

ORIGINAL ARTICLE

Depression and PTSD in Pashtun Women in Kandahar, Afghanistan

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Objectives The objectives were (a) to establish prevalence of depression and post-traumatic stress disorder (PTSD) in Afghanistan and, (b) to investigate sociodemographic and quality of life variables, which predict depression and PTSD.

Methods Translated versions of the Beck Depression Inventory, Impact of Event Scale-Revised, and Quality of Life Inventory were administered to 125 Pashtun women in Kandahar, and statistically analyzed.

Results Approximately half of the participants showed moderate to severe levels of depression, and more than half of the participants exhibited symptoms of PTSD. Education and income showed significant associations with PTSD symptoms or depression. The way one spends time, general health status, and general feeling towards life predicted low levels of depression and PTSD.

Conclusions The high prevalence of depression and PTSD indicate the continuing need for mental health intervention. While education has been found to be a protective factor for mental health in previous studies, the relationship between education and mental health appear to be more complex among Afghan women. Quality of life variables could be further investigated and incorporated into mental health interventions for Afghan women. [*Asian Nursing Research* 2009;3(2):90–98]

Key Words Afghanistan, depression, mental health, post-traumatic stress disorder, quality of life, women

INTRODUCTION

The aim and focus of nursing for women has expanded from the protection of mothers to the gaining of women's individual rights. Moreover, nursing for women aims to holistically improve the quality of women's lives through mental, social, and

cultural aspects, as well as physical health. Due to the recent conflicts in Afghanistan and the country's cultural stance and attitude towards women during the Taliban, the health of Afghan women is an important area that needs addressing.

Afghanistan has experienced more than two decades of war, political conflict and upheaval caused



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by the Soviet invasion and occupation (1979–1989) and the Taliban (1994–2001), an Islamic fundamentalist group that stabilized political control of the country while imposing extreme restrictions on the Afghan people (Physicians for Human Rights Report), especially women. The Taliban movement was influenced by Pashtun tribal culture, but has taken the Pashtun code of ethics beyond the tribal norm (Hilton, 2001).

In the context of prolonged violence and political upheaval, distress and mental health consequences in Afghan communities were inevitable. Mental health services are limited, as the main psychiatric hospital in Kabul was destroyed in the war and the few community mental health centers are no longer functioning (WHO, 2001). Studies on mental health in Afghanistan have mainly focused on the prevalence of post-traumatic stress disorder (PTSD), depression, and anxiety (Bolton & Betancourt, 2004; Lopes Cardozo et al., 2004; Scholte et al., 2004). A survey in Eastern Afghanistan ($n=1,011$) showed that 3.7% of respondents experienced between eight and ten traumatic events and 14.1% experienced 11 or more in the last 10 years (Scholte et al.). In the same study the symptoms of PTSD were reported by 20.4% of the respondents. Another study showed that 62% of respondents experienced at least four traumatic events in the 10-year period prior to the study (Lopes Cardozo et al.). The prevalence of symptoms of depression and anxiety was found to be high in Afghanistan; 38.5% (Lopes Cardozo et al.) to 67.7% (Scholte et al.) for depression, and 51.8% (Lopes Cardozo et al.) to 72.7% (Scholte et al.) for anxiety. In comparison to other war affected areas (de Jong, Komproe, & Van Ommeren, 2003; Lopes Cardozo, Vergara, Agani, & Gotway, 2000) the prevalence of depression and anxiety was relatively high in Afghanistan, although PTSD symptoms were not (Hilton, 2001).

In the midst of constant war and conflict, Afghan women have been a focus in the media due to the impact that the Taliban takeover had on their status and role in society. Women who lost their husbands during the rule of the Taliban became 'unprotected women' and considered the lowest socioeconomic

strata of society (Povey, 2003). A cross-sectional survey of 160 women in Afghanistan reported significant decline in physical health (71%) and mental health status (81%) after the takeover of the Taliban (Rasekh, Bauer, Manos, & Iacopino, 1998). Moreover, there was a decline in access to health care (62%), as health care was officially denied to women during the rule of the Taliban (Anonymous, 2005). This limited access to health care for women continued even after the Taliban reign, due to the lack of facilities and cultural factors. The reported symptoms of major depression (97%), anxiety (86%), and clinical PTSD (42%) were also very high among Afghan women (Rasekh, Bauer, Manos, & Iacopino, 1998). Several studies have demonstrated that women in postwar Afghanistan have significantly poorer mental health status (e.g. increased anxiety, PTSD, and number of traumas experienced) than men (Lopes Cardozo et al., 2004; Scholte et al., 2004).

Several factors have been found to affect the mental health status of Afghan women, namely, education, age, marital status, ethnicity, coping mechanisms, and regular income. Studies have consistently found that education level is a protecting factor for mental health. For instance, the association between a lower level of education and PTSD among post-conflict areas including Afghanistan (de Jong, 2002) as well as depression and anxiety (Scholte et al., 2004) is consistent with the findings from Western countries (Kessler, Sonnega, Bromet, & Nelson, 1995). Education is speculated to be one of the best predictors of health status (Reldman, Makuc, Kleinman, & Cornoni-Huntly, 1989) and affects the health of mothers and children by limiting access to information and health services and the utilization of coping strategies. In addition, older age was associated with a higher prevalence of PTSD (de Jong) and depression (Scholte et al.). In some studies marital status and ethnicity affected symptoms of PTSD, where being single and belonging to the Tajik ethnic minority group was associated with higher symptoms of PTSD than in people from other ethnic groups (Scholte et al.). The main coping strategies utilized by Afghan men and women were religious and spiritual practices, such as reading the Koran or

praying (Lopes Cardozo et al., 2004). In one study, 98% of participants mentioned 'Allah' as the main source of emotional support when distressed. The second source of support was from family members or friends (Bolton & Betancourt, 2004; Scholte et al.). Other types of coping styles included practical coping strategies, such as having more income and receiving medical assistance (Bolton & Betancourt). Finally, a lack of regular income was noted as a source of stress and found to have a significant association with higher rates of anxiety and PTSD (Lopes Cardozo et al.). However, there has been a lack of literature on other sociodemographic variables of depression and PTSD, such as finances, housing arrangements, general state of health, life satisfaction, and sense of security.

While there have been some studies regarding mental health status of people in Afghanistan (Lopes Cardozo et al., 2004; Scholte et al., 2004), there has been a lack of research on Afghan women, particularly Pashtun women. The Pashtun tribe has been one of the most conservative and least studied groups due to their strict code of ethics, which influenced the Taliban movement. Moreover, identification of sociodemographic variables related to mental health outcomes and recommendations are needed for development of interventions. Therefore, the objectives were (a) to establish prevalence of depression and PTSD in Pashtun women in Kandahar, and (b) to investigate sociodemographic variables and quality of life variables, which relate to or predict depression and PTSD.

METHODS

Sample

Participants were 125 Pashtun women living in Kandahar, Afghanistan. The participants' age ranged from 16 to 60 years, with the mean age being 33.32 years ($SD=11.527$). The age at which the participants got married ranged from 7 to 30 years with the mean age being 17.15 years ($SD=4.048$). In terms of marriage status, 79% were married, 26.6% were single, 8.9% were widows, and 0.8% were divorced. Less than half of the participants, 40.8% ($n=51$), reported

receiving formal education. Of those who had received education, the years of education ranged from 1 to 19 years, with a mean of 9.96 years ($SD=4.40$).

In terms of living situation, 54.4% of participants were living in their own house, 31.2% were living in a rented house, 10% were living in a relative's house, and 7% were living in other settings. Most participants were living in an environment they referred to as 'very good' (34.4%) or 'good' (36.0%), 22.4% referred to their environment as 'normal' and 6.4% were living in an environment they thought was 'bad'. Among the participants, 1.6% reported an experience of rape or physical attack and 2.4% reported an experience of being robbed.

In relation to income, only half of the participants (50.4%) had sufficient income for their living costs. Moreover, 21.6% had a job with an income and the remaining 77.6% did not have a paying job.

Measures

Beck Depression Inventory, Impact of Event Scale-Revised, and Quality of Life Interview were used as measures. These were translated into Pashto, a language commonly used in Afghanistan. An Afghan university student translated the questionnaires into Pashto. Then the translated version was back-translated into English by another Afghan person. The translated versions of the questionnaires were edited by another Afghan person with 14 years of English speaking experience. The revised Pashto versions of the questionnaires were administered to 10 individuals in a pilot study. Based on the feedback from the pilot study, some items were edited or deleted to make the questionnaire culturally valid. For instance, the last item on the BDI regarding sexual interest was deleted due to cultural sensitivity and inappropriateness for researchers to ask this of Afghan women.

Beck depression inventory

The Beck Depression Inventory (BDI-II; Beck, 1996) is a standardized measure that assesses symptoms of depression. There are 21 items where an individual chooses one of the four responses with scores ranging from 0 to 3. The recommended cut-off scores

from the manual for interpreting specific levels of the severity of depressive symptoms are 0 to 13 as minimal, 14 to 19 as mild, 20 to 28 as moderate, and 29 to 63 as severe. The internal reliability is high ($\alpha = .91$; Dozois, Dobson, & Ahnberg, 1998). The internal reliability of the translated version of BDI in Pashto for the current study was .874.

Impact of event scale-revised

The Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997) was developed in parallel to the DSM-IV criteria for PTSD. It has 22 items and respondents are asked to rate on a five-point Likert scale (0 'not at all' to 4 'extremely') how likely each statement was according to their past 7 days. There are three subscales: Avoidance, Intrusion, and Hyperarousal subscales. In a study of four different population samples the internal reliability of the three subscales was high, with Cronbach alpha ranging from .79 to .90 (Weiss & Marmar). Criterion validity was also suggested to be high (Horowitz, Wilner, & Alvarez, 1979; Weiss & Marmar). In terms of the cut-off scores, Creamer, Bell, and Falilla (2002) suggested a total score of 33 or above to be an appropriate cut-off score for diagnosis of PTSD, and Kawamura, Kim, and Asukai (2001) reported that total scores of more than 37 suggest that the functioning of the respondents' immune system is likely to have been suppressed by the trauma. The reliability and validity of IES-R in other languages have been supported in other cultures as well, such as Korean (Eun et al., 2005), Japanese (Asukai et al., 2002) and Chinese versions (Wu & Chan, 2003). The internal reliability of the translated version of IES-R in Pashto was also high with a Cronbach alpha of .99.

Quality of life interview

This study adapted some items from the Quality of Life Interview (QOLI; Lehman, 1983). There are 20 questions in the QOLI and some items have a 'Yes or No' format, while others have a 7-point Likert scale with several anchoring labels (e.g. 1 'terrible' to 7 'delighted'). It has an internal reliability of .79 to .88 and test-retest reliability of .41 to .95

(Lehman, 1983). The internal reliability of the translated version of the Likert scale items of the QOLI in Pashto was .886.

Procedure

Participants were recruited using convenience sampling by visiting four schools, two hospitals, four non-government organizations, and home visits in Kandahar. In hospitals, patients, patients' family members, doctors, nurses, and other staff were given opportunities to take part in the research. At schools, teachers, students, and other staff were recruited for the research. The participants were briefly introduced to the purpose and content of the research, and they were informed of their right to withdraw from the study at any given time. Verbal consent was obtained.

In order to assess symptoms of depression and PTSD among Afghan women, structured self-report questionnaires were administered. The questionnaires included the Beck Depression Inventory (BDI-II; Beck, 1996), Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997) and items from the QOLI (Lehman, 1983). These questionnaires were translated into Pashto, a common language used in Afghanistan.

The internal reliability of the translated version of BDI was .874 and that of the Likert scale items of the QOLI was .886. The internal reliability of the translated version of IES-R was also high, having a Cronbach alpha of .99.

Data analysis

Descriptive analysis was used to establish prevalence of psychological distress, and correlation analysis, multiple regression, Mann-Whitney U, and Kruskal-Wallis tests were used to establish the relationship between sociodemographic and quality of life variables, and psychological outcomes.

RESULTS

Descriptive analysis for this study showed that scores on the BDI ranged from 1 to 49 with the mean score

Table 1
Correlation Analysis of Total Scores of BDI, IES-R, and Sociodemographic Variables

	BDI	IES-R	Age	Years of education	Age at the time of marriage
BDI					
IES-R	.235*				
Age	.062	.146			
Years of education	-.184	.294**	.210		
Age at the time of marriage	-.079	.009	.098	.180	

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

of 17.02 ($SD = 11.36$). Considering that one of the 21 items was deleted from BDI in this study, the cut-off score for moderate depression was readjusted to 19, and 40.6% of the participants had a score of 19 or more indicating that almost half of the participants experienced moderate or more severe level depression. The scores on IES-R ranged from 0 to 87 with the mean score of 29.33 ($SD = 36.18$). Based on the cut-off score of 33 suggested by Creamer et al. (2002), 54.8% of participants had a score of more than 33, suggesting that approximately half of the people are likely to experience diagnostic PTSD.

Spearman's Rho correlation analysis was performed between each of the total scores of BDI, and IES-R, and continuous sociodemographic variables (age, years of education, and age of marriage; Table 1). Beck's Depression Inventory was significantly related to IES-R ($r = .235, p < .05$). There was a significant positive correlation between years of formal education and scores on IES-R ($r = .294$). The increase in the years of education was related to increase in symptoms of PTSD.

The relationships between discrete sociodemographic variables, such as marital status, living situation, and psychological measures were analyzed using Kruskal-Wallis and Mann-Whitney U tests. Marital status ('married', 'widowed', or 'never married') had no significant relationship with the total scores BDI-II [$\chi^2(2) = 2.453, p = .293$], and IES-R [$\chi^2(2) = 5.266, p = .072$]. The surrounding environment ('very good', 'good', 'normal', or 'bad') also had no significant relationship with the total scores

of BDI-II [$\chi^2(3) = 7.459, p = .059$] and IES-R [$\chi^2(2) = 5.307, p = .151$]. Living conditions (living in the house owned by the participants or their husband, relatives' house, rented house, or other conditions) did not have a significant relationship with IES-R score [$\chi^2(3) = 7.577, p = .056$], but had a significant relationship with the scores of BDI-II [$\chi^2(3) = 9.032, p < .05$]. Post hoc analysis was performed using a Mann-Whitney U test, which showed that participants living in a house owned by the participant or her husband (mean rank = 48.08) had significantly lower levels of depression as measured by BDI-II, than those living in a rented house (mean rank = 64.32; $Z = -2.608, p < .05$).

Being employed in a paying job did not have a significant relationship with BDI-II scores ($Z = -.067, p = .947$) and IES-R ($Z = -.146, p = .884$). Having had sufficient finances for living costs last year had a significant relationship with BDI-II ($Z = -3.565, p < .05$), but not with IES-R scores ($Z = -1.616, p = .106$). Those who said they had sufficient money for living during the last year (mean rank = 51.19) had a lower level of depression than those who did not (mean rank = 74.18). Having experienced rape, burglary, or any other physical attack did not have a significant relationship with any of the psychological measures. Whether or not the participants received education had a significant relationship with the score of IES-R ($Z = -2.184, p < .05$), but not with BDI-II. Those who received education (mean rank = 54.28) had less symptoms of PTSD than those who did not (mean rank = 52.12).

Table 2

Significant Correlations Between the Total Scores of BDI, HS, IES-R, and Items from Quality of Life Interview ($p < .05$)

Items	BDI	IES-R
How do you feel about your life in general?	-.455	-.316
Overall rating of functioning in home, social, school, and working settings at the present time	-.455	-.316
How do you feel about		
... the way you spend your spare time?	-.515	-.214
... amount of time you have to do the things you want to do?	-.373	-.210
... the chance you have to enjoy pleasant or beautiful things?	-.390	
... the amount of relaxation in your life?	-.397	
... the pleasure you get from the television or radio?	-.203	-.176
... the things you do with other people?	-.196	-.253
... the amount of time you spend with other people?	-.263	
... the people you see socially?		
... how you get along with other people in general?	-.281	
... the chance you have to know people with whom you really feel comfortable?	-.185	
... the amount of friendship in your life?	-.280	
... your personal safety?	-.319	
... how safe you are on the streets in your neighborhood?	-.262	
... how safe you are where you live?	-.326	
... the protection you have against being robbed or attacked?		.183
... your chance of finding a policeman if you need one?		
... your health in general?	-.467	
... the medical care available to you if you need it?	-.495	-.241
... how often you see a doctor?	-.448	
... your physical condition?	-.469	-.219
... your emotional well-being?	-.496	-.298
My faith shapes how I think and act each and every day		
My faith helps me know right from wrong		
Every day I see evidence that God is active in the world		
I take time for periods of prayer and meditation		.240
As I grow older, my understanding of God changes		.277
My life is filled with meaning and purpose		
I have a real sense that God is guiding me		

Finally, correlation analysis with the three measures and items related to quality of life and life functioning (adapted from the QOLI; Lehman, 1988) was performed and all three measures showed significant correlation with numerous items as shown in Table 2.

With the items that showed significant correlations, a stepwise multiple regression analysis was

performed to determine which items relating to quality of life most predicted the level of depression and symptoms of PTSD. Three items relating to satisfaction regarding the way one spends time, general health state, and general life satisfaction predicted 41% of the score on BDI-II [$F(3, 115) = 26.641, p < .05$]. A high level of positive feeling towards the way the

Table 3*Multiple Regression Between Items on Quality of Life Interview and Depression (BDI-II)*

Items	β	<i>p</i>
How do you feel about the way you spend your spare time?	-.347	.001
How do you feel about your health in general?	-.292	.001
How do you feel about your life in general?	-.204	.05
<i>Adj-R</i> ² = .41.		

Table 4*Multiple Regression Between an Item on Quality of Life Interview and PTSD (IES-R)*

Items	β	<i>p</i>
How do you feel about the way you spend your spare time?	-.316	.001
<i>Adj-R</i> ² = .10.		

participant spends her time, health in general, and life in general predicted a low level of depression. Among these three items, feeling towards the way one spends her time had the most predicting power [$\beta = -.347$, $t = -3.896$, $p < .05$; Table 3]. A stepwise multiple regression analysis with IES-R presented only one item ('How do you feel about life in general?') as a predicting item [$F(1, 118) = 13.056$, $p < .05$]. This item accounted for 10% of variance in the scores of IES-R. High level of positive feeling about one's life in general predicted low levels of PTSD symptoms [$\beta = -.316$, $t = -3.613$, $p < .05$; Table 4].

DISCUSSION

Our study is significant in its attempt to study one of the most conservative tribes in Afghanistan, the Pashtun, and the most inaccessible group within the tribe, the women. The study found a relatively high prevalence rate of depression and PTSD among Afghan women in Kandahar. Approximately half of the participants showed moderate to severe levels of depression, and more than half of the participants

exhibited symptoms of PTSD that may be clinically significant and diagnostic. Such findings replicate the prevalence rate found in previous literature concerning depression and PTSD among Afghans [e.g. 42.1% PTSD (Scholte et al., 2004) and 38.5–67.7% depression (Lopes Cardozo et al., 2004; Scholte et al.)], and others in war torn areas (Lopes Cardozo, 2000) despite the use of different assessment measures between studies. High prevalence of depression and PTSD suggests significant need for investment in mental health support and intervention. While other physical and social needs may be imperative in the current situation, mental health should also be one of the priorities on the social agenda.

Among various sociodemographic factors, education and income were the only variables to show a significant relationship with mental health. First, education was found to have a significant relationship with PTSD. Among women who have received education (about 60% of participants), the length of education ranged from 1 to 19 years with mean years of education being 9.96 years. Such a wide range of years in education suggests the heterogeneity of Afghan women, in which some women have received quite a long period of education (more than 12 years, 23.5%), whilst the majority of women had not. Previous literature has shown that having had an education is a protective factor against mental health problems (Reldman et al., 1989), but the findings in this study suggest a more complex picture. In contrast to previous findings, increase in years of education was associated with the experience of PTSD in the current study. In addition, having received no education was also positively associated with PTSD. This suggests that there are in fact two

risk groups for PTSD: those with many years of education, and those without any education (40.8% in this study). The possible reason for positive association with the length of education and PTSD among Afghan women may be the interaction between education and its sociocultural context. For instance, one postulation could be that those with exceptionally more years of education may be more westernized and less conservative, and thus, might experience a subjectively higher degree of trauma due to the cultural distance in the Afghan social and political environment than those who are more accustomed to Afghan culture. However, there needs to be further studies to explore the relationship between PTSD and length of education.

Second, sufficient income for living was negatively related to depression in this study providing evidence of the inseparable association between basic physical needs and mental health. Poverty and a lack of income contribute to stress and limit access to potential resources that can enhance one's mental and physical health. However, in this study, other variables such as marital status, quality of surrounding environment, experience of rape or robbery, housing situation, and employment status failed to show a significant relationship with depression or PTSD. This may suggest that education level and having sufficient income are more prominent contributing factors for the mental health of Afghan women.

Among many variables related to quality of life that showed significant correlation with depression and PTSD, general feeling towards life, satisfaction with the way one spends time and general health state significantly predicted low levels of depression, and general feeling towards life predicted low levels of PTSD. Further studies are needed to clarify the nature of such relationships among these variables, especially whether improving general health state and the way one spends one's time could positively affect the mental state of Afghan women.

Limitations of the study include data size and possible sample bias. The power of the statistical analyses could improve with a larger sample size. Moreover, questions may be raised as to how representative the Pashtun women participants are of the general

female population in Afghanistan. For instance, the Pashtun culture is known for its conservativeness and thus, the sample may be different in its characteristics to women of other less conservative regions of Afghanistan. Furthermore, most of the participants were outside their home when they were approached and interviewed. Thus, it is possible that those who mainly reside at home may be different from those who participate in activities outside home (e.g. those who go out and participate in activities outside could be less conservative), leading to a potential sampling bias. Another potential limitation of this study is the validity and reliability of the translated versions of the BDI and IES-R. The psychometric properties of these measures need to be further assessed on a larger sample, and the question on the validity of using these measures, which were developed in a different sociocultural context, in Afghanistan need to be examined. Moreover, the fact that the participants were interviewed in person and were interviewed by foreigners may raise some questions about the validity of their responses. For instance, some could have provided less accurate and more socially favorable responses for questions about the income and experience of burglary or rape. Last, since there is a lack of research on Afghan women, qualitative research would be beneficial in exploring the experiences of Afghan women and factors that mediate and moderate their mental health.

CONCLUSION

The study suggests that specific support and interventions are needed for two risk groups in Afghanistan: women with many years of education, and women with no education. It also suggests that further investigation of factors contributing to the increased likelihood of PTSD is needed. Variables related to depression and PTSD were education level, income, general feeling towards life, general health state, and satisfaction with the way one spends one's time. While the psychometric properties and any cultural issues related to the use of BDI-II and IES-R may need further investigation, the translated versions

of BDI-II and IES-R from this study could be useful in future studies of mental health in Afghanistan.

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