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## **Sexual satisfaction in spouses of ex-POWs: The role of PTSD symptoms and self-differentiation**

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### Abstract

Spouses of former prisoners-of-war (ex-POWs) are at risk for Posttraumatic Stress **Symptoms (PTSS)** and marital distress. This longitudinal study assessed the implications of **PTSS** and self-differentiation in sexual satisfaction among 90 ex-POWs' spouses and 75 matched combatants' spouses of the 1973 Yom-Kippur War. Standardized questionnaires were used. Ex-POWs' spouses had elevated **PTSS and imbalanced self-differentiation**. **PTSS** were associated with poorer self-differentiation and lower sexual satisfaction. Imbalanced self-differentiation mediated the association between **PTSS** and sexual satisfaction. The findings imply that **PTSS** and imbalanced self-differentiation contribute to low sexual satisfaction among spouses of primary trauma survivors.

**Keywords:** sexual satisfaction; posttraumatic stress symptoms; self-differentiation; spouses of veterans; secondary traumatization; indirect trauma exposure

## Introduction

### Sexual Satisfaction among Middle-Aged Women

Numerous definitions have been offered to denote sexual satisfaction. The most common **view is that of** sexual satisfaction as the emotional response stemming from individuals' evaluation of the positive and negative aspects of their sexual relationships (**Lawrance & Byers, 1995**). Sexual satisfaction is perceived as a sexual right (World Health Organization, 2010) **and** often serves as a marker for a wide range of indicators for physical health and psychological well-being (McClelland, 2010; Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014). Research has indicated that high sexual satisfaction is associated with enhanced physical and psychological health (e.g., Scott, Sandberg, Harper, & Miller, 2012), as well as quality of life (e.g., Chao et al., 2011; Flynn et al., 2016).

In particular, sexual satisfaction seems to have great significance regarding the wellbeing of middle-aged women (**i.e., approximate age range of 40 to 65 years; Collins Dictionary, n.d.**), who are the focus of the current investigation. Research has indicated that middle-aged women view sexuality as a key component in their intimate relationship (Gott & Hinchliff, 2003; Woloski-Wruble, Oliel, Leefsma, & Hochner-Celnikier, 2010) and experience their ability to engage in active sexual relationships as a source of vitality and happiness (Daker- White & Donovan, 2002).

Although some studies have indicated that changes in sexual functioning during midlife might be associated with reduced sexual satisfaction (e.g., Daker- White & Donovan, 2002; Lee, Nazroo, O'Connor, Blake, & Pendleton, 2016), other evidence has suggested that changes of menopause and aging do not necessarily lead to reduced sexual satisfaction (Thomas, Hess, & Thurston, 2015). Furthermore,

previous studies have revealed an increase in sexual satisfaction during midlife (Chao et al., 2011; Thompson et al., 2011; Trompeter, Bettencourt, & Barrett-Connor, 2012). One explanation for these findings suggests that women place more emphasis on other aspects of sex, such as emotional closeness, rather than physical sensations, **during this life stage** (Ginsberg, Pomerantz, & Kramer-Feeley, 2005; Winterich, 2003) **and, therefore, could** experience sexual satisfaction, even if their sex lives are different than in their younger years.

Psychological factors and relational aspects might play a central role in shaping women's sexual satisfaction (e.g., Thomas et al., 2015; Tiefer, Hall, & Tavis, 2002). **A large-scale study conducted among older individuals indicated associations between sexual satisfaction and satisfaction with social relationships in general (Laumann et al., 2006). Additionally, studies** have revealed positive associations between relationship satisfaction, better **communication with partners** and sexual satisfaction (Avis et al., 2005; Young, Denny, Young, & Luquis, 2000).

Given that women's sexual satisfaction has been found to be associated with their physical and mental well-being, expanding our understanding regarding the psychological and relational aspects that might be involved in shaping sexual satisfaction is meaningful, in general, and specifically in regards to women who are at high risk for mental distress. The present study explores the associations between indirect trauma exposure, posttraumatic stress symptoms (**PTSS**), self-differentiation, and sexual satisfaction, among middle-aged women who are married to former prisoners-of-war (ex-POWs) or combatants.

### **Indirect Exposure to War Captivity, PTSS, and Sexual Satisfaction**

Physical and mental endangerment is commonly experienced on the war-front by combatants. However, prisoners-of-war (POWs) face further exposure to traumatic experiences during captivity, which may include torture, humiliation, deprivation of basic needs, and isolation (Engdahl, Harkness, Eberly, Page, & Bielinski, 1993).

**Thus, it is not surprising that ex-POWs suffer from** high rates of psychiatric disorders (e.g., Rintamaki, Weaver, Elbaum, Klama, & Miskevics, 2009), with Posttraumatic Stress Disorder (PTSD) being the most conspicuous psychiatric **sequelae** (American Psychiatric Association, 2013).

The ramifications of war captivity are not limited to the individuals who experience it firsthand. **Learning about a close family member's traumatic event may result in symptoms similar to that of the person who directly experienced the trauma** (DSM-5; American Psychiatric Association, 2013). **The term 'secondary traumatization' describes this phenomenon and has been documented in research** (e.g., Figley, 1995). **Studies** among spouses of traumatized veterans have shown effects such as low self-esteem, pain complaints, depression, anxiety, and self-blame (Beckham, Lytle, & Feldman, 1996; Riggs, Byrne, Weathers, & Litz, 1998). Furthermore, previous studies among the current sample implied that indirect exposure to war captivity could lead to more severe outcomes compared to combat, so that ex-POWs' spouses had higher PTSS, psychiatric symptomatology, functional difficulties, and poorer perceived health, than spouses of comparable combatants (e.g., Greene, Lahav, Bronstein, & Solomon, 2014).

The trauma of war captivity might **result in** difficulties in the interpersonal sphere and, in particular, intimate relationships. For example, a study among WWII ex-POWs indicated that both ex-POWs and their partners experienced emotional distance from one another (Bernstein, 1998). According to Monson and colleagues

(2010), difficulties in trusting others, increased numbing, propensity for outbursts, and elevated aggression, all of which are part of posttraumatic reactions, could take a toll on the marital relationship. The empirical literature has found support for this claim, indicating intensified relationship distress (Campbell & Renshaw, 2012; Knobloch-Fedders, Caska-Wallace, Smith, & Renshaw, 2017), and communication problems (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004) among traumatized veterans, ex-POWs and their partners.

**In exploring the sexual domain in the aftermath of war captivity, there is evidence suggesting that this aspect might also be hindered.** This could be rooted, at least in part, in elevated **PTSS** among ex-POWs. Emotional numbness, a **posttraumatic stress** symptom, may limit the ability to enjoy sexual interactions. **Additionally**, the physiological processes involved in PTSD, could harm sexual functioning and **reduce** sexual satisfaction (Gabrielson, Liu, & Sikka, 2018; Yehuda, Lehrner, & Rosenbaum, 2015). A study among ex-POWs found poor sexual satisfaction and revealed negative associations between ex-POWs' PTSS and their sexual satisfaction (e.g., Zerach, Anat, Solomon, & Heruti, 2010).

Nevertheless, research regarding sexual satisfaction among spouses of ex-POWs has been limited. Given that indirect exposure to war captivity could lead to broad negative ramifications and relational effects, one might suggest that the sexual domain could also be hindered. It is also plausible to assume that, as with the **PTSS** of **primary trauma survivors, such as ex-POWs, their spouses' PTSS** would similarly affect their **own** sexuality and, furthermore, would be associated with low sexual satisfaction. Thus, the first two aims of the present study, are to explore sexual satisfaction among spouses of ex-POWs versus spouses of control combatants and to assess the association between spouses' PTSS and their sexual satisfaction.

## Self-Differentiation, PTSS, and Sexual Satisfaction

Another relational aspect that might play a central role in shaping sexual satisfaction among spouses of ex-POWs is self-differentiation. Self-differentiation denotes two interrelated dimensions: the intra-psychic, which **reflects one's ability** to distinguish between intellect and emotions (e.g., Bowen, 1985); and, **the interpersonal, which is addressed here and reflects the capacity to** balance between having both relationship intimacy and autonomy (e.g., Kerr & Bowen, 1988).

Self-differentiation ranges from high self-differentiation ("balance") to low self-differentiation ("fusion-with-others" or "cut-off"). Balanced self-differentiation reflects one's ability to maintain a sense of self and adherence to personal convictions, despite pressure to do otherwise (Bowen, 1985). Balanced individuals have flexible interpersonal boundaries and are able to engage in intimacy without fear of loss-of-self (e.g., Bowen, 1985; Kerr & Bowen, 1988). **Imbalanced self-differentiation is manifested in pleasing others at the expense of one's self ("fusion-with-others"), or emotionally withdrawing ("cut-off"). Whereas fused individuals experience separation as overwhelming and actively avoid it, cut-off individuals perceive closeness as threatening and seek to limit it.**

**Although** self-differentiation has been claimed to be relatively stable (Kerr & Bowen, 1988), the trauma literature suggests that direct and indirect exposure to war captivity (e.g., Dekel, 2010; Solomon, Dekel, Zerach, & Horesh, 2009), as well as subsequent **PTSS** (Ben Arzi, Solomon, & Dekel, 2000; Zerach, 2015), are associated with imbalanced self-differentiation. A recent study among the current sample indicated higher levels of fusion in spouses of ex-POWs compared to spouses of combatants. Furthermore, findings have revealed a mutual association between fusion



and **PTSS**, so that **PTSS** predicted an increase in fusion tendencies over time and vice versa (Lahav, Levin, Bensimon, Kanat- Maymon, & Solomon, 2017).

Balanced self-differentiation serves as an important component in intimate relationships that enables sexual satisfaction. According to Schnarch (1991, 1997), the ability to maintain balanced self-differentiation allows a couple to communicate sexual issues, needs, and fantasies openly without being overwhelmed by anxiety, thus leading to higher sexual satisfaction. In a similar vein, Perel (2007) argues that eroticism flourishes in the space between the spouses. Thus, couples with balanced differentiation are better able to contain the anxiety embedded in the acknowledgment of each partner being a separate entity and, therefore, experience more sexual satisfaction. Research has **provided support for this view**. **Previous** studies have **documented** associations among self-differentiation, sexual desire (Ferreira, Narciso, Novo, & Pereira, 2014), and sexual satisfaction (Timm & Keiley, 2011). Similarly, a study among both clinical and nonclinical populations indicated that self-differentiation was a significant predictor of sexual satisfaction (Goff, 2010).

To the best of our knowledge, the role of self-differentiation concerning sexual satisfaction among indirect trauma survivors has not been investigated. Hence, it is unclear whether imbalanced self-differentiation among spouses of ex-POWs is linked to their levels of sexual satisfaction. Filling this gap, the present study will also investigate the combined contribution of self-differentiation, indirect exposure to war captivity and PTSS with regards to sexual satisfaction, as well as the mediating role of self-differentiation within the association between PTSS and sexual satisfaction.

In light of the literature reviewed above, we hypothesize the following:

- 1) Spouses of ex-POWs will report poorer self-differentiation and lower levels of sexual satisfaction compared to spouses of comparable veterans.
- 2) Spouses' PTSS will be associated with poor self-differentiation and low levels of sexual satisfaction.
- 3) PTSS and self-differentiation will contribute to the explanation of spouses' sexual satisfaction, above and beyond the effects of indirect exposure to war captivity.
- 4) Poor self-differentiation will mediate the associations between spouses' PTSS and sexual satisfaction.

## **Methods**

### **Participants**

This study is part of a longitudinal multi-cohort study of Israeli ex-POWs from the 1973 Yom Kippur War and their spouses (for full details see Solomon, Horesh, Ein-Dor, & Ohry, 2012). Data on the three study measures of PTSS, self-differentiation, and sexual-differentiation were collected only in 2003. Hence, the present study refers only to this time point.

According to Israel's Ministry of Defense (IDF), 240 combat veterans from the Israeli infantry were captured during the Yom Kippur War and held in either Egypt or Syria. A control group was sampled from IDF computerized data banks of combat land force veterans of the Yom Kippur War and matched to the ex-POWs in personal (age, ethnic background, marital status, education) and military (military units, roles, and IDF psychosocial profiles) backgrounds.

At the time of data collection, 111 ex-POWs and 102 control combatants who participated in the study were married. Ninety spouses of the ex-POWs (81.1%

response rate) and 75 spouses of the control combatants (73.5% response rate) took part in this study.

Missing data analysis indicated that, across variables, 0-18.2% of the values were missing. To decide whether the data had missing values in a pattern that was random, we conducted analyses of the differences between the groups in all of the variables using Little's Missing Completely at Random test (Collins, Schafer, & Kam, 2001). The analyses revealed that the data were not missing completely at random,  $\chi^2(35) = 179.86, p < .001$ . Thus an advanced method for handling missing data (Collins et al., 2001) of maximum likelihood (ML) imputation was employed using SPSS 25.

At the time of the study, the mean age of the spouses was 50.70 ( $SD = 6.36$ ), mean years of education was 14.18 ( $SD = 3.18$ ); the majority were secular (57.9%), with a higher than average income (35.0%). No significant differences between the groups were found in terms of spouses' country of birth ( $\chi^2(2, n = 89) = 3.37, p = 0.143$ , Cramer's  $V = 0.14$ ), number of children ( $t(161) = 0.60, p = 0.285, d = -0.09$ ), years of marriage/cohabitation ( $t(164) = 0.84, p = 0.404, d = 0.30$ ), past psychological treatment ( $\chi^2(1, n = 163) = 2.67, p = 0.2128$ , Cramer's  $V = 0.13$ ), and number of traumatic events other than the husbands' captivity ( $t(124.81) = -0.49, p = 0.625, d = -0.08$ ).

Following approval from the Tel Aviv University Review Board, potential participants were contacted. Participants were encouraged to meet with research assistants (licensed social workers) without their partners to ensure confidentiality. Participants completed the research questionnaires, in the presence of a research assistant, either in their homes or a location of their choice. Participation in the study

was voluntary and no compensation was offered. All participants read and signed an informed consent agreement before taking part in the study.

## Measures

**Background variables.** The questionnaire included data such as age, country of origin, years of schooling, years of marriage, level of religiosity, income, employment, number of children, military service/national service, recognition of disability by the National Insurance Institute, and history of past or present mental health care.

**Posttraumatic Stress Disorder Inventory (PTSD-I; Solomon et al., 1993).** Spouses' PTSS were assessed via the PTSD-I, a well-validated, 17-item, self-report questionnaire. The items on the PTSD-I correspond to the *DSM-IV-TR* diagnosis for PTSD (American Psychiatric Association, 2000), which was the standard when the study commenced. Respondents rated symptoms experienced in the previous month on a scale ranging from 0 (*not at all*) to 4 (*almost always*). Spouses rated their symptoms as relating to their husbands' experience of captivity or combat. The number of positively endorsed symptoms was calculated by the items answered as 3 (*often*) or 4 (*almost always*), as these responses best capture the *DSM-IV-TR* criteria of a persistent experience of trauma symptoms. The PTSD-I has proven psychometric properties and convergent validity (e.g., Solomon et al., 1993). The inventory had high internal consistency (Cronbach's  $\alpha = .91$ ) for PTSS total score.

**Differentiation of the Self** (Appel, 1996). The current study employed this scale to measure three dimensions of self-differentiation: (a) fusion-with-others: being overinvolved with one's partner; (b) balance: participation in the experiences of one's partner without losing individuality; and (c) cut-off: prioritizing individuality. The

scale contains nine statements for each dimension. Participants rated how accurately each statement describes the way they relate to their husbands, on a 5-point scale ranging from 'not at all' to 'very much.' The scale's internal consistency in this study was 0.62 for fusion-with-others; 0.76 for balance; 0.73 for cut-off.

**Index of Sexual Satisfaction** (Hudson, Harrison, & Crosscup, 1981). This questionnaire contains 25 statements relating to three components of sexual satisfaction: personal sexual satisfaction, satisfaction with a partner's sexuality, and satisfaction with the sexual interaction. The answers are measured on a Likert scale from (1) infrequently to (5) often. The final score is based on average responses. A higher score indicates greater satisfaction. This scale has high reliability and good construct validity (Hofmeyr & Greeff, 2002) and has been used previously within a study of Israeli veterans with high internal consistency (Cronbach's alpha was 0.93) (Zerach et al., 2010). In the current study, Cronbach reliability was: total score,  $\alpha = 0.94$ ; personal sexual satisfaction,  $\alpha = 0.63$ ; satisfaction with a partner's sexuality,  $\alpha = 0.86$ ; and satisfaction with the sexual interaction,  $\alpha = 0.85$ .

## Results

Before conducting the main analysis, we explored the correlations between the socio-demographic variables and sexual satisfaction. Analyses indicated non-significant correlations between socio-demographic variables (education, income, number of years of marriage and number of children) and sexual satisfaction. Hence, socio-demographic variables were not included in the main analyses.

To compare ex-POWs' spouses and controls in their levels of PTSS, differentiation, and sexual satisfaction, we conducted a series of One Way Analysis of Variance (ANOVA) (see Table 1). Results showed that spouses of ex-POWs reported

elevated **PTSS** and higher levels of fusion-with-others. Other comparisons yielded non-significant results.

Next, Pearson correlations were conducted to explore the associations among spouses' PTSS, self-differentiation, and sexual satisfaction (see **Table 2**). Analyses indicated significant associations between spouses' PTSS and their self-differentiation and sexual satisfaction. The higher the levels of PTSS among the spouses, the poorer their self-differentiation and the lower their sexual satisfaction.

A regression analysis was conducted to assess the unique and combined contribution of the study variables in predicting the sexual satisfaction total score. The analysis included three steps. The first step consisted of study group (i.e., spouses of ex-POWs versus spouses of controls). The second step consisted of spouses' PTSS, and the third step consisted of self-differentiation subscales. The final model explained 34.7% of the variance of spouses' sexual satisfaction,  $F(5, 159)=16.93$ ,  $p<.001$  (see Table 3). Only two variables had a significant effect in predicting spouses' sexual satisfaction – spouses' PTSS and balanced self-differentiation. The higher the levels of PTSS, the lower the spouses' sexual satisfaction. The higher the levels of balanced self-differentiation, the higher the spouses' sexual satisfaction.

An accelerated corrected-bias bootstrap test was conducted, with all three subscales of self-differentiation, to assess whether self-differentiation mediated the association between PTSS and sexual satisfaction. Analysis revealed that only balanced differentiation partially mediated the association between PTSS and sexual satisfaction (see Table 4). High levels of PTSS predicted low levels of balanced differentiation, which, in turn, was related to lower sexual satisfaction.

## Discussion

The present study assessed the sexual satisfaction of spouses of ex-POWs and spouses of control combatants. Results indicated that, although spouses of ex-POWs had elevated PTSS and higher fusion self-differentiation compared to control spouses, the differences between the groups in sexual satisfaction were non-significant. However, spouses' PTSS were associated with poor self-differentiation and low sexual satisfaction. Moreover, spouses' elevated PTSS as well as imbalanced self-differentiation were associated with their low sexual satisfaction and explained 34.7% of the variance of sexual satisfaction. Lastly, our findings revealed that imbalanced self-differentiation mediated the association between spouses' PTSS and their sexual satisfaction – high levels of PTSS were associated with low balanced self-differentiation, which, in turn, was associated with low sexual satisfaction.

Our findings regarding the elevated PTSS among spouses of ex-POWs were consistent with research indicating that spouses of primary trauma survivors might suffer from symptoms that mirror PTSD symptoms (e.g., Taft, Watkins, Stafford, Street, & Monson, 2011). Our results implied that the posttraumatic reaction resulting from indirect trauma exposure might be more severe in cases of extreme, prolonged, and complicated interpersonal traumatic events, such as war captivity. Although the spouses did not experience war captivity themselves, their over-identification with their partners might have led to the transmission of the traumatic experience (Figley, 1986). **Not mutually exclusive is the possibility that the spouses of ex-POWs assumed the caregiver role, as a way to assist their partners, which over time posed a significant burden and took a psychological toll (Caska & Renshaw, 2011).**

Although being a spouse of an ex-POW was not found to be related to sexual satisfaction, **spouses' PTSS regarding their partners' traumatic events of combat or war captivity were** associated with low sexual satisfaction. Thus, it is not the

nature of the traumatic event that the spouse is indirectly exposed to, rather it is the PTSS that can lead to poor sexual satisfaction. Given that sexual satisfaction is often considered a marker for a wide range of indicators regarding physical and psychological well-being, our findings demonstrated the substantial impact of a posttraumatic reaction among indirect trauma survivors. Several paths might explain what accounts for the low sexual satisfaction among these traumatized spouses.

The associations between spouses' PTSS and their sexual satisfaction might be rooted in the negative implications of PTSS on marital relations. Various posttraumatic stress symptoms have negative effects on the marital relationship. For example, intrusive symptoms increase self-preoccupation at the expense of the relationship, avoidance symptoms hinder the propensity for self-disclosure, and hyperarousal symptoms might fuel marital discord. Research conducted among combat veterans and ex-POWs (e.g., Cook et al., 2004; Gewirtz, Polusny, DeGarmo, Khaylis, & Erbes, 2010) as well as among the current sample of ex-POWs' and combatants' spouses (Lahav, Kanat-Maymon, & Solomon, 2017) has consistently demonstrated the relations between elevated PTSS and low marital satisfaction. **Thus, it might be that spouses' PTSS impeded their marital relationships which, in turn, influenced their sexual interactions and reduced their** satisfaction.

On the other hand, various physiological mechanisms might also be involved in low sexual satisfaction among traumatized spouses. For example, it has been argued that individuals with PTSD suffer from an inability to regulate and redirect physiological arousal (Yehuda et al., 2015). Traumatized individuals often display heightened autonomic arousal compared to healthy controls (Geraciotti Jr et al., 2001). Sexual stimuli activate the sympathetic nervous system, which increases heart rate and perfusion to the genitals. However, evidence indicates that excessive sympathetic



stimulation, as seen in PTSD, can lead to a fear response and, accordingly, to a decrease in sexual desire and arousal (Lorenz, Harte, Hamilton, & Meston, 2012). Additionally, traumatized individuals' inability to regulate the release of cortisol might hamper sexual dysfunction and satisfaction. Cortisol, which is a key component within the hypothalamic-pituitary-adrenal axis, is involved in redirecting physiological and metabolic processes toward immediate survival mechanisms, such as the fight-or-flight response (Guilliams & Edwards, 2010). Whereas cortisol levels produced under conditions of non-traumatic stress are related to suitable sexual arousal and desire, excess or inadequate cortisol levels, which have been found in PTSD, might inhibit feelings of desire and hinder sexual satisfaction.

Our findings indicated that PTSS among ex-POWs and combatants were related to lower self-differentiation. These findings are consistent with previous studies among indirect trauma survivors, such as second-generation Holocaust survivors (e.g., Giladi & Bell, 2013) and combatants' wives (e.g., Ben Arzi et al., 2000), and have been documented in previous studies among this sample (Lahav, Levin, et al., 2017). The current findings might reflect emotional regulation deficiencies or difficulties in maintaining healthy boundaries within relationships – both of which are related to PTSS. At the same time, these findings could also reflect spouses' maladaptive efforts to cope with their emotional distress caused by their PTSS. Spouses might become fused in their relationship as a way to receive emotional support from others and to avoid being preoccupied with their symptoms **or, alternatively, they might become emotionally** detached to avoid triggers and over-stimulation that may intensify their distress.

In addition, PTSS alongside imbalanced self-differentiation were found to be related to low sexual satisfaction among the spouses. Moreover, the results also

showed that imbalanced self-differentiation mediated the relationship between spouses' PTSS and their sexual satisfaction. These findings imply that imbalanced self-differentiation might serve as a mechanism underlying low sexual satisfaction among individuals who suffer from PTSS as a result of indirect trauma exposure.

The capacity to maintain balanced self-differentiation is important for individuals' well-being, whereas the lack thereof has been found to be associated with elevated distress (Kerr & Bowen, 1988; Skowron, Wester, & Azen, 2004). Thus, it is plausible to assume that spouses who suffer from PTSS and also exhibit poor self-differentiation, may experience intensified distress, which negatively affects the sexual domain as well. On the other hand, our findings regarding the mediating role of self-differentiation within the associations between spouses' PTSS and their sexual satisfaction might reflect marital difficulties linked to imbalanced self-differentiation. Self-differentiation has been argued to be essential for healthy marital relationships (Bowen, 1985; Kerr & Bowen, 1988). Whereas spouses with balanced differentiation may have more role flexibility, intimate contact, and be likely to remain calm in response to their partners' fluctuating emotions (Bowen, 1985; Kerr & Bowen, 1988), spouses with imbalanced differentiation may have a limited capacity to uphold balanced levels of closeness and separateness. Thus, it might be that traumatized spouses who have imbalanced self-differentiation could exacerbate their marital difficulties, resulting in decreased sexual satisfaction.

Lastly, it might be that poor self-differentiation associated with PTSS has a direct impact on sexual interactions, leading to low satisfaction. According to the couple therapists, Perel (2007) and Schnarch (2009), intimacy that benefits the sex life of couples requires a delicate balance between distance and closeness. According to this view, both poles of enmeshment and detachment impede couples' sex life and are

related to low desire and satisfaction (Perel, 2007). Research has provided some support to this claim, indicating associations between high emotional intimacy (e.g., Murray & Milhausen, 2012; Štulhofer, Ferreira, & Landripet, 2014), low levels of fusion or enmeshment between partners (Sims & Meana, 2010) and elevated sexual desire. Moreover, a previous study indicated that balanced self-differentiation among couples was associated with high sexual desire (Ferreira et al., 2014). The results of the present study, suggest that the same trend might be applicable among indirect trauma survivors who suffer from PTSS, in that traumatized spouses' poor self-differentiation might hinder their sexual interactions, leading to low sexual satisfaction.

The present study has several limitations. First, the use of self-report questionnaires may result in reporting bias. Second, the present study was a cross-sectional design, which, although common, **does not allow for inferring the direction of the relations between the study's variables over time nor for the prediction of causality. Thus, the present findings could reflect any number of directional relations between PTSS, self-differentiation and sexual satisfaction, as each of the variables could, theoretically, contribute to the other.** Future longitudinal studies should examine the associations between PTSS, self-differentiation and sexual satisfaction over time. Third, data regarding spouses' sexual functioning prior to their indirect trauma exposure were not included. Finally, this study was conducted among middle-aged Israeli spouses of ex-POWs and combatants. This may limit the generalizability of the findings to other populations. Thus, there is a need for future studies to examine the contribution of PTSS and self-differentiation to sexual satisfaction among various samples (e.g., different locations, various ages, among both men and women) of indirect trauma survivors.

Nevertheless, the present study suggests that PTSS alongside imbalanced self-differentiation are implicated in low sexual satisfaction among spouses of primary trauma survivors. As the current study indicates, spouses who are married to ex-POWs and combatants **and who suffer from PTSS** are likely to experience difficulties in maintaining balanced self-differentiation, which is associated with lower sexual satisfaction. Indirect trauma exposure has been shown to impact many different aspects of one's life. The findings of this study call for an intervention that will also target sexual satisfaction, as it plays an important role concerning physical and psychological well-being. The results imply that indirect trauma survivors who suffer from difficulties in the sexual domain could benefit from clinical interventions to assist them in creating and maintaining healthy boundaries in their marital relationships with their primary survivor spouses.

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Table 1. *PTSD symptoms, self-differentiation, and sexual satisfaction as a function of study group*

$\eta^2$	<i>F</i>	Wives of Controls ( <i>n</i> =75)		Wives of Ex-POWs ( <i>n</i> =90)		Variable
		<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	
.13	23.37***	2.51	2.08	4.30	4.80	PTSD symptoms - total score
.02	4.08*	.54	2.22	.62	2.41	Fusion
.00	.38	.58	3.95	.61	3.89	Balance
.00	.02	.58	1.96	.58	1.95	Cut-Off
.01	1.17	.62	4.20	.78	4.08	Personal Sexual Satisfaction
.02	3.58	.58	4.13	.69	3.94	Satisfaction with partners' Sexuality
.02	2.75	.60	3.89	.86	3.69	Satisfaction with the sexual interaction
.02	3.05	.54	4.04	.69	3.87	Sexual Satisfaction – total score

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 2. *Correlations among the study variables (n=165)*

Measure	1	2	3	4	5	6	7	8
1. PTSS	—							
2. Fusion	.56***	—						
3. Balance	-.18*	-.31***	—					
4. Cut-off	.29***	.36***	-.65***	—				
5. Personal sexual satisfaction	-.29***	-.24**	.45***	-.44***	—			
6. Satisfaction with partners' sexuality	-.37***	-.31***	.42***	-.42***	.75***	—		
7. Satisfaction with the sexual interaction	-.33***	-.31***	.51***	-.37***	.83***	.86***	—	
8. Sexual Satisfaction – total score	-.36***	-.32***	.52***	-.44***	.88***	.95***	.96***	—

Note. PTSS=Posttraumatic Stress Symptoms. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$

Table 3. *Regression Standardized Coefficients Predicting Wives' Sexual Satisfaction**(n=165)*

		Sexual Satisfaction	
		$\beta$	$R^2$ change
<b>Step 1</b>			
	Study Group	-.14	.02
<b>Step 2</b>			
	Study Group	-.10	.11***
	Wives' PTSD symptoms	-.36***	
<b>Step 3</b>			
	Study Group	-.03	.22***
	Wives' PTSD symptoms	-.24**	
	Fusion	-.03	
	Balance	.40***	
	Cut-off	-.10	

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



Table 4. *Unstandardized Regression coefficients, Standard Errors, and Bootstrap 95% Confidence Intervals for predicting Sexual Satisfaction by PTSD symptoms through self-differentiation*

Measure	Sexual Satisfaction	
	Bootstrap 95% Confidence Intervals	$\beta$ (SE)
Direct	{-.0660, -.0154} <sup>*</sup>	-.04 <sup>*</sup> (.01)
Indirect through fusion	{-.0163, .0127}	-.01 (.01)
Indirect through Balance	{-.0262, -.0018} <sup>*</sup>	-.01 <sup>*</sup> (.01)
Indirect through Cut Off	{-.0139, .0022}	-.01 (.01)

*Note.* 95% Confidence Intervals are presented in brackets. Confidence intervals that do not include 0 (null association) are significant. <sup>\*</sup>  $p < .05$