublished manuscript in Giang, 2006) who reported an overall 5.4% prevalence of mental distress as measured by the SRQ-20 in 3,425 adults in rural Vietnam. Given these findings, the previously reported allocation of 1% of the total health budget to mental health seems woefully inadequate in a country of approximately 82 million people.

The contribution of poverty to poor mental health noted in this study has been previously well established in both developed and developing countries (Patel & Kleinman, 2003). It is interesting

Table 1
Sample characteristics

	<i>n</i>	%
Age		
18–24	765	15.4
25–34	1,121	22.5
35–44	1,375	27.6
45–54	728	14.6
55–64	405	8.1
65–74	337	6.8
75+	250	5.0
Gender		
Male	2,296	46.1
Female	2,685	53.9
Marital status		
Single	942	18.9
Married	3,518	70.6
Divorced	56	1.1
Separated	35	0.7
Widowed	428	8.6
Ethnicity		
Kinh	4,682	94.0
Rac Lay	215	4.3
Other	84	1.7
Religious affiliation		
None	3,413	68.5
Buddhist	1,063	21.3
Christian	439	8.8
Other	64	1.3
Education		
No schooling	364	7.3
Uncompleted primary	908	18.2
Completed primary	1,381	27.7
Completed secondary	1,108	22.3
Completed high school	747	15.0
Completed vocation	134	2.7
Completed college/university/postgraduate	302	6.1
Occupation		
Farmer	1,056	21.2
Market vendor	1,018	20.4
Housewife	453	9.1
Student	175	3.5
Government staff	437	8.8
Worker	183	3.7
Retired/Elderly	477	9.6
Other	667	13.4
Cannot work	222	4.5
Receiving unemployment benefit	136	2.7
Non-government staff	157	3.2

Table 2
Bivariate correlations for all variables

	SRQ20	Gender	Age	Married	Kinh	Rac Lay	Other race	Religious	Education	Employed	Wealth measurement tool	Interviewer assessment of wealth	Community authority assessment of wealth
Gender	0.12***												
Age	0.22***	0.04**											
Married	-0.03	-0.09***	0.13***										
Kinh	-0.13***	0.00	0.08***	-0.03*									
Rac Lay	0.10***	0.01	-0.07***	0.02	-0.84***								
Other race	0.07***	-0.01	-0.02	0.04**	-0.52***	-0.03							
Religious	-0.04**	0.02	0.06***	-0.04**	0.04*	-0.03*	-0.02						
Education	-0.07***	-0.03	-0.07***	-0.05***	0.01	0.00	-0.01	-0.02					
Employed	-0.02	0.21***	0.00	0.10***	-0.04*	0.02	0.03*	-0.05*	0.04**				
Wealth measurement tool	-0.25***	-0.01	0.00	0.00	0.43***	-0.36***	-0.23***	0.07***	0.08***	0.04**			
Interviewer assessment of wealth	-0.24***	-0.01	0.02	0.5**	0.28***	-0.25***	-0.13***	0.06***	0.03*	0.05**	0.58***		
Community authority assessment of wealth	-0.19***	-0.04*	0.01	0.05**	0.25***	-0.20***	-0.13***	0.02	0.02	0.02	0.32***	0.36***	
Self-rated health	-0.55***	-0.16***	-0.39***	-0.04**	0.04**	-0.03*	-0.03	-0.01	0.08***	-0.01	0.22***	0.17	0.12***

Table 3
Linear regression analysis prediction SRQ-20 total score

Predictor	<i>B</i>	<i>b</i>	<i>t</i>
Gender	0.28	0.03	2.86**
Age	0.01	0.03	2.71**
Rac Lay	0.69	0.03	2.72**
Other race	0.98	0.03	2.57*
Religious	-0.34	-0.04	-3.36**
Education	-0.01	-0.02	-1.49
Wealth measurement tool	-1.14	-0.05	-3.43**
Interviewer assessment of wealth	-0.49	-0.09	-5.77***
Community authority assessment of wealth	-0.55	-0.07	-5.39***
Self-reported health	-2.34	-0.50	-37.56***

to note that in this study, single-item, third-party estimates of wealth produced outcomes similar to multi-item, objective ratings scales of wealth and contributed as equally significantly to overall mental distress. Similarly, the finding that women, the young and the very old are more affected by mental distress in this sample is also not surprising, given the findings of a similar curvilinear relationship in previous studies of non-western countries (i.e. Patel & Kleinman, 2003). However, this contrasts with the findings of large-scale western epidemiological studies such as the National Comorbidity Survey Replication, and others that have found old age to be a protective factor for all psychiatric diagnoses (e.g. Kessler *et al.*, 2005) and for the development of psychiatric disorder post-trauma exposure (e.g. Acierno *et al.*, 2006). Contrasting with Giang's (2006) findings, education level and marital status did not significantly alter levels of mental distress in this sample. Further investigation into these findings is warranted, given the previously documented protective influence of both these variables in mental health (e.g. Kessler *et al.*, 2005; Patel & Kleinman, 2003) and Vietnam's significant traumatic geopolitical and social history coupled with its frequent exposure to natural disasters.

The SRQ-20 is a brief, cost-effective and reasonably valid measure of both community and individual mental distress and has been used in many studies of developing countries. Its main weakness is that it does not provide a specific psychiatric diagnosis, nor does it sample the degree to which help-seeking behaviour occurs in response to these symptoms. In addition, the SRQ-20 may measure both the presence of symptoms as well as a respondent's inclination to answer questions about their physical health symptoms. In other words, false positives may inflate results in populations with chronically poor physical health, and false negatives may result from social stigma associated with the reporting of mental illness. The failure to mix emic with etic research approaches into the evaluation of mental distress in Vietnam represents a potential shortcoming in this or any study that attempts to measure mental illness in communities that maintain traditional, or non-westernized, appreciations of what it means to be mentally ill measured against a westernized, categorical classification diagnostic system (i.e. see Patel, 1995).

Finally, while useful, the results of this study would have been further enhanced with a concomitant reliability check in the form of a clinical interview to confirm if the cut-off threshold used in this study was optimal.

ACKNOWLEDGEMENTS

This research was supported by a grant from Atlantic Philanthropies to the Community Health Centres of Da Nang and Khanh Hoa, Vietnam, with personnel and technical support from the Veterans for America Foundation. Special thanks to Anne Seymour for her assistance in coordinating international efforts of our research team.

REFERENCES

- Acierno, R., Ruggiero, K.J., Kilpatrick, D.G., Resnick, H.S. & Galea, S. (2006) Risk and protective factors for psychopathology among older versus younger adults after the 2004 Florida hurricanes. *American Journal of Geriatric Psychiatry*, 14, 1051–1059.
- Giang, K.B. (2006) *Assessing Health Problems. Self-Reported Illness, Mental Distress and Alcohol Problems in a Rural District in Vietnam*. Stockholm: The Department of Health Sciences, Karolinska Institutet. <http://diss.kib.ki.se/2006/91-7140-776-6/thesis.pdf>.
- Giang, K.B., Allebeck, P., Kullgren, G. & Nguyen, V.T. (2006) The Vietnamese version of the Self-Reporting Questionnaire 20 (SRQ-20) in detecting mental disorders in rural Vietnam: A validation study. *International Journal of Social Psychiatry*, 52, 175–184.
- Harpham, T., Reichenbaum, M., Oser, R., Thomus, E., Hamid, N., Jaswal, S, Ludermir, A. & Aidoo, M. (2003) How to do (or not to do...): Measuring mental health in a cost-effective manner. *Health Policy and Planning*, 18, 344–349.
- Harpham, T. & Tuan, T. (2006) Lessons from the field. From research evidence to policy: Mental healthcare in Vietnam. *Bulletin of the World Health Organization*, 84, 664–668.
- Kessler, R.C, Berglund, P., Demler, O., Jin, R., Merikangas, K.R. & Walters, E.E. (2005) Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 593–602.
- Kessler, R.C., Berglund, P., Demler, O., Jin, R., Koretz, D., Merikangas, K.R., Rush, A.J., Walters, E.E. & Wang, P.S. (2003) National Comorbidity Survey Replication. The epidemiology of major depressive disorder: Results from the National Comorbidity Survey Replication (NCS-R). *Journal of the American Medical Association*, 289, 3095–3105.
- Kessler, R.C., Chiu, W.T., Demler, O. & Walters, E.E. (2005) Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617–627.
- Nghi, T.V. (2006) Developing mental health care strategies in Vietnam. National workshop for mental health care and suicide prevention (in Vietnamese). In Giang, K.B. (2006) *Assessing Health Problems. Self-Reported Illness, Mental Distress and Alcohol Problems in a Rural District in Vietnam*. Stockholm: The Department of Health Sciences, Karolinska Institutet.
- Patel, V. (1995) Explanatory models of mental illness in sub-Saharan Africa. *Social Science & Medicine*, 40, 1291–1298.
- Patel, V. & Kleinman, A. (2003) Poverty and common mental disorders in developing countries. *Bulletin of the World Health Organization*, 81, 609–615.
- Patel, V. (2007) Mental health in low- and middle-income countries. *British Medical Bulletin*, 81/82, 81–96.
- Sartorius, N. & Janca, A. (1996) Psychiatric assessment instruments developed by the World Health Organization. *Social Psychiatry Psychiatric Epidemiology*, 31, 55–69.
- Thanh, H.T.T., Tran, T.N., Jiang, G-X, Leenars, A. & Wasserman, D. (2006) Lifetime suicidal thoughts in an urban community in Hanoi, Vietnam. *BMC Public Health*, 6, 76–84.
- Tuan, T., Harpham, T. & Huong, N. (2004) Validity and reliability of the Self-Reporting Questionnaire 20 items (SRQ-20) in Vietnam. *Hong Kong Journal of Psychiatry*, 14, 15–18.
- World Health Organization (1994) *A User's Guide to the Self-Reporting Questionnaire (SRQ)*. Geneva: World Health Organization.

World Health Organization (2001) *The World Health Report 2001: Mental Health: New Understanding, New Hope*.
Geneva: World Health Organization/Whitehots Incorporated.

Lisa K. Richardson, MAppPsy, Murdoch University, Perth, WA, Australia.

Ananda B. Amstadter, PhD, Medical University of South Carolina, Charleston, SC, USA.

Dean G. Kilpatrick, PhD, Medical University of South Carolina, Charleston, SC, USA.

Mario T. Gaboury, JD, PhD, Department of Criminal Justice and Oskar Schindler Humanities Foundation, University of New Haven, West Haven, CT, USA.

Trinh Luong Tran, MD, Health Department of Da Nang City, Da Nang, Vietnam.

Lam Tu Trung, MD, Da Nang Mental Health Hospital, Da Nang, Vietnam.

Nguyen Thanh Tam, MSc, Vietnam Veterans of America Foundation, Washington, DC, USA.

Tran Tuan, PhD, Research and Training Centre for Community Development, Hanoi, Vietnam.

La Thi Bui, MD, Research and Training Centre for Community Development, Hanoi, Vietnam.

Tran Thu Ha, MPH, Research and Training Centre for Community Development, Hanoi, Vietnam.

Tran Duc Thach, MPH, Research and Training Centre for Community Development, Hanoi, Vietnam.

Ron Acierno, PhD, Medical University of South Carolina, Charleston, SC, USA; Ralph H. Johnson Veterans Affairs Medical Centre, Charleston, SC, USA.

Correspondence to: acierno@musc.edu