The Role of Culture and Stigma in screening for Mental Disorders among College Students in Saudi Arabia: The Example of PTSD

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Abstract: Background. Early detection of PTSD is very important. Culture plays a very important role in all areas and stages of mental health (e.g. Prevention, Intervention, and treatment) from the beginning to the end. It is a necessary step to improve treatment results. While screening instruments for PTSD and other mental disorders have been developed, applied and evaluated in western populations, research into the effectiveness of screeners in Arab countries is lacking. In this paper, the researcher utilized the Jellinek-Post Traumatic Stress Disorder questionnaire (J-PTSD) which is highly reputable for its high efficiency, brief content and ease to use.

Method. The aim of the present study was to replicate and cross-validate the J-PTSD screener in a community sample in Saudi Arabian students. In total, 239 subjects completed both the screener and a structured interview: The Mini International Neuropsychiatric Interview. Results. Results of the current study did not confirm the validity of the screening questionnaire in Saudi Arabia, in that much lower values were found for sensitivity (.47) in detecting PTSD. The specificity found in the present study was good: .89. Results were compared to literature on Mental disorders as well as to the 2019 Saudi National Survey of Mental Health. Cultural barriers (e.g. stigma) have been explored

Conclusion. The low value found for sensitivity indicates that the screener possesses poor diagnostic qualities in this population. Therefore, clinical use of this screener in non-Western context, e.g. in Arab and perhaps other Muslim (i.e. non-Arab) refugees, cannot be recommended. The same may apply to non-Arab and non-Muslim cultures that share similar cultural characteristics relevant to mental health and treatment issues. Recommendations were presented.

Keywords: PTSD; screener; Saudi Arabia; specificity; sensitivity; MINI

Introduction

Mental disorders are very prevalent in the world including Saudi Arabia. One in every 8 people in the world live with a mental disorder (WHO, 2022). Mental disorders can cause significant distortions to the individual's thinking, emotional regulations, and behavior. Trauma refers to a very serious and horrible event that includes exposure to death, death threat, serious injury or sexual violence, witnessing it or learning of its occurrence to a close family member or friend. It does not include, however, watching it on TV or in movies unless it is part of work.

Such experience may cause posttraumatic stress disorder (PTSD). According to the American Psychiatric Association, the triggers for PTSD symptoms include death, serious injury or sexual violation (https://www.psychiatry.org/file%20library/psychiatrists/practice/dsm/apa_dsm-5-ptsd.pdf). This may include:

- Direct experience of the traumatic event.
- Witnessing the traumatic event personally.
- Learning of the occurrence of death, threat of death, actual violence or serious injury to a close family member or close friend.
- First-hand experience of repeated or extreme exposure to repulsive details of the traumatic event (not through the media, pictures, videos, or television unless it is work-related).

- Serious illness or health risk (National Health Services Site at (https://www.nhs.uk/mental-health/conditions/post-traumatic-stress-disorder-ptsd/overview/).

PTSD affects people of all ages including children. The DSM-V included two additional subtypes of PTSD that have not been included in previous editions. These two types are: PTSD Preschool subtype which refers to PTSD in children before the age of six, and PTSD Dissociative Subtype.

In general, PTSD symptoms can occur immediately after the event or weeks, months or even years after the event.

Mental Health and the prevalence of mental disorders in Saudi Arabia:

Upon reviewing literature on mental health in Saudi Arabia, we can find that Mental health awareness and care have progressed tremendously in the last 30 years and are still on the rise (Qureshi, Al-Habeeb and Koeing, 2013 & Koeing et al. 2013). The government created 3-level system to diagnose and treat mental disorders and psychiatric patients. These levels included Primary health care centers in primary health centers (PHC) which served as the first contact between patients and medical professionals. If unable to deal with the presenting mental issues, a referral can be made to psychiatric departments in general hospitals as the secondary level, and if not able to treat, a referral to specialty psychiatric or teaching hospitals as the last and tertiary level (Qureshi et al. 2009). This process does not limit individuals from seeking mental health care directly from mental health care professionals including psychologists and psychiatrics (Al-Atram, 2017).

Studies that examined mental health conditions in Saudi Arabia focused on depressive symptoms among high school students (Abdel-Fatah and Asal, 2007). Although PTSD and depression are often seen together according to the American National Center for PTSD which states: "Results from a large national survey showed that depression is nearly 3 to 5 times more likely in those with PTSD than those without PTSD" (https://www.ptsd.va.gov/understand/related/depression_trauma.asp). Furthermore, according to the DSM-V, PTSD is associated with high levels of social, occupational, and physical disability. It can also manifest in any or more of the following differential diagnosis: adjustment, acute stress, anxiety and OCD, major depressive, personality, dissociative, conversion and psychotic disorders (p. 279). Al-Gelban (2006) also examined psychiatric symptoms among high school students with average age of 17 years where he used Beck Depression Inventory (BDI) for male students and the Symptom Checklist 90 (SCL-90-R) for female students. Results revealed that 59% of students had significant levels of either depression, anxiety or stress; 41 % had significant levels of two or more of these symptoms and 23% had significant levels of all three symptoms. The presence of PTSD was not examined although many students may attend schools while going through traumatic events such as family violence, abuse, parents' separation or divorce, or death of a parent or loved one particularly when we learn that the Saudi culture values keeping family's secret to prove loyalty and discourages men (including growing male children) to hide emotions as a sign for manhood.

Al-Shammari and Al-Subaie examined depressive symptoms among Saudi elderly (n= 7970) using the 30 item Geriatric Depression Scale. Significant depression was associated with loss of a close relative (68%), divorced or widowed (51%) & perception of poor health and dependence on others for daily activities were associated with more depressive symptoms (68%). As stated above, the study did not assess for PTSD although results strongly suggest the presence of PTSD particularly with loss of close relatives, divorce and death of a spouse.

The Technical Report of the Saudi National Mental Health Survey (2019) which was spearheaded by King Salman for Disability Research surveyed a sample of 4004 individuals representing the entire Kingdom of Saudi Arabia found that the 34.2 % of the sample have been diagnosed with a mental disorder during sometime in their lives. This rate compares to 47.4 % in the U.S.A., 39.3% of New Zealand, 37.9 % in France and 31.7% in the Netherland (p. 18). Two out of every five individuals will suffer some sort of mental disorder (i.e. 40%) in the age groups ages between 15-24 and 25-34 % equally falling the second to only that of the United States which was 52.4% among the same age group, ahead of France (26%) and European countries (13.7%). The age group from 35- 49 scored 29 % while 50-65 years of age group scored 19% (p. 19 &20).

While PTSD scored 3.9 % among Saudi females (fifth in order among mental disorders), it has scored 2.8% among males (10th in order) which indicates the prevalence of PTSD in Saudi society for one, and that it is higher among

females than males (p. 24). An explanation for the higher level among women which may be overlooked by mental health professionals is the dismissal of the mental effects of second and subsequent marriages for the man over first wife, a religiously allowed and socially encouraged in some communities within the Kingdom of Saudi Arabia although it is diminishing with time and changes that Saudi Arabia is experiencing but hardly recognized as a possible source of PTSD.

Obstacles to Mental Health diagnosis and treatment in Saudi Arabia:

In addition to the cultural factors mentioned above (e.g. Keeping family's secrets even at the expense of one's own health, and discouraging men from expressing emotional vulnerability), stigma is another obstacle to prevention and treatment of mental disorders. Stigma surrounds terms that are related to mental health and /or illness. Various types of stigmas (e. g. public, self, perceived, label and structural stigmas) surround mental health/ illness and hinder the person's ability and/or willingness to admit having any mental disorder let alone seeking treatment for it. Stigma may compound the mental illness by instilling feelings of shame and hesitation to seek treatment or speak about it to anyone. This may result in lack of understanding and support within one's own family, friends and other social circles, reduction of employment opportunities or participation. Furthermore, it may even subject the individual to bullying, physical, and mental violence and harassment. Individuals may reject any suggestion of any diagnosis or to seek treatment thus increasing their resistance to treatment and consequently delaying recovery. According to Mayo Clinic (2017), victims of stigma may suffer isolation, unemployment, addiction, and possible suicidal ideation. According to the National Alliance on Mental Illness (NAMI), stigma can manifest in the following ways:

1. Public perception: the public stigma legitimizes medical conditions while viewing mental health conditions as weaknesses.
2. Labeling: public both individuals and institutions may define individuals with mental illnesses by their mental conditions thus affecting those individuals' self-esteem, identity and potentials.
3. Social Isolation: due to fear and misunderstanding, individuals with mental illnesses are excluded by the public thus leading them to avoid being in public.
4. Discrimination: individuals with mental illnesses may face discrimination in various aspects of life (e.g. employment, education, housing and in relationships).
5. Self-Stigma: internalizing the public negative beliefs and stereotypes about mental illness leads to reduced self-esteem, and hesitation or refusal to seek treatment.
6. Barriers to treatment: this is a double-blind situation where individuals feel discouraged to seek treatment thus worsening their mental conditions or delaying recovery, while public policies are institutionalizing negligence, marginalization and /or oppression of individuals with mental illnesses (National Alliance on Mental Illness website https://www.nami.org/stigmafree).

Stigma surrounding mental illness is commonplace in almost all developing countries and Saudi Arabia is not an exception. Alamer et. Al (2021) studied mental stigma among Al-Ihsa population (one of the most conservative regions) in Saudi Arabia with a sample that consisted of 758 participants between 18-65 years old who resided in Al-Ihsa at the time of the study. The study found that most of the population (91.96%) had a low to medium-low level of stigma. The main variables which affected the level of stigma were age, career, number of spoken languages, prior diagnosis with a mental illness, and knowing someone who was diagnosed with a mental illness. Older age was found to be a factor associated with higher level of stigma. Low level of Stigma was found to be associated with working in health care than all other fields, speaking more languages, prior diagnosis with mental illness and knowing someone who was diagnosed with a mental illness.

Posttraumatic stress disorder (PTSD) is a prevalent disorder in community samples across the globe. About 7,8% of individuals had a lifetime diagnosis of PTSD (Kessler, Berglund, Delmer, Jin, Merinkangas, & Walters, 2005). Despite its high prevalence PTSD is often missed in clinical practice. Patients do not often report traumatic experiences and PTSD symptoms willingly and on their own. Untreated PTSD may have serious consequences including substance abuse, medical co-morbidity and increased risk of suicide (e.g. Van Dam, Vedel, Ehring & Emmelkamp, 2013). Furthermore, missed PTSD diagnosis can lead to wrong and/ or incomplete treatment of associated issues (e.g. depression, anxiety, obsessive compulsive disorder [OCD], personality disorders, dissociative and psychotic disorders among others). There is evidence that systematic screening can lead to a four-times-higher

detection of PTSD among patients. Therefore, screening for PTSD is of great clinical importance particularly in cultures such as Saudi Arabia.

Screening instruments for PTSD should ideally consist of few items only and have simple response scales and simple scoring methods. The Primary Care Posttraumatic Stress Disorder Screener has been developed as a short and simple screening questionnaire for PTSD. The PCPTSD for DSM-5 consists of five yes/no questions representing the PTSD symptom clusters re-experiencing, avoidance/numbing, and increased arousal (Prins, Ouimette, Kimerling, Cameron, Hugelshofer, Shaw-Hegwer et al., 2004). The PC-PTSD was originally developed in a Veteran Affairs (VA) primary care setting and has been widely used in the U.S. army. Its diagnostic qualities have been studied within VA settings, showing high sensitivity and specificity values for cutoff scores 2 (sensitivity >.84; specificity >.70) and 3 (sensitivity >.75; specificity >.86) in this population (Prins et al., 2004). In a study, a modified version of the PC-PTSD was evaluated in a group of civilian patients with substance use disorders (SUD) (van Dam, Ehring, Vedel & Emmelkamp, 2010). The instruction for the PC-PTSD was adapted in that participants were first provided with a list of traumatic events and were asked to indicate whether they had experienced any of these events. Van Dam et al. (2010) found a sensitivity of .86, and a specificity of .57 for the PC-PTSD (cutoff score = 2). The performance of the PC-PTSD was found to be equal to the Posttraumatic Diagnostic Scale (Foa, Cashman, Jaycox & Perry, 1997), a self-report questionnaire of PTSD symptom severity assessing all 17 criteria of the fourth revision of the Diagnostic and Statistical Manual (DSM-IV) . In addition, the diagnostic efficiency did not improve by adding four additional items to the PC-PTSD referring to arousal and numbing symptoms, which are assumed to be linked to substance use in PTSD samples.

In a study of an independent sample of patients (van Dam et al., 2013), this new item combination referred to as the Jellinek-PTSD (J-PTSD) screening questionnaire was cross-validated. Results showed a high sensitivity (.87), specificity (.75) of the J-PTSD in detecting PTSD when using a cutoff score of 2.

Given its high diagnostic efficiency and the fact that the questionnaire is brief and easy to use, the J-PTSD is currently one of the most promising screening measures for PTSD. Nevertheless, more research is needed before it can be recommended for use in routine clinical care. The diagnostic accuracy has been proven in various studies such as in civilian groups (Williamson et al. 2022 & civilian group with substance abuse (Van Dam, Ehring, Vedel & Emmelkamp, 2010 and Van Dam et al., 2013), whereas screening measures often show much poorer properties in replication samples than in the original samples. In addition, particular caution is required when generalizing results from substance use disorder (SUD) samples to civilian populations and from Western populations to other cultures. Almost all studies of PTSD have been conducted in Western countries. There is a clear need of studies into PTSD in the Arab countries and cultures. Given this scarcity of research the aim of the present study was to replicate and cross-validate the J-PTSD in a community sample of Saudi Arabian students.

METHOD

Data Collection and Procedure

The study was conducted at several different colleges located in Jeddah, the second-largest city in Saudi Arabia with a population currently at approximately 3.8 million people (according to 2022 sensus). The study was approved by the Research Ethics Committee of the Prince Mishaal bin Abdul Aziz Centre for Social and Humanities Research at King Abdulaziz University. Subjects were included if they: 1) were at least 18 years old college students, 2) had sufficient knowledge of the Arabic language, and 3) agreed to participate voluntarily in the study. Intending to capture a representative sample, this study did not use any other exclusion criteria. The study was conducted at both public and private colleges i.e. King Abdulaziz university, Effat university, CBA university, Science and Technology university, Technology college, East college, Ibn Sina college, Communication college, and Al-Faisal university. At the beginning, a letter from the research centre at King Abdulaziz University was provided to Students' Affairs Departments in each university to obtain the permission to administer a survey and a structured interview. Participants were selected among college students from different departments. Students were approached with the permission of instructors. Those who agreed to take part were informed that participation is voluntary, that their information will be kept confidential and that they can refuse to answer any question if they so choose and that they can withdraw from participation at any time during and after completing the questionnaire and the interview without any penalty. Written informed consent for participation in the study was obtained. The sample consisted of

277 females and 306 males, 422 from a public university and 161 from private universities. The Mean age of the participants was 23 years (range 18 – 28 yr); Subjects were invited to participate by same-gender psychologists except for 16 male participants who were invited by a female psychologist. The survey consisted of a number of brief questionnaires including the J-PTSD. Afterwards, a number of subjects were invited to participate in a structured interview (MINI). The participants were interviewed by same gender psychologists. The total number of participants of whom the screening questionnaire J-PTSD and the MINI data were available is 239.

Screening questionnaire

The Jellinek-Post-Traumatic Stress Disorder (J-PTSD) screening questionnaire was used to screen for PTSD. The screener first provides a definition of traumatic events with a list of potentially traumatic experiences (e.g., physical intimidation, physical violence/assault, serious accident, disaster, rape/sexual violence, war), including a "free category" for other kinds of traumatic events. Participants were asked to mark all traumatic events they had experienced in the past. Participants who have never experienced any traumatic event were instructed to stop filling out the questionnaire at that point. All other participants were asked to fill out four yes/no items, reflecting respectively on re-experiencing, avoidance, hyperarousal and numbing symptoms.

The Mini International Neuropsychiatric Interview (MINI)

The MINI (Pinninti, Madison, Musser & Rismiller, 2003) was developed to address the feasibility shortcomings of other structured interviews. The MINI has a much shorter format as the SCID-I and the CIDI and covers 17 axis I categories. In the present study, the following categories were used: Major depressive disorder, panic disorder, agoraphobia, social phobia, generalized anxiety disorder and posttraumatic stress disorder.

Data analyses

In order to investigate the diagnostic qualities of the screener, sensitivity (chance of screening positive while having a true diagnosis) and specificity (chance of screening negative while not having a diagnosis), were calculated. A receiver operating characteristic (ROC) analysis was carried out to evaluate different cut-offs weighting sensitivity versus specificity. Results were compared with earlier findings for the J-PTSD (van Dam et al., 2010; 2013).

RESULTS AND DISCUSSION

Trauma experienced

Results of the reported traumata on the J-PTSD are listed in Table 1.

Table 1: Sample characteristics: Traumatic events.

Traumatic events	Total sample (*N*=239)
Any trauma reported	N = 81
Single trauma	N = 67
Multiple trauma	N = 14
Physical intimidation	N = 14
Serious accident	N = 31
Disaster	N = 5
Physical violence/assault	N = 14
Rape/Sexual violence	N = 7
War	N = 4
Other traumatic events	N = 27

Diagnostic efficiency of the J-PTSD

In a first step, ROCs were performed to investigate the diagnostic efficiency of the J-PTSD identifying PTSD and partial PTSD. The area under the curve was .73 for PTSD. In a second step, diagnostic efficiency was calculated for the J-PTSD, using the cutoff of 2 established in earlier research (van Dam et al., 2010). Poor sensitivity and good specificity were found in detecting PTSD with a score of 2 (PTSD: sensitivity = .47, specificity = .89). Finally, it was tested whether the diagnostic efficiency of the J-PTSD could be improved by choosing a different cutoff. Results showed that this was not the case.

Discussion

The aim of the current study was to replicate and cross-validate earlier findings for the J-PTSD screening questionnaire in a community sample of students in Saudi Arabia. In two previous studies ((van Dam et al., 2010, 2013), high sensitivity (.92 and .87 respectively), and moderate and fair specificity (.62 and.75) were found using a cutoff score of 2. In Williamson et al., a cutoff score of 4 maximized sensitivity to 100% while maintaining specificity of 0.67-0.86 which is remarkable compared to the previously mentioned studies. Results of the current study did not confirm the validity of the J-PTSD screening questionnaire, in that much lower values were found for sensitivity (.47) in detecting PTSD. This means that out of 100 patients with PTSD, only 47 will be correctly identified by the screener as having PTSD. The specificity found in the present study was .89, meaning that out of 100 patients without a diagnosis for PTSD, 89 will be correctly identified as having no PTSD. There are no universal criteria to decide what constitutes a good performance of a screening instrument as the relative importance of sensitivity and specificity depends on the nature of the diagnostic situation. However, it can be argued that identifying PTSD high sensitivity has a priority above other diagnostic quality. The low value found for sensitivity indicates that the screener possesses poor diagnostic qualities in this population. Although the specificity is comparable to the former studies, the sensitivity is too poor to have clinical value in screening for PTSD. This indicates that the J-PTSD screening questionnaire does not enhance the efficiency in practice. Using the J-PTSD screening questionnaire, a large number of patients with PTSD will not correctly be identified to be invited for in-depth assessment.

Reasons for failure to replicate

Why was the cross-validation of the J-PTSD screening questionnaire in a community sample of students in Saudi Arabia unsuccessful? Specific sample characteristics may play a role in accounting for the differences between the former studies and current study, limiting the generalizability of our findings. First, given that the present study was conducted on students, the participants will have attained on average a relatively high level of education. There is some evidence that education level is a significant predictor of PTSD (Breslau, Chen & Luo, 2013). Further, the former studies (Van Dam et al., 2010, 2013) were conducted in patients with substance use disorder being assessed for abstinence/controlled use-orientated treatment programs only while the Williamson et al. (2022) was conducted among civilian population who were receiving behavioral health treatment. These specific clinical samples are not comparable to students. Thus, the discrepancy found between the present study on the one hand and the previous studies on the other hand may reflect a systematic difference between normal students and substance abusing patients. Last but not least, differences in culture between Saudi Arabia and the Netherlands and United States may explain the differences found. There are several factors that may account for the poor reporting of mental health issues and concerns, some of which are specific to the Saudi culture including (a) the negative stigma attached to mental illnesses in Muslim cultures, (b) the strong family and social support system, and (c) the lack of involvement in political and military conflicts in the past (Al-ghzawi, ALBashtawy, Azzeghaiby & Alzoghaibi, 2014; Cifci, Jones & Corrigan, 2012; Kobeisy, 2004).

In sum, the cross-validation of the J-PTSD screening questionnaire in Saudi Arabia was unsuccessful. Therefore, the diagnostic properties of the J-PTSD screener questionnaire need to be cross-validated in other countries and/or other settings before their use in these different contexts, such as screening for PTSD in Arab refugees, can be recommended.

Conclusion and recommendations:

Mental health is very important for individuals, communities, nations and the world. Mental disorders are on the rise and are expected to be the first cause of death in the near future. Early detection of mental disorders is the best

strategy for effective prevention and successful treatment. PTSD is very important among all other types of disorders because its detection can help treat the underlying cause of many other disorders (e.g. adjustment, acute stress, anxiety, major depressive, personality, dissociative, conversion and psychotic disorder) according to the DSM-V. Furthermore, it can help predict suicide ideation and possible real loss of lives to suicide. At the same time, the presence of PTSD may help explain the presence of other disorders which if they were to be treated in isolation of PTSD, such treatment will be incomplete, ineffective and will put the patient at a greater risk of relapse. Directing individual's and community resources towards the improvement of mental health is the best utilization of such resources. Screening for PTSD in primary health care facilities (PHC) is very important practice particularly for vulnerable populations such as children, women and elders. Veterans of wars and first emergency care respondents are also very good candidates to developing PTSD and, therefore, would benefit greatly from such early screening.

Awareness of the public and professionals is the first defense against the development of mental disorders and/or the worsening of already existing conditions especially when affected by stigma.

Cultural sensitivity is very important for both screening tools as well as for professionals when applying western-based or western originated screeners in order to achieve accurate results. It is possible that multiple layers or stages of screening would be more helpful to overcome. Saudi Arabia is witnessing a great progress in mental health at all levels of education, awareness campaigns, professional organizations, and government policies and allocation of resources. There is always more room for progress and advancement which will reflect on improvement in quality of life, productivity, social stability and economic sustainability; all are objectives of the Saudi Vision 2030.

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