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Development of a brief screening tool for women's mental health assessment in refugee settings: A psychometric evaluation

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ABSTRACT

Background and purpose: The detection of common mental disorders in humanitarian crisis settings requires a screening tool that is feasible to use as well as sensitive and specific. The Self-Report Questionnaire, developed by the World Health Organization in 1994 to detect presence or absence of common mental health disorders, has frequently been used among conflict-affected and refugee populations. Our goal was to identify a highly predictive and reliable subset of items to serve as a screening tool that can be used in busy, over-crowded, and low-resource primary health care settings to identify women who need mental health attention.

Methods: We analyzed the responses on a version of the Self-Report Questionnaire expanded to include two suicidality items from 810 displaced women living in refugee camps in Rwanda. Screening items were selected and evaluated for predictive ability using logistic regression in a cross-validation process, sensitivity and specificity using receiver operating characteristic curve analysis, and internal consistency analysis.

Results: A five-item screening tool resulted. Those items are "Do you feel unhappy?", Do you feel easily nervous, tense, or worried?", "Have you lost interest in things?", "Do you have trouble thinking clearly?" and "Has the thought of ending your life been on your mind?".

Conclusion: The Self-Report Questionnaire-5 may be an important tool for identifying common mental disorders as well as suicide ideation and behaviors when assessing mental health among women in crisis situations. Further evaluation of this tool is warranted.

What is already known about the topic?

- Countries affected by humanitarian crises rank among the lowest in mothers' and children's indicators of well-being: including health status, contraceptive use and infant mortality.
- Mental health concerns among refugees are a challenge. Research has shown that refugees experience depression and posttraumatic stress disorder (PTSD) at more than double the rate of the US population.
- The Self-Report Questionnaire has been used and validated in multiple low resource and global settings, including refugee camps.

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What this paper adds

- This five-item screener derived from the SRQ-SIB shows a degree of sensitivity and specificity that likely is acceptable for use in low-resource settings.
- The SRQ-5 demonstrates diagnostic accuracy in terms of identifying women with suicidal thoughts as well as women who likely have a common mental disorder.
- Indications of good discriminant validity with the SRQ-5 were found because women with the trauma exposure of forced sex during the conflict had differences in mean scores on the SRQ-5 that were as strongly different across groups as those on the full SRQ-SIB.

1. Background

Mental health problems are a serious and growing public health epidemic, contributing 14% to the global burden of disease (Prince et al., 2007). War and conflict have devastating effects on populations, with women being more acutely affected than their male counterparts (Usta et al., 2008). Countries affected by humanitarian crises (defined as armed conflict, famine, epidemics, or natural disaster) rank among the lowest in mothers' and children's indicators of well-being, including health status, contraceptive use and infant mortality (Women's Refugee Commission, 2010). Refugees experience depression and posttraumatic stress disorder at more than double the rate of the United States population (Mollica et al., 2004). Prevalence rates of both common mental health disorders and suicidal intention and behavior are high, with one study citing 31% of Darfurian refugee women as meeting criteria for major depression (Kim et al., 2007). Another study with a population of Burmese refugee women awaiting resettlement or repatriation in Thailand found 7.4% had suicidal ideation in the past month (Falb et al., 2013a). Refugee women represent a population with a high potential trauma history, where residing in harsh conditions in addition to experiences of gender-based violence, sexual violence and war-related conflict may increase predisposition to common mental health disorders (Falb et al., 2013a,b; Gupta et al., 2014).

Development efforts have long focused on reproductive health indicators and safe motherhood, while mental health of women (which arguably affects all aspects of women's health), has been neglected, particularly in the Millennium Development Goals. Given that these goals were set for the world's poorest countries where war and human rights violations are endemic (United Nations, 2010), this absence is striking. Frontline approaches to mental health services in post-conflict and post-disaster settings are limited and badly needed (Carter Center, 2012). Detecting women with common mental health disorders that are severe or life-threatening is essential so that they can be connected to what limited psychiatric care is available. Screening that is both sensitive and specific is ideal, but in post-conflict and post-disaster settings where resources are severely constrained, it is particularly important to achieve reasonable specificity so as to focus further assessment on those most likely to be affected. Given the paucity of mental health service providers in these settings, screening via women's health or primary care clinics through a short written or verbal assessment may be an efficient case-finding strategy (Baron et al., 2014).

The focal measure for this project was the SRQ-SIB, a modified version of the Self Report Questionnaire (SRQ). The original version has long been used in developing countries as a means to measure incidence and prevalence of common mental health disorders, where rather than being predictive of specific mental health diagnoses, the SRQ assesses symptoms of common mental health disorders and uses a cut-point on the total score to indicate the need for further evaluation. Designed by the World Health Organization (1994), the original tool includes 20 items about depression, anxiety, and somatic complaints, and is designed to be either self-administered or administered by a trained interviewer. The SRQ has been psychometrically validated in multiple settings, including conflict and non-conflict situations (Iacoponi & Mari, 1989; Scholte et al., 2011b; Ventevogel et al., 2007). Cut-off scores used have varied depending on the population and setting, although a cut-off score of between 6 and 8 has been commonly used to identify presence of common mental health disorders (Harding et al., 1980; Harpham et al., 2003; World Health Organization, 1994).

2. Methods

2.1. Design

Our analysis followed steps to develop a set of screening items from a longer instrument. To enhance the rigor of this approach, where no concurrent validation with another measure or a clinical interview was available, we used a random split-halves cross-validation design (Choi et al., 2012; Seng et al., 2010) to select and test items with the "training" half of the dataset first, then repeating the testing with forced coefficients on the "testing" half of the dataset.

The dataset employed for this analysis was from a larger analysis of conflict-affected women using the Reproductive Health Assessment Toolkit for Conflict-Affected Women, which was conducted by the American Refugee Committee with support from the Centers for Disease Control in July and August 2008. The survey was part of a larger parent study that was intended for field staff and management of non-governmental organizations to use to identify and prioritize key women's health needs, translate priorities into programmatic responses, evaluate programs and policies, and to disseminate results for improving the reproductive health of the women in the camps (Division of Reproductive Health, 2007). The sample size of 810 was determined for the original study using the Reproductive Health Assessment for Conflict Affected Women Toolkit guidelines to achieve point estimates within ±5% of the true population prevalence, with 95% confidence (Division of Reproductive Health, 2007).

2.2. Sample

The original study sample was drawn from a population of Congolese refugee women living in long-term temporary