Journal of Mental Health

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ISSN: 0963-8237 (Print) 1360-0567 (Online) Journal homepage: https://www.tandfonline.com/loi/ijmh20

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To cite this article: M. Graça Pereira, Diana Pereira & Susana Pedras (2020) PTSD, psychological morbidity and marital dissatisfaction in colonial war veterans, Journal of Mental Health, 29:1, 69-76, DOI: 10.1080/09638237.2018.1487532

To link to this article: https://doi.org/10.1080/09638237.2018.1487532

Published online: 19 Jan 2019.

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Journal of
MENTAL
HEALTH

http://tandfonline.com/ijmh
ISSN: 0963-8237 (print), 1360-0567 (electronic)

J Ment Health, 2020; 29(1): 69–76
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ORIGINAL ARTICLE

PTSD, psychological morbidity and marital dissatisfaction in colonial war veterans

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Abstract

Background: Forty years after Colonial War, veterans still show psychological disturbances affecting their marital and sexual satisfaction.
Aims: This study analyzed the relationships between Post-Traumatic Stress Disorder (PTSD), number of PTSD symptoms and symptom clusters, psychological morbidity, marital dissatisfaction and sexual dissatisfaction; the variables that contributed to marital dissatisfaction and the mediator role of marital dissatisfaction and sexual dissatisfaction, in a sample of colonial War Veterans.
Method: The sample included 138 Portuguese war veterans who answered Index of Marital Satisfaction; Index of Sexual Satisfaction; Beck Depression Inventory; State Trait Anxiety Inventory; Post-Traumatic Stress Disorder Scale.
Results: PTSD, number of PTSD symptoms and symptom clusters were associated with psychological morbidity, marital and sexual dissatisfaction. Age, depression symptoms and sexual dissatisfaction contributed to marital dissatisfaction and the model explained 55% of the variance. Marital dissatisfaction mediated the relationship between depression symptoms and sexual dissatisfaction, as well as between number of PTSD symptoms and sexual dissatisfaction.
Conclusions: Health professionals need to take into consideration the veteran's marital and sexual relationship in clinical routine consultations. As such, treating the veteran in the couple' context seems warranted.

Keywords

PTSD, psychological morbidity, sexual dissatisfaction, war veterans

History

Received 5 December 2016
Revised 22 March 2018
Accepted 18 April 2018
Published online 22 November 2018

Introduction

Post-Traumatic Stress Disorder (PTSD) is a clinically diagnosed condition listed in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000) most often associated with war trauma. However, PTSD symptoms, and psychological morbidity or distress (anxiety and depression joined together) are also commonly reported by war veterans, affecting their sexual and marital satisfaction.

Recently, Marmar et al. (2015) estimated a current prevalence of war-zone PTSD between 4.5 and 10.8%, depending on the instrument used, 40 or more years after Vietnam war. In Portugal, near a million of young troops participated in the Colonial war (Angola, Guinea and Mozambique), between 1916 and 1974, corresponding to 10% of the country's population. The few studies about Portuguese war veterans showed that 10,000 were killed, 40,000 injured and 140,000 have chronic psychological morbidity as a result of their participation in the war (Albuquerque & Lopes, 1997). In a sample of Ex-Marines, Pereira & Monteiro-Ferreira (2006) found that 66% of veterans fulfilled the criteria for a PTSD diagnosis. With a larger sample, Maia et al. (2006), in a study with 350 veterans, found that 39% of veterans fulfilled the criteria for PTSD and 56% presented psychological morbidity. In addition, Pereira et al. (2012), in a sample of 101 veterans found that 71% presented psychopathology (e.g. anxiety, depression, hostility, phobic anxiety) showing emotional disturbance and 45% had PTSD.

In the wider literature, both PTSD and PTSD symptoms affect the individual, as well as the marital relationship in terms of sexual and marital satisfaction, interpersonal and family relationships (Solomon et al., 2011). Several studies have shown that veterans with PTSD have difficult marital relationships with communication and intimacy problems compared with veterans without PTSD (Jordan et al., 1992; Solomon et al., 1987). More than 75% of veterans referred for behavioral health evaluations presented difficulties in their couple and romantic relationships and greater than 50% presented mild to moderate intimate partner violence (Sayers et al., 2009).

Studies also have revealed an association between PTSD and difficulties with intimacy, attachment and sexual problems (Ahmadi et al., 2006; Taft et al., 2011). In fact, PTSD may have a strong impact on sexual life at several

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levels: activity, arousal, orgasm, desire and satisfaction (Kotler et al., 2000) as well as emotional symptoms, such as avoidance and emotional numbing, thereby causing difficulties in intimacy and communication (Cook et al., 2004). Ahmadi et al. (2006) found that 45.5% of veterans with PTSD were dissatisfied with their sexual relationship and 11% highly dissatisfied with the marital relationship. This fact may be explained by the higher rate of sexual problems in veterans with PTSD compared to veterans without PTSD (Cosgrove et al., 2002). In Letourneau et al.'s (1997) study, 80% of veterans reported sexual difficulties and, according to Ahmadi et al. (2006), 89% of veterans presented at least one sexual problem. Moreover, some studies suggest that marital dissatisfaction contributes to sexual dissatisfaction (Ahmadi et al., 2006; Taft et al., 2011). However, other studies suggest that sexual dissatisfaction contributes to marital dissatisfaction (Solomon et al., 1991). That is why, in this study, both marital dissatisfaction and sexual dissatisfaction were analyzed as mediators taking PTSD into consideration.

Evans et al. (2003) found that avoidance/numbing symptoms adversely impacted the sexual relationship, as they were more strongly associated with impaired intimacy. According to Monson et al. (2010), symptoms such as behavioral avoidance and emotional numbing negatively affect relationships due to a reduced engagement in pleasurable activities or a reduced expression of loving feelings. However, as far as we know, there are no studies focusing on the specific symptom clusters of PTSD on marital satisfaction, in war veterans.

Psychological morbidity (anxiety and depression symptoms joined together) is common in war veterans. Near 50% to 90% of individuals with PTSD showed psychological problems such as anxiety and depression (Joseph et al., 1997; Yehuda & Wong, 2002). In fact, Orsillo et al. (1996), besides finding anxiety to be the most prevalent disorder, also found that veterans with PTSD presented higher rates of anxiety compared with veterans without PTSD (Orsillo et al., 1996). In Portuguese veterans, Albuquerque & Lopes (1997) found identical results. In addition, in a study with war veterans from the Lebanon war, Ginzburg et al. (2010) found that almost one-half of the war veterans had a lifetime triple comorbidity of PTSD, depression and anxiety. Furthermore, depression was found to be a risk factor for aggressiveness, hostility and poor self-control in veterans with PTSD (Taft et al., 2005). In a study with Korean war veterans, after 50 years, 17% of veterans still had PTSD and depression, 15% had PTSD without depression and 6% had depression without PTSD (Ikin et al., 2010). These studies emphasize the fact that PTSD symptoms remain active for several years after the traumatic or stressful experience, and that veterans may still be prone to suicidal ideation (Sher et al., 2012). Moreover, individuals with PTSD developed a generalized reactivity to a range of stimuli in their civilian life that, in turn, reinforce the stress response such as depression and anxiety symptoms (McFarlane, 2010).

Recent studies that have addressed marital satisfaction, in war veterans, used younger samples and have reported a high percentage of divorce in combat war veterans (Nunnink et al., 2012). Portuguese war veterans belong to a generation where divorce was socially not well accepted and as a result, the divorce rate in this population is very low (Pereira & Pedras, 2010). Therefore, the way psychological morbidity and PTSD impact the couple from the veteran's perspective, in a sample with such characteristics, is not known, and understanding the correlates of marital dissatisfaction, in this population, is therefore useful to guide psychological intervention. In addition, it is well known that psychological morbidity and PTSD affect sexual functioning and marital satisfaction (Ahmadi et al., 2006; Taft et al., 2011), but marital satisfaction may reduce the negative impact of PTSD (Batten et al., 2009). Therefore, the goals of this study were: (1) to analyze the association between PTSD, number of PTSD symptoms, and symptom clusters, along with psychological morbidity, marital dissatisfaction and sexual dissatisfaction; (2) to find if PTSD, number of PTSD symptoms, or symptom clusters, along with psychological morbidity, and sexual dissatisfaction contributed to marital dissatisfaction; (3) to analyze whether marital dissatisfaction was a mediator in the relationship between psychological morbidity/number of PTSD symptoms and sexual dissatisfaction; and, finally (4) to analyze whether sexual dissatisfaction mediated the relationship between psychological morbidity/number of PTSD symptoms and marital dissatisfaction, in a sample of Portuguese colonial War Veterans. We expect PTSD to be associated with marital and sexual dissatisfaction; PTSD, psychological morbidity, and sexual dissatisfaction to contribute to marital dissatisfaction and marital/sexual dissatisfaction to function as mediators.

Method

Procedure

The sample was collected in the Portuguese Veterans Association after approval by the review Committee Board of this institution. Participants were knowledgeable of the purpose of the study, through the newsletter of the institution. Participation was voluntary and participants signed an informed consent. The inclusion criteria were being a veteran of the Portuguese colonial war and having a partner. Participants were invited to participate and from those approached ($n = 152$), 10% refused to participate, but there were no differences in sociodemographic characteristics between those who refused and the participants. Exclusion criteria included having a mental disorder (e.g. schizophrenia, psychosis). Due to participants' literacy level, questionnaires were administered in an interview format.

Instruments

The Portuguese version of the following instruments was used:

Index of Sexual Satisfaction (ISS, Hudson, 1992a). This scale assesses sexual dissatisfaction comprising 25 items, e.g.: ''Our sex life is monotonous,'' ''I feel that my sex life is too rushed and hurriedly completed'', in a 7-point Likert scale from 1 *(never)* to 7 *(always).* Higher results indicate sexual dissatisfaction. The ISS has been shown to have good internal consistency and construct validity. Scores range from 25 to 155 with some items being reversed. Alpha for the total scale, in this study, was 0.82.

Index of Marital Satisfaction (ISM, Hudson, 1992b). This scale assesses marital dissatisfaction comprising 25 items,

e.g.: ''My partner treats me badly,'' ''I feel that our relationship is breaking out'', in a 7-point Likert scale from 1 *(never)* to 7 *(always).* Higher results indicate marital dissatisfaction. Scores range from 25 to 155 with some items being reversed. The alpha for the total scale, in this study, was 0.93.

Beck Depression Inventory (BDI, Beck et al., 1961). This is a scale that assesses depression symptoms comprising 21 items, e.g.: in a Likert scale from 0 ''I do not feel sad,'' 1 ''I feel sad,'' 2 ''I am sad all the time and I can't snap out of it'' and 3 ''I am so sad and unhappy that I can't stand it.'' Higher results indicate greater depression symptoms and scores range from 0 to 63. The alpha for the total scale, in the present study, was 0.90.

State Trait Anxiety Inventory (STAI, Spielberger et al., 1983). This scale assesses anxiety symptoms comprising 20 items: 10 items assess symptoms of state anxiety, e.g. ''I feel calm'', ranging from a Likert scale of 4 points, 1 ''not at all'' to 4 ''very much so,'' with an alpha of 0.78 in the present study and the remaining items symptoms of trait anxiety e.g. ''I feel pleasant,'' ranging from a Likert scale of 4 points, 1 ''almost never'' to 4 ''almost always.'' Higher scores indicate greater anxiety symptoms and scores range from 20 to 80 in each scale. The alpha in this study was 0.86.

Post-Traumatic Stress Disorder Scale (McIntyre, 1997). This scale provides a probable diagnosis of PTSD, according to the DSM-IV. The first section is qualitative and descriptive and asks whether the individual was exposed in the past to traumatic events and the emotions associated with it (criteria A). In this case, participants were asked to answer taking in consideration their war experience. The second section has 17 items (yes/no responses) that correspond to number of PTSD symptoms, grouped in three symptom clusters: cluster 1: re-experiencing the event, assesses re-experiencing symptoms that correspond to criteria B (5 items), e.g.: ''Do you have many bad dreams or nightmares about regarding the war traumatic experience?''; cluster 2: avoidance symptoms that assesses denial and numbness (criteria C, 7 items), e.g.: ''I tried not to have thoughts or feel sensations similar to what I experienced in the war,'' and cluster 3: Hypervigilance that assesses hypervigilance and activation, including all the vegetative symptoms (criteria D, 5 items), e.g.: ''I have trouble falling and staying asleep.'' To obtain a probable diagnosis of PTSD, an individual needs to respond affirmatively to at least one question from cluster 1, three from the cluster 2 and at least 2 from the cluster 3 (after Criteria E and F being present, i.e. the duration of the disturbance being more than one month, (criteria E); and the disturbance causing clinically significant distress (criteria F). Internal consistency was .85 for both symptom clusters 1 and 2 and.73 for the symptom cluster 3. This scale also has a total score that includes the number of PTSD symptoms, with an alpha of 0.93.

Data analysis

As questionnaires were administered in an interview format, there were no missing data. As the data followed a normal distribution, to assess the relationship between probable PTSD, a number of PTSD symptoms, symptom clusters and psychological morbidity (anxiety and depression symptoms) marital and sexual dissatisfaction, a Point Biserial correlation (for probable PTSD) and Pearson correlation tests for the remaining variables were performed. To examine the variables that contributed to marital dissatisfaction, a regression analysis (method enter), was performed with three blocks. Two models were tested. Since veteran's age and duration of marriage were highly correlated, only age entered in the first block. Probable PTSD, entered in the second block and to avoid multicollinearity, only trait anxiety was included (anxiety trait presented a higher correlation with the dependent variable), with depression, and sexual dissatisfaction. Interaction effects between probable PTSD, number of PTSD symptoms and symptom clusters on sexual dissatisfaction were also tested. Finally, the mediating effect of marital dissatisfaction and sexual dissatisfaction was analyzed through bootstrapping via a macro command for SPSS (Preacher & Hayes, 2008).

Results

Sample characteristics

The sample was composed of 138 male war veterans, all married (first marriage). Demographic and military data are presented in Table 1.

From the total sample, 48.6% presented probable PTSD. Veterans presented moderate anxiety state ($M = 40.24$, $SD = 10.2$) and trait ($M = 42.57$, $SD = 10.1$), moderated marital ($M = 76.30$, $SD = 29.5$) and sexual dissatisfaction ($M = 83.18$, $SD = 29.5$) but low depressive symptoms ($M = 14.24$, $SD = 8.82$) (Table 2).

Relationship between probable PTSD, number of PTSD symptoms and symptom clusters and psychological variables

Probable PTSD was positively associated with state anxiety ($r_{pb} = 0.347$, $p < 0.01$), trait anxiety ($r_{pb} = 0.532$, $p < 0.01$), depression symptoms ($r_{pb} = 0.401$, $p < 0.01$), marital dissatisfaction ($r_{pb} = 0.457$, $p < 0.01$) and sexual dissatisfaction ($r_{pb} = 0.327$, $p < 0.01$). Thus, probable PTSD was associated with more psychological morbidity and marital and sexual dissatisfaction.

Number of PTSD symptoms were positively related with depression symptoms ($r = 0.23.88$, $p < 0.01$), state anxiety ($r = 0.390$, $p < 0.01$), trait anxiety ($r = 0.588$, $p < 0.01$), marital dissatisfaction ($r = 0.465$, $p < 0.01$) and sexual dissatisfaction ($r = 0.352$, $p < 0.01$).

Symptom cluster 1 was positively associated with depression symptoms ($r = 0.296$, $p < 0.01$), state anxiety ($r = 0.338$, $p < 0.01$), trait anxiety ($r = 0.338$, $p < 0.01$), marital dissatisfaction ($r = 0.370$, $p < 0.01$) and sexual dissatisfaction ($r = 0.261$, $p < 0.01$). Symptom cluster 2 was also positively associated with depression symptoms ($r = 0.388$, $p < 0.01$), state anxiety ($r = 0.345$, $p < 0.01$), trait anxiety ($r = 0.593$, $p < 0.01$), marital dissatisfaction ($r = 0.510$, $p < 0.01$) and sexual dissatisfaction ($r = 0.396$, $p < 0.01$). Finally, symptom cluster 3 was positively associated with depression symptoms ($r = 0.385$, $p < 0.01$), state anxiety ($r = 0.393$, $p < 0.01$), trait

anxiety ($r = 0.543$, $p < 0.01$), marital dissatisfaction ($r = 0.375$, $p < 0.01$) and sexual dissatisfaction ($r = 0.297$ $p < 0.01$) (Table 3).

Table 1. Sociodemographic and military data of the sample ($N = 138$).

Variable	% (*n*)				
Categorical variables					
Educational level					
Four years	68.6% (96)				
High school	29.3% (39)				
College education	2.1% (3)				
Military branches					
Army	92.5% (123)				
Airforce	4.5% (6)				
Navy	2.3% (3)				
Military post					
Soldier	72.1% (101)				
Sergeant and officers	27.9% (37)				
Continuous variables	Mean	SD	Min	Max	Median
Age (years)	62.27	4.18	55	73	62.00
Length of marriage (years)	42.28	4.32	30	53	42.00
Length of military service (years)	2.70	0.97	1	8	3

Table 2. Descriptive statistics of the sample ($N = 138$).

	Min	Max	M (SD)
PTSD	0	1	48.6%, $n = 68$
Traumatic Stress Symptoms	0	17	8.66 (5.83)
PTSDS: cluster1	0	5	3.03 (2.25)
PTSDS: cluster2	0	7	2.70 (2.41)
PTSDS: cluster3	0	5	2.94 (1.72)
STAI-S	20	80	40.24 (10.2)
STAI-T	20	80	42.57 (10.1)
BDI	0	63	14.24 (8.82)
ISS	25	155	83.18 (29.5)
ISM	25	155	76.30 (29.5)

Min: Minimum; Max: Maximum; M(SD); mean(standard deviation); PTSD: Post-Traumatic Stress Disorder; PTSDS: Post-Traumatic Stress Disorder Scale; STAI: State Trait Anxiety Inventory; STAI-S: State; STAI-T: Trait; BDI: Beck Depression Inventory; ISS: Index of Sexual Satisfaction; ISM: Index of Marital Satisfaction.

Variables that contributed to marital dissatisfaction

Model 1: The regression model of marital dissatisfaction with veteran's age explained 8% of the variance (R^2aj $= 0.088$, $p < 0.001$) $F(1,138) = 13{,}234$, $p < 0.001$; when probable PTSD was added, it explained 22.2% of the variance (R^2aj $= 0.222$, $p < 0.001$) $F(1,137) = 26.041$, $p < 0.001$, with age ($t = 2.08$; $p < 0.05$) and probable PTSD ($t = 5.10$; $p < 0.001$) being significant variables. When all variables were entered into the model, age (t=–2.58, $p < 0.001$), depression symptoms ($t = 3.479$, $p < 0.01$) and sexual dissatisfaction ($t = 6.341$, $p < 0.001$) contributed to marital dissatisfaction (Table 4).

Model 2: When probable PTSD was replaced by number of PTSD symptoms ($t = 1.779$, $p = 0.078$) or by symptom clusters (Model 3): symptom cluster 1 ($t = 0.357$, p=0.722), cluster 2 ($t = 1.867$, $p = 0.064$) and cluster 3 ($t = -1.150$, $p = 0.252$), there were no significant effects on marital dissatisfaction. The same was true for the interaction between number of PTSD symptoms and depression symptoms ($t = -0.713$, $p = 0.477$) and between number of PTSD symptoms and state anxiety (t = –0.498, $p = 0.619$).

The interaction between symptom clusters and anxiety or depression symptoms had no significant effect on marital dissatisfaction, i.e., cluster 1 and depression/anxiety symptoms (t = –1.1211, $p = 0.228$; t = –0.306, $p = 0.760$); cluster 2 and depression/anxiety symptoms (t = –0.009, $p = 993$; $t = -0.241$, p=.810), and finally, cluster 3 and depression/anxiety symptoms (t = –0.759, $p = 0.449$; t = –1.153, $p = 0.251$).

Marital dissatisfaction as a mediator between depression/anxiety and sexual dissatisfaction

The indirect (mediation) effect of depression symptoms on sexual dissatisfaction through marital dissatisfaction was significant (95% confidence interval = 0.3745 0.9187, $p \leq 0.001$) (Figure 1). Marital dissatisfaction did not mediate the relationship between anxiety symptoms and sexual dissatisfaction (95% confidence interval = 0.5258 1.239, $p \leq 0.001$).

Table 3. Relationship between age, duration of marriage, and psychological variables ($N = 138$).

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age		0.989**	−0.285**	−0.324**	−0.179*	−0.321**	−0.273**	−0.180*	−0.235**	−0.240**	−0.061	−0.296**
2. Duration of marriage			−0.295**	−0.335**	−0.192*	−0.325**	−0.282**	−0.169*	−0.208*	−0.220**	−0.040	−0.269**
3. PTSD symptoms				0.858**	0.921**	0.934**	0.876**	0.388**	0.390**	0.588**	0.352**	0.465**
4. PTSD					0.770**	0.862**	0.691**	0.401**	0.347**	0.532**	0.327**	0.457**
5. PTSDS: Cluster1						0.781**	0.720**	0.296**	0.338**	0.467**	0.261**	0.370**
6. PTSDS: Cluster2							0.738**	0.388**	0.345**	0.593**	0.396**	0.510**
7. PTSDS: Cluster3								0.385**	0.393**	0.543**	0.297**	0.375**
8. BDI									0.120	0.330**	0.375**	0.493**
9. STAI-S										0.738**	0.505**	0.452**
10. STAI-T											0.609**	0.591**
11. ISS												0.650**
12. ISM												

PTSD: Post-Traumatic Stress Disorder; PTSDS: Post-Traumatic Stress Disorder Scale; BDI: Beck Depression Inventory; STAI: State Trait Anxiety Inventory; STAI-S: State; STAI-T: Trait; ISS: Index of Sexual Satisfaction; ISM: Index of Marital Satisfaction; *$p < 0.05$, **$p < 0.01$.

Table 4. Final model regarding the variables that contributed to marital dissatisfaction ($N = 138$).

	R^2 (R^2aj)	F (3,134)	$SE\ B$	β	B 95.%	CI	t	f^2
1st Block								
Age	0.088 (0.081)	13,234***	–0.296	–2.08	–3.22	–0.953	–3.64*	
2nd Block								
Age	0.23 (0.22)	26.04***	–0.165	–1.16	–2.26	–0.062	–2.088**	
PTSD			0.404	23.74	14.5	32.9	5.10***	
3rd Block								1.29
Age			–1.12	–0.1.27	–9.34	1.56	–2.58	
PTSD			1.25	7.33	0.553	16.6	1.83	
STAI-S			0.114	0.329	–0.111	0.701	1.62	
BDI			0.230	0.771	0.356	1.25	3.47***	
ISS	0.56 (0.55)	34.14***	0.456	0.728	0.488	0.942	6.34***	

PTSD: Post-Traumatic Stress Disorder; STAI-S: State Trait Anxiety Inventory-State; BDI: Beck Depression Inventory; ISS: Index of Sexual Satisfaction; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

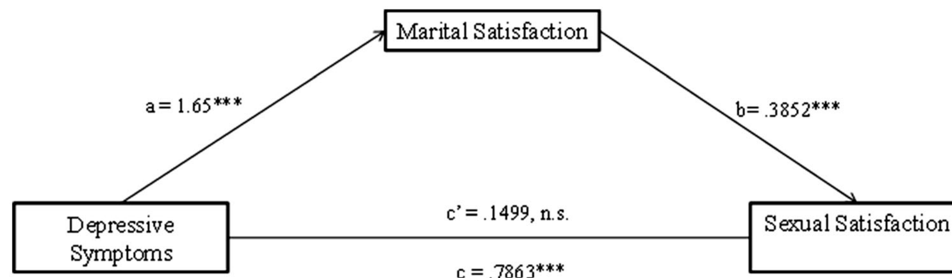

Figure 1. Marital satisfaction as mediators of the relationship between depressive symptoms and sexual satisfaction.

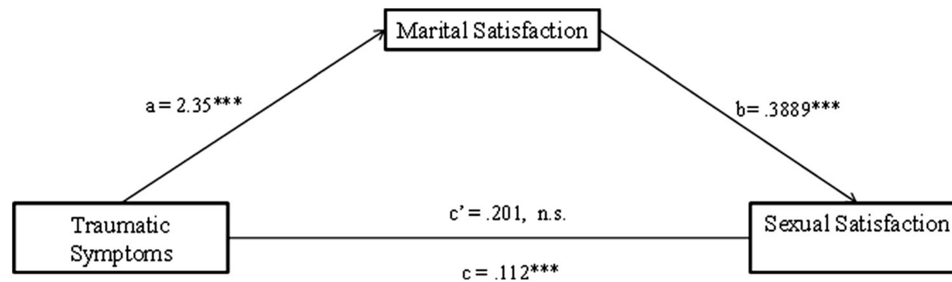

Figure 2. Marital satisfaction as mediators of the relationship between traumatic symptoms and sexual satisfaction.

Marital dissatisfaction as a mediator between number of PTSD symptoms and sexual dissatisfaction

The indirect (mediation) effect of global number of PTSD symptoms on sexual dissatisfaction through marital dissatisfaction was significant (95% confidence interval = 0.5855 1.352, $p \leq 0.001$) (Figure 2).

Sexual dissatisfaction as a mediator between depression/anxiety/number of PTSD symptoms and marital dissatisfaction

Sexual dissatisfaction did not mediate the relationship between depression (95% confidence interval = 0.3857 0.1.075, $p \leq 0.001$), anxiety (95% confidence interval = 0.5258 0.1.239, $p \leq 0.001$), number of PTSD symptoms (95% confidence interval = 0.5659 1.527, $p \leq 0.001$) and marital dissatisfaction.

Discussion

This study analyzed the relationship between probable PTSD, number of PTSD symptoms and symptom clusters, psychological morbidity (anxiety and depression symptoms), sexual and marital satisfaction and the mediator role of sexual and marital satisfaction in war veterans, forty years after the end of the war.

The findings indicate that depression and anxiety symptoms, sexual and marital dissatisfaction were positively related to probable PTSD, number of PTSD symptoms and PTSD clusters (re-experiencing, avoidance and hypervigilance symptoms) as expected. Although number of PTSD symptoms and symptom clusters were related to sexual dissatisfaction and psychological morbidity, they did not contributed to marital dissatisfaction. Probable PTSD alone with age contributed to marital dissatisfaction emphasizing

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the global weight of the diagnosis, but when psychological morbidity (depression and anxiety symptoms) were added together with marital dissatisfaction, it became nonsignificant. The results are consistent with previous research that found PTSD associated with psychological morbidity (Solomon et al., 2011; Wilson et al., 2004) and marital problems (Dunn et al., 2004; Najavits & Walsh, 2012). Taking into account the clinical characteristics of PTSD, together with psychological morbidity, is not surprising that marital relationship and sexual life may be impaired, in this population (Bentsen et al., 2015; Goff et al., 2007). As war veteran's couples experience low levels of marital satisfaction and high levels of conflict, poor problem resolution and communication difficulties (Cook et al., 2004; Pereira & Pedras, 2010), it comes as no surprise that these couples may present intimacy problems and low sexual satisfaction (Ahmadi et al., 2006; Cook et al., 2004). In terms of the duration of the marital relationship, it makes intuitive sense that veterans who have been married for a shorter period of time reported less dissatisfaction as the relationship may be less worn out. As younger veterans have more psychological morbidity and PTSD, that are associated with hypoactive sexual desire (Antičević & Britvić, 2008), it is understandable that marital dissatisfaction was higher in younger veterans.

PTSD clusters or number of PTSD symptoms did not contribute to marital dissatisfaction. However, probable PTSD and veteran's age-contributed to marital dissatisfaction. One may hypothesize that the damage caused by the diagnosis is higher on the family, interfering more with the couple dynamics affecting marital satisfaction, but psychological morbidity and sexual dissatisfaction seems to have a higher impact than the diagnosis, on the couple. In fact, sexual satisfaction influences marital satisfaction (Fugl-Meyer et al., 1997). Studies have shown that veterans with PTSD have a higher probability of having sexual problems, take medication for sexual problems, compared with veterans with mental disorders, besides PTSD, and with veterans without mental disorders (Bentsen et al., 2015; Taft et al., 2011). Goff et al. (2007) found that sexual problems significantly contributed to marital dissatisfaction and these problems were stronger contributors than psychological morbidity. In addition, according to Breyer et al. (2014), a PTSD diagnosis, increases three times the risk of having sexual problems. Antičević and Britvić (2008) found that veterans with PTSD have less satisfaction with sexual relationships, due to their own spouse problems. As sexual life is a fundamental part of the marital relationship, which has an impact on mental and physical health (Mitchell et al., 2011), it is understandable that sexual dissatisfaction contributes to marital dissatisfaction. However, it is important to emphasize that the comorbidity associated with PTSD is as much responsible for family and marital difficulties as PTSD itself (Evans et al., 2003) corroborating this study's findings. Indeed, depression was found to contribute to marital dissatisfaction and to contribute to marital dissatisfaction more than PTSD (Bleich & Solomon, 2004; Kotler et al., 2000). In contrast, PTSD and psychological morbidity may lead to a lack of sexual desire, which in turn, may lead to a lack of willingness on the veterans' side to have intercourse. Although the number of PTSD symptoms may adversely impact the sexual relationship, avoidance/numbing symptoms, in particular, seem to impact the most, as they are more strongly associated with impaired intimacy (Evans et al., 2003). Nonetheless, in this study, symptom clusters and their interactions with depression and anxiety had no effect on marital dissatisfaction, emphasizing their independent contribution together with sexual dissatisfaction regarding the marital relationship (Ahmadi et al., 2006; Taft et al., 2011).

Finally, the results showed that marital dissatisfaction mediated the relationship between depression symptoms and sexual dissatisfaction, but not between anxious symptoms and sexual dissatisfaction. In fact, psychological morbidity is very common in war veterans (Cosgrove et al., 2002; Wilson et al., 2004) but according to the results, depression symptoms affected sexual dissatisfaction trough marital dissatisfaction. Several studies showed marital satisfaction to be problematic in war veterans (Jordan et al., 1992; Wilson et al., 2004) but it seems that it is the quality of the marriage that influences, positively or negatively, mental health (Levenson et al., 1993). Furthermore, since research shows (Pereira & Pedras, 2010) that the veterans' generation culturally believes that marriage is for life, and that women need to be available and sexually satisfy their husbands, as part of their role as good wives due to the greater influence of the catholic church (the colonial war had a missionary goal), one may hypothesize that when the veteran feels dissatisfied regarding the marriage, he may feel depressed and his sexual life becomes affected, as a result. In addition, marital dissatisfaction mediated the relationship between number of PTSD symptoms and sexual dissatisfaction, emphasizing once again the role of the quality of the marital relationship, between number of PTSD symptoms and sexual dissatisfaction. Another goal of the study was to explore the mediator role of sexual dissatisfaction, but the results showed that there was no mediation between psychological morbidity/number of PTSD symptoms and marital dissatisfaction. Therefore, this study showed that marital dissatisfaction impacted veterans' sexual dissatisfaction, in the presence of psychological morbidity and number of PTSD symptoms, and not the other way around.

This study has several limitations that need to be acknowledged. The study used a cross-sectional design and health problems were not controlled since access to medical records was granted. Future studies should take this aspect into consideration and include veterans' spouses assessing how the veteran's psychological morbidity and number of PTSD symptoms affect their sexual and marital relationship. Due to its nature, the instrument used did not allow to assess criterion F (how PTSD caused clinically significant distress or impairment) in those with probable PTSD, at the moment of the assessment. Therefore, it would be useful to use a gold standard measure for PTSD (CAPS-5 or PCL-5) to compare the diagnostic results of the two measures, as underscored by Marmar et al., 2015.

Conclusions

Less duration of the marriage, sexual dissatisfaction, depression symptoms and PTSD contributed to marital dissatisfaction, emphasizing the weight of a PTSD diagnosis in the

couple relationship. The mediating effect of the marital dissatisfaction between depression symptoms and sexual dissatisfaction, and between number of PTSD symptoms and sexual dissatisfaction suggests the important role that the marital relationship plays on the veteran's sexual intimacy, particularly when the veteran feels depressed or presents PTSD symptoms. Psychological morbidity and number of PTSD symptoms play an important role in marital satisfaction and sexual satisfaction, respectively. Health professionals need to take into consideration the veteran's marital and sexual relationship in clinical routine consultations. As such, treating the veteran in the couple' context seems warranted.

Acknowledgements

The authors thank APVG for their support.

Declaration of interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This study was partially funded by Bayer Portuguesa (B02/06).

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