Predictors of the new criteria for probable PTSD among older adults

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ABSTRACT

The definition of post-traumatic stress disorder (PTSD) changed in the fifth edition of the Diagnostic and Statistical Manual (DSM-5) and it is yet unclear how these changes affect the diagnosis of PTSD among older adults. The present study examined the contribution of demographic characteristics, functioning status, health related factors, as well as exposure to rocket attacks to prediction of probable PTSD in older adults. Three-hundred and thirty-nine community-dwelling adults (age range 50-90; $M=65.44$, $SD=9.77$) were sampled through random dialing to Jewish residents in the south of Israel. Participants completed a phone-questionnaire that collected background information and reports of relevant symptoms. Analyses showed that self-rated health, incidence of depression episodes, and exposure to rocket attacks predicted the DSM-5 definition of PTSD as well as the subscale of negative alternations in cognition and mood. The current study delineates the unique set of predictors of probable PTSD in older adults, with an emphasis on negative alternations in cognition and mood. Greater attention to unique predictors of PTSD in the second half of life is called for.

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1. Introduction

The latest edition of the Diagnostic and Statistical Manual (DSM-5; American Psychological Association, APA, 2013) has led to significant changes in conceptualization and diagnosis of post-traumatic stress disorder (PTSD) (Hiskey et al., 2015). The most prominent change is the inclusion of the new symptom category of negative alterations in cognition and mood (Hafstad et al., 2014). Instead of viewing PTSD through a three-factor model (i.e., re-experiencing, avoidance/numbing, and hyper-arousal), the new definition involves four components: intrusion, avoidance, negative alterations in cognition and mood, and hyper-arousal (Carmassi et al., 2013). This definition splits the traditional category of avoidance into two scales, one that refers to active avoidance (two items) and one that is now called negative alternations in cognition and mood and includes two items from the old scale and five new items (altogether seven items). This change is based on empirical research that demonstrated that symptoms of avoidance and numbing are theoretically and practically distinct from one another (Forbes et al., 2011; Friedman et al., 2011; Calhoun et al., 2012).

Several studies have confirmed the four-factor structure of the new definition of PTSD in the general population (Kilpatrick et al., 2013; Hafstad et al., 2014). However, inconsistency was found with regard to the prevalence of the full PTSD syndrome. Some analyses found no significant differences in the prevalence of PTSD as defined by the new criteria, with a tendency for an increase in the level of symptoms (Elhai et al., 2012; Carmassi et al., 2013; Kilpatrick et al., 2013; Hafstad et al., 2014), while other analyses found a small decrease in the prevalence of the diagnosis (Forbes et al., 2011; Miller et al., 2013). Moreover, Cox et al. (2014) showed that the expanded cognitive and mood symptoms in the new definition were more prevalent among women, among individuals who were characterized by higher lifetime PTSD, as well as among individuals with a higher number of exposures to general traumatic events, especially interpersonal assaults.

However, we do not yet fully understand the contribution of demographic characteristics, functioning status, and health related factors, to the prediction of the prevalence of probable PTSD in general, and to the prediction of the new subscales in particular. Specifically, little attention has been drawn to the implications of the new definition to prevalence of PTSD among older adults (Böttche et al., 2015). Evidence suggests that some PTSD symptoms are more prominent in older adults with PTSD than in younger adults with PTSD. For instance, some authors suggested that older adults with PTSD experience more symptoms of avoidance and numbing (Trappler et al., 2002; Yehuda et al., 2009) as well as more chronic disease, physical disability, and recent health problems than do younger adults with PTSD. Each of these factors or their combination might contribute more to the prediction of PTSD in older relative to younger adults (Böttche et al., 2015). In contrast, older adults might report fewer intrusive thoughts and less survivor's guilt (Averill and Back, 2000; Lapp, Agbokou, and

Table 1
Demographic characteristics.

	Total ($N=339$)	Not PTSD ($N=255$)	Probable PTSD ($N=84$)	Difference test
1. Age	65.44 (9.77)	65.80 (9.85)	64.34 (9.51)	$T(336)=1.19$
2. Gender (women)	190 (56.0%)	137 (53.7%)	53 (63.1%)	$X^2(339, 1)=2.25$
3. Marital status (married)	237 (69.9%)	184 (72.2%)	53 (63.1%)	$X^2(339, 1)=2.47$
4. Education (years)	13.57 (3.24)	14.10 (3.06)	11.95 (3.28)	$T(333)=5.43^{***}$
5. Religiosity (secular)	184 (55.3%)	159 (63.6%)	25 (30.1%)	$X^2(333, 1)=28.25^{***}$
6. Place of living (city)	224 (66.1%)	148 (58.0%)	76 (90.5%)	$X^2(339, 1)=29.66^{***}$
7. Chronic disability (yes)	136 (40.4%)	88 (34.6%)	48 (54.8%)	$X^2(337, 1)=13.97^{***}$
8. Functioning	3.88 (1.39)	4.17 (1.22)	3.00 (1.50)	$T(330)=7.09^{***}$
9. Self-rated health	3.20 (1.09)	3.40 (1.02)	2.60 (1.07)	$T(335)=6.21^{***}$
10. Incidence of depression (yes)	125 (37.2%)	73 (29.0%)	52 (61.9%)	$X^2(336, 1)=29.25^{***}$
11. Exposure to rocket attacks	3.85 (1.31)	3.58 (1.26)	4.64 (1.15)	$T(337)=6.81^{***}$

$^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Ferreri, 2011), and may be more resilient to symptoms that involve mental health problems. Indeed, it has been shown that negative emotions are better regulated among older adults who were exposed to trauma than among comparable younger adults (Scott et al., 2013).

The present study aims to provide the first evidence regarding the factors that contribute to the prediction of probable PTSD and to its four subscales among older adults, with an emphasis on negative alternation in cognition and mood. Older adults tend to express psychological difficulties through other symptoms, such as physical or somatic complaints, underrating mental health and trauma-related symptoms (Thorp et al., 2011). It is therefore hypothesized that levels of demographics, health and disability will contribute more to the prediction of probable PTSD in older adults. However, because older adults have better emotional regulation mechanisms (Scott et al., 2013), depressive symptoms and levels of exposure to trauma (as measured here by exposure to rocket attacks) are expected to be less prominent in predicting probable PTSD and its subscales.

2. Method

2.1. Participants and sampling design

A polling company sampled participants through an in-region random digit dialing methodology. All participants were Jewish, living in the south of Israel in the region that surrounds the Gaza Strip, and all were 50-years-old or older. Sampling used the national telephone directory, which provides regional and community-specific phone number information. The interviews were conducted between January 12 and February 24, 2014, fourteen months after a military operation in which more than 800 rockets were fired at the area. During those 14 months 63 rockets were targeted at the area, among them 24 rockets were fired during the time of the interviews (⟨http://www.terrorism-info.org.il/en/index.aspx⟩). The sample was stratified by two age group (50–64, 65–90), gender, and place of living (city, rural). Two-thirds of the sample lived in the city of Sderot and one-third lived in rural communities, a percentage that is compatible with previous representative studies of the area (see Gelkopf et al., 2008, 2012).

The interviewers conducted 12,609 phone calls to 3159 households; in 2374 households someone picked up the phone; 930 of these households included eligible interviewees (over age 50); 254 potential interviewees refused to participate in the survey; 232 additional potential interviewees could not be interviewed because of hearing problems or cognitive incapacity; 105 participants filled only the initial part of the survey and refused to complete the rest of the interview, either because the interview was too long or because they did not want to refer to some of the questions. The sample of those who filled only the initial part of the questionnaire included slightly but not significantly more women (64.0%, $\chi^2=1.76$, $p=0.19$) as well as slightly but not significantly fewer married individuals (59.3%, $\chi^2=3.54$, $p=0.06$) than did the final sample. They were also older ($M=72.09$, SD$=11.24$, $t=5.08$, $p < 0.001$), less educated (M$=11.59$, SD$=4.77$, $t=-3.58$, $p < 0.005$) less secular (32.1%, $\chi^2=13.34$, $p < 0.001$), and more likely to live in the city (90.6%, $\chi^2=22.12$, $p < 0.001$) as compared to the final sample.

The final sample consisted of 339 participants who completed the entire survey. Participants' age ranged between age 50 and age 90, with an average age of 65.44 (SD$=9.77$). About half of the participants were female (56%), most participants were married (69.9%), and the average number of years of formal schooling was 13.57 (SD$=3.24$). More than half were secular (54.3%) and two thirds were living in the city (66.1%). Demographic characteristics of the sample are presented in Table 1. A power analysis was performed to determine the required sample size, using G*Power 3.1.9.2 (Faul et al., 2009). The analysis was calibrated for a regression coefficient embedded within multiple logistic regression with an effect size of OR$=1.5$ (considered to reflect a small effect size, see Chinn, 2000), with power$=0.80$, and a two-tailed test. This analysis yielded a sample size of 268. Therefore, the current sample of 339 was adequate for the detection of the relevant effects.

The telephone interviews were carried out by experienced interviewers in either Hebrew or Russian, and each interview lasted approximately 15–25 minutes. Informed consent was obtained at the beginning of the interview. Recruitment and administration were approved by the Ethics Committee of the University of Haifa.

2.2. Measures

Demographic characteristics included the following variables: age (treated as a continuous variable), gender (1=men, 2=women), marital status (1=currently married, or living with a partner, 2=currently unmarried), education (treated as a continuous variable), religiosity (1= secular, 2=traditional, conservative or ultra-orthodox), and place of living (1=city, 2=rural).

Self-report of chronic illness or disability was measured by asking "Do you have a chronic health problem, illness, or disability?" (1=yes, 2=no), as done by Van Doorslaer et al. (2000).