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Vulnerability and mental health in Afghanistan: Looking beyond war exposure

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Abstract

This study examined the prevalence of mental distress among groups in Afghanistan considered to be at risk. Data were drawn from a representative cross-sectional disability survey carried out in Afghanistan including 5,130 households in 171 clusters throughout the 34 provinces of the country. The sample included 838 non-disabled control participants aged above 14, and 675 disabled participants. Results showed that various vulnerable groups (disabled people, the unemployed, the elderly, minority ethnic groups, as well as widowed, divorced or separated women) were at higher risk of experiencing mild to severe mental health problems. The adjusted odds ratio for war-related disability compared to non-disabled was 4.09 (95% confidence interval 2.09 to 7.99) for mild mental distress-disorders, and 7.10 (3.45-14.5) and 14.14 (3.38-59.00) for moderate or severe mental distress-disorders, respectively. Women with disabilities (whatever the cause of impairment) when compared with non-disabled men, as well as poorer segments of society compared to the richest, had a higher prevalence of mental health problems. Women with non-war-related disabilities compared with non-disabled men were respectively 3.35 (1.27-8.81) and 8.57 (3.03-24.1) times more likely to experience mild or moderate mental distress-disorders. People who experience multiple vulnerabilities are more at risk of deteriorating mental health in conflict zones. The study shows that mental health, in times of war, is influenced by a combination of demographic and socioeconomic characteristics linked to social exclusion mechanisms that were in place before the conflict began and that are re-defined in relation to the changing social, cultural, and economic contexts. Mental health policies and programmes remain must prioritise the most vulnerable segments of Afghan society.

Introduction

Armed conflict has long-lasting physical and psychological impact on the civilian population (Sidel & Levy, 2003). A large body of literature on mental health in conflict and post-conflict contexts assumes that violence and destruction resulting from war are the predominant and direct causes of mental distress and more serious chronic disorders. In Afghanistan, conflict has been identified as the major cause of unrest for the population, and various forms of what we call mental distress and disorders are believed to be widespread in all strata of the population, hindering adequate social functioning (Lopes Cardozo et al., 2004). However, exposure to war violence is not the only cause of various mental distress-disorders, such as anxiety and depression or more severe psychotic and behavioural disorders. Conflicts disrupt material conditions that can generate or aggravate other stressors, which have cumulative effects on mental health (Lopes Cardozo et al., 2004; Miller & Rasmussen, 2010).

Many authors have discussed the complexities of concurrent economic and socio-cultural issues that co-occur in specific groups to increase their risk for both common and more severe mental disorders (Betancourt, Agnew-Blais, Gilman, & Ellis, 2010; Miller, Omidian, Rasmussen, Yaqubi, & Daudzi, 2008; Panter-Brick, Eggerman, Gonzalez, & Safdar, 2009). Some studies have shown that poverty or socioeconomic disadvantage is associated with low self-esteem, loss of meaning of life, and deterioration of social networks (Ahearn & Noble, 2004; Eggerman & Panter-Brick, 2010; Patel, Araya, de Lima, Ludermit, & Todd, 1999). The literature has examined the impact of war on deterioration of socioeconomic conditions, the consequences it has on mental health outcomes, and the coping strategies elaborated by specific subgroups (Lopes Cardozo et al., 2004; Miller et al., 2008; Panter-Brick et al., 2009; Panter-Brick, Eggerman, Mojadidi, & Mcdade, 2008; Patel & Kleinman, 2003; Scholte et al., 2004). Wherever the additional variable of the impact of war

or civil unrest has been addressed in previous research, it is within the context of larger surveys, and the tools used have been limited and most often developed within cultural contexts far removed from the conflict or post-conflict situations (Patel, Kirkwood, Pednekar, Weiss, & Mabey, 2006; Patel & Kleinman, 2003; Thabet & Vostanis, 1998).

In the present paper, we explore the association between socio-economic factors related to social exclusion, war violence, and mental distress or disorders in Afghanistan, a conflict affected country (Uppsala Conflict Data Program & International Peace Research Institute, 2010). In Afghanistan, poverty and unemployment have been identified as salient stressors, and Afghan women are believed to be at greater risk when faced with persisting daily stressors (Miller et al., 2008). The paper examines the relationship between poverty and mental health (Boyce et al., 2009; Das, Do, Friedman, McKenzie, & Scott, 2007; Gureje, Lasebikan, Kola, & Makanjuola, 2006). We aim to identify the factors that make individuals and groups with specific demographic and socioeconomic characteristics at greater risk of mental distress or disorders when they are exposed to violence in the context of general exposure to conflict.

Vulnerability, Risk and Conflict

In the present study, we adopted a socio-ecological definition of vulnerability, defining vulnerable groups as those particularly at risk of being socially and economically excluded and having reduced wellbeing when faced with adverse events (Ahern, Galea, Hubbard, & Karpati, 2008; Dubois & Rousseau, 2008; Gallopín, 2006). We examined associations between risk of mental distress and disorders and characteristics of specific social groups within Afghan society that are more at risk of socioeconomic marginalisation and less equipped to respond to both violence linked to war and socioeconomic stress: single mothers, the elderly, disabled, uneducated, unemployed or poor people, and ethnic minorities.

We hypothesised that groups characterised by socioeconomic vulnerabilities would be more likely to report mental distress-disorders since they have lower self-esteem, limited material and psychosocial resources, and limited capacity to cope with external stresses or to adapt and display resilience (Galea, Ahern, & Karpati, 2005; Gallopín, 2006; Trani, Bakhshi, & Rolland, 2011). The literature has suggested that subjective social status is related to mental health and that perception of low social status is associated with depression and other mental health outcomes (Demakakos, Nazroo, Breeze, & Marmot, 2008; Franzini & Fernandez-Esquer, 2006). Identifying the links between social status and the response to trauma can inform psychosocial policies and programmes to improve relevant mental health services (Das et al., 2007; Gureje et al., 2006; Ventevogel, 2011).

Social and Economic Exclusion in Afghanistan

Prejudice based on strong cultural beliefs, discrimination, and social inequalities exists between different groups in Afghan society. The unwritten rules of Pashto culture—the *Pashtunwali*, a code of honour—and particularly the central role given to the tribe or community (*qawm*, *wulus* or *tifah*) and religion, provide the source of norms for all ethnic groups (Canfield, 2011; Dupree, 2011). *Pashtunwali* particularly influences the Pashto and Tajik tribes that together represent 70% of the Afghan population (CIA, 2011). Ahmad Shah Durrani (1747-72) unified Pashto tribes and instituted a tribal confederacy based on tribal militia or *lashkar* and the authority of the council or *Jirga*. These principles heavily influence the whole country and have largely contributed to shaping the beliefs and social norms of various ethnic groups in Afghanistan (Cramer & Goodhand, 2002). Ethnicity and kinship, alongside religion, constitute the source for collective identities and the reference for social interaction among groups and individuals (Shahrani, 2002). The literature has emphasised the strong social and political influence of religious leaders, called *mullahs* (Canfield,

1984). While culture and religion forge identities are, protective factors and offer solace and fortitude, being unable to meet social requirements associated with specific identities may also contribute to mental health problems (Aggarwal, 2007; Chandler & Lalonde, 1998; Wexler, Di Fluvio, & Burke, 2009).

Social exclusion mechanisms in Afghanistan are largely determined by the failure of the individual to fulfil traditional social roles inspired by both community rules and religion. Factors that may lead to exclusion include poverty and disability, and for women include the absence of a husband or other male protector (father or sometimes brother). Men are compelled to marry and ensure the livelihood and security of the family. As a result, disabled men, who cannot work because of their impairment, or poor men who cannot take care of a family, are often marginalised. Afghan women's roles are determined in relation to men and are circumscribed to the household and the compound. Marriage and having children are both crucial accomplishments and the means for women to acquire a voice within the household and sometimes the community. Women are also invested with the family honour (*Namus*). The duty of each male of the family is then to 'protect' the women, hide them from strangers, and generally ensure that their movements are surveyed at all times: Women can rarely leave the house and in many rural areas are almost always clad in a *burqa* when they do. In Shia Hazaraland, women do not wear the *burqa*; nevertheless, the Islamic rule of *purdah*, or the segregation of genders, applies and its burden is mainly placed on women. Without the protection of a man, women are distrusted and often stigmatised (Bakhshi & Trani, 2011).

The handful of mental health care institutions that exist in Afghanistan are open to women with very diverse mental disorders: the common denominator, however, remains social ostracism. In the governmental asylums (*maristoons*) run by the Afghan Red Crescent, member of the International Federation of Red Cross Red Crescent Societies, the largest humanitarian network in the world, providing assistance to people affected by disasters and

conflicts, in major towns of the country, the authors identified women traumatised by war—showing signs of PTSD, anxiety and distress (women with *shukhe asabi*)—living alongside both women with severe mental illness (considered mad or *dewana*), and women accused of adultery abandoned by their family. Social exclusion is most commonly the fate of persons who were born with impairment: the *mayub*. The term itself also evokes religious and supernatural causes that are unexplained (God’s will, spirits, jinns, black magic, destiny, etc.), in contrast to ‘acquired’ forms of impairment (*malul*) that can be traced to an identified incident (war injury, work accident, etc.). This distinction between *mayub* and *malul* influences all spheres of life: social acceptance and self-esteem, integration into education, access to employment, as well as marriage. *Mayub* are systematically cast out as their impairment is considered linked to fate and as a result society holds them responsible for it. Social hostility translates into use of verbal abuse: *Mayub* as seen as “unhealthy” or “half human”. Hostility and shame lead to more isolation. For instance, mothers are afraid their disabled children would be mistreated at school. People with any kind of learning or mental condition, from mental illness to depression, and people with hearing impairment as well, are designed with the colloquial term of *Dewana*, which translates in having something wrong with related to the mind (*asab*). Lack of understanding of these different conditions and the lack of ability to deal with people with a mental condition leads to prejudice and as a result exclusion and marginalisation.

The present study aimed to clarify the links between conflict and mental distress and disorders in vulnerable groups at risk for social exclusion. Specifically, we aimed to identify social and economic factors contributing to vulnerability, measure the levels of mental distress or disorders among the Afghan population, and identify the coping strategies of various social groups.

Methods

Study Design and Participants

The authors who were technical advisors to the Minister of Martyrs and Disabled were tasked by various disability stakeholders (government bodies, organisations of persons with disabilities, NGOs active in the field of disability, and UN agencies) to conduct a national case-control disability survey. The study was supported by the European Commission, UNOPS/UNDP, UN Mine Action Center for Afghanistan, Handicap International, French Embassy and Swiss Agency for Development and Cooperation.

Sampling.

The study was carried out between December 2004 and July 2005 and investigated the circumstances of persons with disabilities. It covered all 34 provinces of Afghanistan, and 121 out of the 397 districts. To determine the sample size, we performed power analysis using the limit of statistical significance $\alpha = .05$ with 95% confidence intervals (CIs), assumed a prevalence of disability of 8%, and an estimated design effect of two. Disability prevalence was our main variable of interest, even if the present paper mainly explores mental health of Afghans. Based on these assumptions, a sample size of 7,728 was necessary for 5% precision, 4,417 for 10%, and only 3,111 for 15%. For this precision and a prevalence of 4.6% as we found, we needed a sample of 2,675. With a prevalence of severe mental distress-disorders of 10.3%, this sample was sufficient. Our target sample was above this last number: we oversampled the primary sampling unit (PSU) by randomly selecting 175 PSU, rather than 150, in order to anticipate difficulties in completion due to security restrictions—a common procedure when surveying in conflict areas. A total of 175 clusters of 30 households were surveyed, which yielded 5,250 households; however, due to security restrictions by local Afghan authorities, only 171 clusters were surveyed. The four villages we could not

survey were based in different districts where at least one village had already been surveyed. We carried out sensitivity analyses of the four missing clusters by increasing the weight of the observations in each of the other clusters in the district concerned (geographically close to the missing ones), and the findings did not change. This sample size was adequate for a precision between 5 and 10% and an accurate estimate of disability prevalence and factors of vulnerability.

We adopted a three stage random-sampling design. At the first stage of sampling, 175 PSU were selected systematically at the district level with a probability proportional to size sampling. The 2004 pre-census was used as the primary sampling frame for 31 provinces. For the three remaining provinces, where more recent data were not available, projections for 2003-2004 from the 1979 census were used. The second stage consisted of listing all villages and sections of towns by population or estimated population, and locations were selected randomly with a probability proportional to size sampling as previously described elsewhere (Trani, Bakhshi, Noor, Lopez, & Mashkoo, 2010).

insert Figure 1 (approximately here)

At the third stage of sampling, 30 households were randomly selected within each cluster. A “household” was defined as a unit that shared a kitchen, an income and occupied the same flat, house, or compound. Based on the International Classification of Functioning, Disability and Health (WHO, 2001) as well as the Capability Approach (Sen, 1995, 1999), disability was defined as the interaction between an individual restriction or lack of ability to perform any given everyday activity due to an impairment in functioning and the community and social resources, beliefs, and practices that enable or prevent a person from participating in all spheres of social life and making decisions that are relevant to his/her own future.

Selection of participants

Face-to-face interviews were carried out with all persons identified with physical¹, sensory, or intellectual disability, epilepsy (*mirgi*), mental illness, or a combination of any of these who were over four years of age, or with a caretaker as a proxy respondent, as well as with a control group of non-disabled people consisting of two sub-groups. Disability was assessed with an original screening questionnaire comprised of 27 questions referring to activity limitations, adapted to the cultural context and avoiding stigma and negative stereotypes. The head of the household answered the household questionnaire and the screening questions on behalf of all the members of the household.

To identify living conditions and coping strategies that might be linked with disability we compared people with disability to non-disabled people. We selected two types of non-disabled comparison groups, as shown in Figure 1.

Interviews with non-disabled respondents from the control group were undertaken to enable comparison with the living conditions and coping strategies of persons identified as having a locomotor, physical, or sensory disability, mental illness, or intellectual disability. All respondents, disabled and non-disabled, were asked about health conditions and accessibility to existing services, education, employment, income, livelihood conditions, self-perception, and social participation using the same instrument. A shorter questionnaire was designed for children under age 15. In the present paper, we only consider the respondents aged 15 years or above.

Participants were free to participate: they could decline participation and provided written or verbal consent in case of illiteracy. The rate of global non-response was very low (below 1%) in the survey. We observed a 1.2% non-response for 10 items of the mental

¹ Note that amputation of big toe/thumb (but not other toes/fingers) is considered a disability.

health instrument. Confidentiality of the interview was ensured both by the destruction of the data collection forms once data entry had been completed and verified, and by the absence of names in the database. We did not provide any monetary incentive for participating.

However, where needed, doctors from the field team visited people in the village—especially in remote areas where access to healthcare facilities was difficult—and referrals for disability was organised whenever needed and possible.

Interviewer training

The training of the 15 trainers and monitors, the 24 supervisors, and the 112 interviewers took place in six major cities. It lasted one month and was carried out by a number of specialists working in the field of disability in Afghanistan. Trainers and monitors were tasked with teaching supervisors and interviewers about survey methods and the content of the questionnaire and were responsible for monitoring the work in the field, i.e. organising the logistic and ensuring the high quality of the data collected through review of all questionnaires. These trainers were recruited among medical doctors from the Ministry of Public Health with previous experience of large scale surveys. Teams of interviewers were composed of both men and women in similar numbers, as women could only be interviewed by women in Afghanistan. Interviewers were recruited locally for security purposes and because of their knowledge of the communities. They all had high school education.

Interviewers were trained on survey concepts and goals (one day), disability and mental health issues and awareness (15 days), interview techniques and instrument (10 days, including item-by-item explanation of instruments), mine risk and security information (one day), followed by review, test, and debriefing (half day after each session). Role play, visits to health centres, and field practice interviews were organised.

Questionnaire Design

The questionnaires were developed, validated, and pilot tested through focus groups and face-to-face semi-structured interviews over a period of five months, in both rural villages and urban neighbourhoods of the province of Kabul, with input from experts and partners within and outside Afghanistan. A screening tool (Table 1) consisting of 27 questions to detect the presence of persons with disabilities within the household was developed based on the International Classification of Functioning, Disability and Health (WHO, 2001), the Hopkins Symptom Checklist-25 (HSCL-25), the Self-Reporting Questionnaire (SRQ-20) and the Capability Approach (Sen, 1995, 1999). The questionnaire was tested for internal consistency (Cronbach's $\alpha = 0.85$). We tested for reliability and obtained relatively good Cohen's kappa statistic for the whole questionnaire (0.9).

-- Insert Table 1 Screening tool, approximately here --

The other questionnaires consisted of a checklist and consent form, a household form designed to collect sociodemographic information on all the members of the household, and a form with several sections on education, health and mental health, employment, livelihoods, income, social networks and participation. All instruments were translated into Dari and Pashto and then back-translated into English by independent Afghan translators familiar with the terminology used in the survey. Translations were checked by several Afghan academics and doctors, and other survey experts experienced in instrument development. They were then discussed in an expert panel together with the authors. Finally, we pre-tested the translation process through interviews. We ensured that the questionnaires were conceptually equivalent to the English version, performed in the same way, understood by and ensured the same meaning to respondents representative of those in the study population.

Assessment of Mental Distress-Disorders

Mental distress-disorders were identified using a culturally specific 22-item instrument designed and validated by the authors. These items relate to four dimensions of mental distress: social interaction difficulties; learning difficulties; behavioural disorders; and anxiety and depression. However, these four dimensions do not constitute independent subscales and the instrument was designed as a global measure of mental distress-disorders.

The instrument took in account Afghan social structures and beliefs. The instrument was designed based on focus group and key informant interviews identifying local expressions of distress and 22 items were retained after a selection process based on their recurrence in the focus group and semi-directive interviews. A higher score distinguishes distress-disorders from common responses to acute stress experience (Hyder, Bloom, Leach, Syed, & Peters, 2007; Mumford et al., 2005; Saeed, Gater, Hussain, & Mubbashar, 2000; Ventevogel et al., 2007). The instrument has much good overlap with the Afghan Symptom Checklist (Miller et al., 2006), a measure of general psychological distress developed later with similar culturally appropriate terminology: eight items about psychological distress are almost identical to the latter. We used “*Der djeegarkhoon shwey/au ya prata de kom zaleela mo djarelewee*” in Pashto, meaning literally “to become very sad/cry without reason,” and “*Besyaar djeegarkhoon boda/wa ya bedoone kodam daleel geryaan karda bashed*” in Farsi, meaning “feeling very sad/or crying without a reason,” to describe a state of depression and feeling low or miserable. We also used *asabi*, a state of nervous irritability, anger, and traumatism often linked to war that translates into verbal and physical violent behaviour (Miller et al., 2006).

Each sign of distress or disorder was related to the exposure to adverse events having occurred during the recent past, including: war-related, gender-based and domestic violence;

loss of family member(s); and significant worsening in living conditions. All the signs of mental distress-disorders thus identified were contextually interpreted, and reviewed for content validity and measurement reliability by researchers assisted by trilingual Afghan disability experts, medical doctors and a psychiatrist, all of whom participated in the survey process.

Data Analysis

We assessed the mental health status of various social groups in Afghanistan with a particular focus on factors of vulnerability. We controlled for factors associated with mental problems and tested with univariate logistic regression the associations between the four level score of mental distress-disorders outcome and nine demographic and socio-economic covariates: sex, age, marital status, ethnicity, cause of disability, education level, residence, employment status, and level of wealth.

Explanatory variables were selected based on their association with signs of mental distress-disorders tested regression, the literature (Das et al., 2007; Dubois & Rousseau, 2001; Patel, Araya, de Lima, Ludermer, & Todd, 1999; Patel et al., 2006; Thabet & Vostanis, 1998; Trani et al., 2010), and their importance in this study. We found two major potential effect modifications linked to interaction terms in the model (gender×marital status and gender×cause of disability) that have a significant combined effect on mental health outcomes: the effect of being a woman and being widowed, separated or divorced and disabled due to an accident, a disease or an unexplained cause (God's will or fate—*kismet* in Farsi). Age was defined by deciles to show the link between aging and mental health problems. War injuries were identified as a specific stated cause of disability to account for the direct impact of war.

Household wealth was measured based on the number of reported household goods and assets. Asset quintiles were calculated using principal-components analysis (Filmer & Pritchett, 2001). This index was composed of 29 indicators referring to the household grouped into four categories: household or individual items (radio, television, cooker, oven, fridge, heater, generator, lamp, sewing machine, bicycle, motorbike, car, tractor); household's dwelling (toilet facilities, sources of drinking water, sources of light, sources of cooking, number of rooms); house ownership and landownership; and ownership of animals (sheep, cows, goats, donkeys, chicken and birds, roosters, horses or camels).

We conducted analysis for each of the nine variables, with $p < .05$ being the criterion for acceptance in the model (except for gender and place of residence, where $p < .10$ was accepted). We verified logistic model assumption (independence of error terms), and tested for collinearity using the Spearman rank correlation coefficient between independent variables. We found collinearity between gender and activity ($r = .80$) and between age and marital status ($r = .50$). Nevertheless, we kept these variables as they were potentially related to social exclusion: many women do not have access to employment and for men, being unemployed is a major cause of stigma as described above; young adults, particularly women, who are not married are also bound to be ostracised by the community. Including these variables did not affect the robustness of our findings. To check for robustness, we proceeded with a logistic regression analysis, employing first a forward stepwise inclusion method, and then a backward elimination method. We finally fitted a full model that included all of the candidate variables, in order to confirm the validity and stability of our results.

Results were replicated when we carried sensitivity analyses using a Poisson regression with a count variable (score from 0 to 22 for mental distress outcome) in absence of over dispersion. To further check for robustness, we alternatively classified responses to items according to the number of positive answers within each of the four dimensions of

mental distress-disorders defined above and obtained a score varying between 0 and 10. Sensitivity analyses using a multinomial logistic regression applied to this different categorisation yielded similar findings. Due to the low level of refusal and missing data (below 2%), selection bias did not seem to be a problem. We imputed values for the missing observations of the outcome and compared both models to examine the potential influence of missing data using a likelihood ratio test. There was no evidence that missing data influenced the association between vulnerability and mental health distress-disorders.

Statistical comparisons were performed using Wald χ^2 tests with $p < .05$ set as the level of significance. All presented data were adjusted for clustering and assigned a weighting factor.

Results

Instrument Validation

The 22 items of the mental distress-disorders instrument can be seen in Table 2, along with prevalence, Chi-square p -value for comparison between disabled by type and non-disabled people, and factor loadings of the final one factor scale. Each item of the mental distress-disorders instrument was tested for its contribution to the internal consistency of the overall 22-item scale, and internal consistency was assessed for the overall instrument using the same sample (Cronbach's $\alpha = 0.92$). Construct validity was also tested on the sample *ex post* using confirmatory unrotated principal factors analysis. All 22 items were loaded by the first factor. The Eigenvalue for the first factor was 7.95, accounting for 78.4% of the total variance. The factor analysis resulted in a psychometrically sound one-factor structure as shown by Table 2. The factorial structure suggests a strong interrelation among the four dimensions of mental distress-disorders. The results show that 270 (40%) disabled Afghan adults showed at least six signs of mental distress-disorders (Table 2). Signs of mental

distress-disorders were significantly more frequent among disabled ($n = 581$, 86.1%) than among non-disabled respondents ($n = 247$, 29.5%) and among women ($n = 382$, 59.1%) than among men ($n = 425$, 49.1%).

---Table 2: Characteristics of mental distress-disorders and disability (about here) ---

Sample Characteristics

The sample characteristics are presented in Table 3. A total of 1,512 persons completed the questionnaire; 675 of these were screened as being disabled and could be classified in various ways: 440 (65.2%) with physical, sensory, or intellectual disability; and 235 (34.8%) with signs of severe mental distress or behaviour disorders. Looking at the cause of impairment, disabled respondents can be classified as disabled as a result of a war injury (147 or 21.8%), or due to an accident, a disease, or an injury incurring during birth (528 or 78.2%). Another classification stratifies respondents with disabilities in the sample as having mobility impairment (265 or 39.3%), sensory impairment (154 or 22.8%) or learning impairment or mental illness (256 or 37.9%). Disabled and non-disabled, as well as male and female respondents were compared to see if they statistically differed based on demographic characteristics.

--- Table 3: Socio-demographic characteristics of Afghan respondents (about here) ---

The sample consisted of more men than women. Non-disabled persons and women were more frequent in the younger age categories (15-24 and 25-34), whereas disabled persons, especially those with sensory impairment, and men were over-represented in the oldest age group (over 45). A higher proportion of disabled people, especially sensory

impaired, and women were widowed, separated, or divorced. Disabled and non-disabled persons, male and female individuals were predominantly from the Pashto ethnic group, and one third were Tajik. Less than 5% of both subgroups ($n = 56$) belonged to minority ethnic groups. Almost two thirds ($n = 1046$) lived in rural areas.

As expected and found in other studies, a higher proportion of disabled persons received no education, were among the poorest, and faced higher levels of unemployment (Beresford, 1996; Braithwaite & Mont, 2009; Elwan, 1999; Filmer, 2008; Yeo & Moore, 2003). No differences between disabled and non-disabled respondents were observed in socio-demographic characteristics, except for age and employment.

In the absence of any established cut-offs, we used frequency of occurrence of items to elaborate an overall prevalence score of mental distress. No sign of distress or disorders corresponds to absence of positive answers to any of the items (46.5% of the sample); 'mild' level of distress-disorders is reflected by one to three positive answers (23.2%); 'moderate' distress when the respondent gave between four and 10 positive answers (20%); and 'severe' between 11 and 22 (10.3%); 54 respondents screened with mental illness were excluded from the calculation as they were expected to score higher on measures of mental distress-disorders.

Vulnerability and Mental Health Outcomes

Table 4 shows that dimensions of vulnerability were all strongly associated with subsequent mental health distress-disorders. The association between cause of disability and mental health status was found to be the most salient. Univariate analyses indicated that mild to severe signs of mental distress-disorders were more common in respondents disabled by war than non-disabled respondents. After adjustment for the other variables in the model, odds of mental distress-disorders remained substantially higher for war-related disabled

respondents compared to non-disabled respondents. This difference was even more significant for those disabled due to ‘other causes’ including disease, accident, birth complications, or unknown causes, before and after adjustment for cofounders. We modified the base category for the model and found that non-war-related disability was much more strongly associated than war-related disability with mental distress-disorders (mild: 2.11, 1.05 to 4.22, $p = .03$; moderate: 2.47, 1.22 to 5.04, $p = .01$).

We also found that widowed and divorced or separated women were respectively 12 and 10 times more at risk of experiencing mild or moderate levels of mental distress-disorders compared to women who are married, after adjustment, as shown by the interaction term gender×marital status. Women with disabilities were also more at risk than non-disabled men for mild ($p = .01$) and moderate ($p < .001$) mental distress-disorders.

The difference between other vulnerable and non-vulnerable sub-groups, such as employed and unemployed, poor and rich—and between Afghans from Pashto and non-Pashto ethnic origins—was also substantial and robust (effects of which persisted after adjustment for confounding variables): unemployed Afghans were five times more likely to report severe signs; the poorest Afghans were more likely to report moderate signs; Afghans of non-Pashto origin (Tajik, Uzbek, Hazara), especially those from ethnic groups that are minorities, reported higher probability of severe signs of mental distress-disorders.

Finally, we noted that Afghans living in urban areas and the elderly were more likely to report moderate and severe signs of distress-disorders, respectively. Lower levels of severe mental distress-disorders were significantly associated with access to primary education.

Table 4 Dimensions of vulnerability and mental distress or disorders (approximately here).

The association of disability (physical, sensory, learning and associated disabilities) as one component of vulnerability with mental distress-disorders was unchanged in multivariate analyses when the analyses were repeated using a variable with two subgroups—disabled and non-disabled people—and by types of disability (instead of cause of disability). We also tested for violence directly experienced by respondents and reported during the interviews, but we did not find any significant association with mental distress-disorders. Finally, sensitivity analyses using a Poisson regression model showed extremely similar trends in mental distress or disorders for all variables of interest.

Discussion

In this study, we examined the association of psychological distress with vulnerability. We identified different dimensions of vulnerability: primarily disability, but also gender compounded by social isolation (widowhood, divorce or separation), ethnicity, unemployment, old age and material poverty (Boyce et al., 2009; Das et al., 2007; Gureje et al., 2006). We hypothesised that isolation from existing social support systems makes individuals more fragile and, in conjunction with intensive and on-going exposure to conflict, impairs mental health and may lead to an increased risk of mild-to-moderate problems. Our findings suggest that the conflict settings of Afghanistan, social exclusion plays a considerable part in shaping mental health (Lopes Cardozo et al., 2004; Miller et al., 2008; Panter-Brick et al., 2009). In fact, increased mental distress-disorders were observed for non-war related disabled people, who more often face poverty and exclusion than war-related disabled people well included within society.

As expected, our data suggest that vulnerable Afghans with specific demographic and socioeconomic characteristics are more prone to mental distress in an extremely trying environment that has affected the entire population for three decades. Wealthier people, with

extensive social networks and secure access to resources that are extremely scarce (Pain & Klijn, 2007; Schütte, 2006), have the option of fleeing if the situation worsens and also have access to specialised help and medication to manage their conditions.

Fighting for everyday survival entails repetitive stressors that many Afghans, already fragile due to other factors of vulnerability, are not equipped to deal with. A feedback loop is created: socioeconomic stressors directly or indirectly linked to war, such as violence, poverty, under or unemployment, lack of education, widowhood, or other issues, create or worsen mental distress-disorders among already fragile individuals. Various factors of vulnerability such as disability, widowhood, material deprivation, and belonging to an ethnic minority lead to extreme isolation as a consequence of cultural beliefs and customs, thus impeding adaptation in a context of risk (Mastern, 2006). In addition, the breakdown of the social fabric as a consequence of war and migration has deprived people, mainly the poor and the unemployed, of the support to which they would traditionally be entitled, making emotional and social functioning more difficult (Eggerman & Panter-Brick, 2010; Miller et al., 2008). Belonging to an ethnic minority (Aimaq, Pashae, Qezalbash, Turkoman, etc.) was also a factor of vulnerability in Afghanistan (Trani et al., 2010); non-Pashto and especially ethnic minorities showed higher probabilities of mental distress-disorders.

Limitations

Our study shares the limitations of other research using cross-sectional designs. Mental health distress-disorders may be closely linked to the causes as well as to the consequences of disability. Similarly, mental health distress-disorders are known to be both the cause and the consequence of many socioeconomic variables such as social exclusion, lack of education, unemployment, and to a certain degree, poverty. In fact, all these variables

may be interlinked in many ways. As a result, we have avoided strong suggestions of causality.

Other limitations of our study were the lack of independent information about exposure to adverse events, and the reliance on self-report measures of mental distress-disorders. Therefore, the direct impact of war on mental health was difficult to evaluate. We did not directly inquire about all war stressors, such as the severity and duration of exposure to danger, torture, suffering, witnessing of traumatic experiences, or exposure to war related losses. However, we did question respondents' exposure to violence and found low levels (Trani et al., 2011). Therefore, we reported disability caused by war injuries. We noted that prevalence of mental distress-disorders in our study was lower than that found in other studies carried out in Kabul for non-disabled young urban elite (Panter-Brick et al., 2009), in Nangarhar province for non-disabled respondents (Scholte et al., 2004), or throughout Afghanistan for both disabled and non-disabled respondents (Lopes Cardozo et al., 2004). Some authors have argued that estimates of high figures of depression and anxiety in Afghanistan should be interpreted with caution due to probable overestimations (Ventevogel, 2005). The present study did not ask about sleep disturbances and nightmares, which can be indicators of traumatic stress. However, we note that our survey questions, based on the established body of literature on mental stress in times of war, are similar to those of other studies (de Jong, Komproe & Van Ommeren, 2003; Lopes Cardozo, Vergara, Agani & Gotway, 2000; Miller et al., 2006; Mumford et al., 2005).

Another possible limitation of our study is the method of calculating asset scores that might be a limited proxy of wealth. We tried to account for the possible absence of significant impact on mental health distress-disorders between wealth groups due to the method of construction of the asset index. For this reason, we tested another validated method of estimating wealth (Ferguson, Tandon, Gakidou, & Murray, 2003). We used 16 specified

household items such as radio, cooker, oven or bicycle to define a proxy of wealth level. We assessed four economic groups with either fewer or more assets than the median wealth level and regression analysis yielded similar findings.

Interpretation and Comparison with Other Studies

Findings from our study suggest that a large number of persons with locomotor, sensory, intellectual disability and age-related health problems had additional mental health problems. The link between persons with disabilities and significant mental health problems is consistent with other studies (Mollica et al., 1999). However, these problems were more severe for persons who were disabled by non war-related factors. Research has shown that when the disability is highly stigmatised within a given society, persons with disabilities are far more prone to be poor and excluded (Braithwaite & Mont, 2009; Harriss-White, 1999; Lwanga-Ntale & McClean, 2004; Mollica et al., 1999). Exclusion is then synonymous with lack of resources, the loss of a job, and of social status, and leads to feelings of guilt, shame and concerns of becoming a burden on the family (Boyce et al., 2009; Trani, Bakhshi, Noor, & Mashkoo, 2009). In Afghan society, people with disabilities face social stigma in many situations, particularly in instances when their disabilities cannot be linked with a clear cause or is believed to be 'by birth' (genetic or congenital) as well as when there is no 'cure.' This is particularly true for intellectual disability (Cerveau, 2011). Literature shows that prejudice is borne not only by the individual, but by the family as a unit, which is often excluded from social networks (Trani et al., 2009); siblings of a person with intellectual disabilities often are deemed unfit matches for marriage.

Results indicate that disabled women were a particularly vulnerable group at higher risk of experiencing mental distress-disorders. This finding is consistent with other studies that show that when women are socially excluded through disability, as well as due to

widowhood, divorce or separation, their mental health deteriorates (Amowitz, Heisler & Iacopino, 2003; Lopes Cardozo et al., 2004; Rasekh, Bauer, Manos & Iacopino, 1998). The status of women is steeped in tradition, but has also been strongly influenced by recent political events. Traditionally, women have roles that limit their choices: gender roles and responsibilities constitute the basis of the social fabric. The role of wife and mother marks a major social accomplishment, and family unity is the central value. Forced marriages of young girls with older men are also a common cause of mental distress (Dupree, 2004, 2011). Family constitutes a support that widowed, divorced, and separated women cannot rely on, and as a result they are more at risk of mental suffering. For women with disabilities the compounded effect of these cultural factors is of particular concern. When their disabilities result from congenital diseases or unknown causes (with no medical diagnosis), women are less likely to marry (or re-marry) and thus become poorer and more isolated than non-disabled women or women who have a physical disability from similar social strata (Trani et al., 2009).

Our study shows that material poverty increases the risk of moderate signs of mental distress, while unemployment and absence of education are both associated with severe signs. Other studies have found similar socioeconomic factors—unemployment, but also low level of education, low income, or low social class—to be associated with mental health problems (Bahar, Henderson, & Mackinnon, 1992; Hoogeveen, 2005; Panter-Brick, Eggerman, Mojadidi, & Mcdade, 2008; Patel et al., 1999; Rasekh et al., 1998; Saraceno & Barbui, 1997; Thabet & Vostanis, 1998). Several mechanisms may explain this: isolation and absence of social and economic opportunities impact the ability to cope with everyday stressors, consequently leading to feeling of low self-esteem and affecting well-being. Unemployed Afghans face increased marginalisation from the community and within the family, which already has limited opportunities and resources. Persons with disabilities compound several

layers of vulnerability (lack of education, unemployment), are more prone to social marginalisation, and are thus more likely to show mental distress-disorders.

Relief and employment programmes in Afghanistan (such as cash for work or food for work) must be grounded in meaningful vulnerability assessments (Hofmann, 2005). If programmes are geared solely towards providing vocational activities and ignore social inclusion mechanisms, they run the risk of being unsustainable in the long-term because they wear out support structures at family and community levels, rather than building on and strengthening them. We established that Afghans from urban areas are more likely to report moderate levels of mental distress showing less resilience than populations in rural Afghanistan. This finding suggests that the perpetuation in villages of vivid family and community support systems based on common adherence to robust and stable cultural values are a central factor of coping with daily stressors linked to pervasive poverty, raising inequalities and various forms of violence (Eggerman and Panter-Brick, .2010).

Conclusion

We found that signs of mental distress-disorders are more prevalent and more severe among certain social groups in a conflict affected fragile state, including persons with disabilities, widowed, divorced or separated women, the poor, the unemployed and uneducated as well as the elderly, and those from minority ethnic groups. The findings from our study suggest that war exposure results in different risks of mental distress-disorders across different social groups. Many Afghans may show some sign of mental distress-disorders but this does not necessarily impede their functioning on a daily basis because of the resilience and fortitude of the population as shown in the recent literature (Eggerman & Panter-Brick, 2010; Panter-Brick et al., 2008). Our findings have implications for policy, practice and future research:

- Following our attempt to define a culturally specific measure of distress-disorders, more consideration should be given to contextual factors when screening and measuring for non-specific psychosocial suffering in conflict areas.
- A majority of policies in recent years in Afghanistan have focussed on individuals' rights: to good health, to employment or to education regardless of collective norms and values in developing interventions. In a context where the sense of well-being is deeply rooted in community values, coping strategies are built at the family and community levels. Policies and programmes should therefore be based on community work and build on local resources, identify patterns of social strengths and weaknesses, and reinforce local capacities. This will restore indigenous collective protective mechanisms, strengthen social support networks and rebuild a sense of belonging (Betancourt & Williams, 2008).
- In situations of limited resources, psychosocial and other mental health programmes and policies should better target those in the community exhibiting multiple vulnerabilities, who are therefore less resilient and more at risk of mental health distress-disorders due to stigma and prejudice as extensively shown in the literature (Betancourt, Agnew-Blais, Gilman, Williams, & Ellis, 2010; Dovidio et al., 2008; Link, Yang, Phelan, & Collins, 2004; Mak et al., 2007; Meyer, Schwartz, & Frost, 2008).
- Addressing multiple and cumulative vulnerabilities requires an examination of indigenous factors that put individuals more at risk of mental distress-disorders, and sources and mechanisms through which daily stressors operate to cause mental distress-disorders, as well as methods to promote strength and resilience.
- Mental health assessments required to shape interventions need to be participatory in order to identify factors contributing to psychosocial distress-disorders besides conflict exposure and the various capacities to cope among Afghans with different social status.

These principles have been applied by the NGO HealthNet TPO active in Afghanistan since 1992. In 2002, the organisation started a culturally appropriate, community-based psychosocial mental health programme addressing the psychosocial effects of violence. The central tenet of its intervention is that essential mental health care can only be made accessible to individuals and families through their active participation, and at a cost that both the community and country can afford (Ventevogel, 2011). The organisation provides training of trainers, specific group intervention, economic support and community psycho-education at the local level, more specialised mental health interventions as well as technical support to the Ministry of Public Health. We think that this multiform, multilevel and multi-sectoral approach provides a way to address mental health and psychosocial problems in the long term whilst prioritising the needs of those most vulnerable.

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