Preliminary evidence linking complex-PTSD to insomnia in a sample of Yazidi genocide survivors☆

Ephraim S. Grossman[a,*], Yaakov S.G. Hoffman[b,1], Amit Shrira[b], Mordechai Kedar[c], Menachem Ben-Ezra[d], Mirza Dinnayi[e], Ari Z. Zivotofsky[f]

[a] Education Department, Ariel University, Ariel, Israel
[b] Interdisciplinary Department of Social Sciences, Bar-Ilan University, Ramat-Gan, Israel
[c] Arabic Department, Bar-Ilan University, Israel
[d] School of Social Work, Ariel University, Israel
[e] Director of Luftbrücke Irak, Germany
[f] Gonda Brain Research Center, Bar-Ilan University, Ramat-Gan, Israel

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ABSTRACT

Complex post-traumatic stress disorder (CPTSD) is a psychiatric diagnosis that includes three additional symptom clusters beyond those necessary for post-traumatic stress disorder (PTSD) diagnosis. CPTSD is typically associated with a prolonged trauma exposure in which a person's destiny is under the control of other people and escape is not an option. Insomnia prevalence in women suffering from CPTSD was compared to the prevalence of insomnia in those with no-PTSD and those with only PTSD. Yazidi women ($N = 108$, age = 24.41 ± 5.71) former captives of the Islamic State terrorist group were queried about captivity variables, psychological distress, resilience, PTSD, CPTSD, and insomnia. CPTSD prevalence was high (>50%) and was highly correlated with insomnia (95% of those with CPTSD had insomnia). A dichotomous insomnia variable was regressed on age and marital-status (Step 1), captivity-duration and number of fellow captives (Step 2), resilience and psychological distress (Step 3), and group (no-PTSD/PTSD/CPTSD) (Step 4). Insomnia was 18 times more likely in the CPTSD group than in the no-PTSD group. There were no differences in insomnia prevalence between the no-PTSD and PTSD groups. Insomnia levels among Yazidi women released from captivity support an understanding of CPTSD as a separate entity than PTSD. Potential factors linking CPTSD to insomnia, beyond those associated with PTSD are discussed.

1. Introduction

A broad body of research (Sinha, 2016; Short et al., 2018) addresses the insomnia-post traumatic stress disorder (PTSD) association. According to the ICD-11 draft, PTSD is a psychiatric condition that may develop following trauma exposure. PTSD comprises three symptom clusters (syndromes), re-experiencing of the traumatic event, avoidance of trauma reminders, and hyper-arousal (Cloitre et al., 2013). While PTSD typically follows a single traumatic event, complex post-traumatic stress disorder (CPTSD) is associated with prolonged trauma when a person's destiny is under the control of other people and escape is unfeasible (Cloitre et al., 2013), such as captivity or sexual slavery. A diagnosis of CPTSD requires fulfilling the PTSD criteria in addition to the fulfillment of three (impaired) self-organization clusters: affective

dysregulation, negative self-concept, and disturbed relationships (Nickerson et al., 2016). Previous data from refugees who experienced prolonged torture showed that about 20% had only PTSD, and another 33% fulfilled the additional CPTSD criteria in addition to fulfilling the PTSD criteria (Nickerson et al., 2016).

1.1. Insomnia following trauma and PTSD

Insomnia was recently defined by Seow et al., (2018) as a common sleep problem referring to difficulties in initiating or maintaining sleep or to having a feeling that obtained sleep is non-refreshing or of poor quality. People may develop acute insomnia after a variety of traumatic events (Cloitre et al., 2013; Nickerson et al., 2016; Sinha, 2016; Grossman et al., 2017; Short et al., 2018) such as the 9/11 attacks

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(Galea et al., 2002) and missile attack exposure (Askenasy and Lewin, 1996). Sleep difficulties may ensue even when the exposure to traumatic content is virtual (Soffer-Dudek, 2016) or indirect (Badger et al., 2008) and due to a specific anxiety of an enemy (Hoffman and Grossman, 2017).

Some sleep researchers contend that insomnia is associated with hyper-arousal (Riemann et al., 2010), which may result from exposure to trauma (Sinha, 2016). Insomnia in turn can ultimately drive the development of PTSD (McLay et al., 2010; Sinha, 2016; Cox et al., 2018). It is thus not surprising that insomnia is robustly related to PTSD (Spoormaker and van den Bout, 2005; Short et al., 2018). Likewise, individuals suffering from PTSD report more weeks of sleep difficulties in the preceding year than those who suffer from other disorders (e.g., separation anxiety, alcohol dependence and major depressive disorder) (Lauterbach et al., 2011).

1.2. Insomnia and CPTSD

Preliminary evidence suggests that persons diagnosed with CPTSD suffer from restless sleep and early awakening (Elklit et al., 2014). However, as the potential insomnia-CPTSD association has not been examined, it is unknown how insomnia prevalence would be associated with CPTSD. Persons with CPTSD who by definition fulfill PTSD criteria (Cloitre et al., 2013; Nickerson et al., 2016) should have higher insomnia prevalence than persons who were exposed to the same trauma but did not exhibit any posttraumatic symptoms. It may also be the case that people with CPTSD have higher PTSD symptom levels than person with only PTSD, therefore, it would be important to control for PTSD symptom levels when assessing the insomnia-CPTSD relationship. A related point is that PTSD and CPTSD may respectively reflect lower and higher symptom levels along the same continuum (Goodman, 2012; Resick et al., 2012). Thus, insomnia in CPTSD may be driven by the same factors associated solely with PTSD elements, such as arousal (Riemann et al., 2010) and recurrent thoughts (Cox et al., 2018). An alternative view is that CPTSD is a qualitatively different diagnostic entity from PTSD (Herman, 2012; Cloitre et al., 2013). Accordingly, higher insomnia prevalence in persons with CPTSD vis-à-vis persons without trauma symptoms, may stem from unique CPTSD factors independent of PTSD symptom level. In effect, rather than insomnia being associated solely with PTSD elements (e.g., arousal/recurrent thoughts), this alternative would pave the way for assessing which of the three CPTSD clusters are associated with insomnia beyond PTSD symptoms. The insomnia-CPTSD association is currently examined in a sample of Yazidi females, who were released from prolonged Islamic-State-of-Syria-and-Iraq (ISIS) captivity.

1.3. The genocide of Yazidis

One of the most horrific man-made atrocities of recent years was the Yazidi genocide perpetrated by ISIS. The Yazidis were among the many minorities in Iraq and Syria who suffered at the hands of ISIS (Abdel-Razek and Puttick, 2016). The genocide of Yazidis perpetrated by ISIS, typically involved the rounding-up and killing of men while forcing women into prolonged captivity, where they were sold as sex-slaves, auctioned off to groups of men who repeatedly raped them and often resold them (Arena, 2017; Hoffman et al., 2018). The current research focused on Yazidi women, who were held in prolonged captivity, where they experienced sexual slavery by ISIS forces.

1.4. Aims of the study

The relationship between clinical insomnia and clinical CPTSD is examined in a sample of Yazidi women who were ISIS captives. We predict a robust insomnia-CPTSD relationship that is beyond PTSD severity level. This in turn would reveal a novel association between insomnia and the newer psychiatric diagnosis of CPTSD.

2. Methods

2.1. Participants and procedure

We interviewed 108 released/resettled female Yazidi captives (see Table 1 for descriptive statistics) from four post-ISIS camps in Kurdistan (Kabarto-20.4%, Khanik-25%, Sharya-33% and Qaida 7.4%), during February-March 2017. Interviews took place between 1 and 4 months after liberation from ISIS by trained bilingual (Arabic and English) female research assistants, who read the questionnaires in Arabic in a personal interview setting. Participants provided written informed consent to procedures approved by an ethics committee in Bar-Ilan University.

2.2. Measures

In addition to demographics (i.e., age, marital status), the questionnaire included captivity-related and psychological variables. The captivity-related variables comprised captivity duration (14.08 months $\pm$ 9.83, range 1–30 months) and number of captives held with the participant (32.29 $\pm$ 80, range 0–400). There were five psychological variables: the 7-item self report Insomnia Severity Index (ISI (Morin et al., 2011), Mean sum ISI = 19.26 $\pm$ 6.88, α = 0.89), the 10-item Connor-Davidson Resilience Scale (Campbell-Sills and Stein, 2007, Mean Resilience = 3.13 $\pm$ .81, α = 0.86), the 6-item K6 psychological distress scale (Kessler et al., 2003, Mean distress = 3.13 $\pm$ .81, α = 0.72), along with the 6-item ICD-11 PTSD (Cloitre et al., 2013, Mean PTSD = 4.68 $\pm$ .41, α = 0.71), and CPTSD (Cloitre et al., 2013, Mean CPTSD = 3.35 $\pm$ .78, α = 0.71) questionnaires. All measures were rated on a Likert scale from 1–5. Based on the PTSD and CPTSD questionnaires, participants were divided into groups comprising three categories (no-PTSD/PTSD-only/CPTSD; this categorical division is further explained in the Data Analysis section).

All translated items were back-translated into English, reviewed, and corrected. The cultural suitability of the Arabic wording was addressed in two pilot studies (N = 20). Consequently, two CPTSD items (feeling worthless/guilty) were reworded to ensure comprehension. Maintenance of original meaning was evaluated by five assessors.

2.3. Data analysis

Following the proposed ICD-11 guidelines (Cloitre et al., 2013), we defined PTSD as endorsing at least one of two possible symptoms (rated $\geq$ 3) from each of the three PTSD syndromes, i.e., re-experiencing, avoidance and sense of threat (hyper-arousal). Likewise, CPTSD was diagnosed when, in addition to meeting criteria for PTSD, respondents exhibited disturbances in self-organization by suffering from all three self-organization syndromes; affective dysregulation, negative self-concept, and interpersonal problems (Cloitre et al., 2013). Similar to PTSD diagnosis, to fulfill criteria of disturbances in self-organization one need not endorse all six items; rather it was necessary to endorse at least one of two symptoms from each the three self-organization syndromes (rated $\geq$ 3). All those who neither met the criteria for CPTSD nor PTSD, were classified as "no-PTSD". Additional analyses were conducted on the continuous PTSD and CPTSD scores, which were obtained by summing the ratings (1–5) across all six PTSD items and all six CPTSD items (each score ranged from possible 6–30). A score of 10 was used as a cutoff-score for defining clinical insomnia (Campbell-Sills and Stein, 2007). In addition, the ISI sum score was used as a continuous score for the additional analyses. Initial group differences were tested with one-way ANOVA tests and Chi-square tests.

For the main regression analysis, clinical insomnia was regressed in a logistic stepwise regression on age and marital-status (Step 1), captivity-duration (Step 2), resilience and psychological distress (Step 3) and the three PTSD groups (Step 4). This main analysis addresses the primary goal of the current study; to examine the association of

Table 1
Descriptive statistics, mean, percent, standard deviations and correlations for study variables.

	M/%	SD	1	2	3	4	5	6	7	8
1. Insomnia	19.27	6.89								
2. Age	24.42	5.71	$r_{(108)} = 0.25^*$							
3. [a]Marital status (Married)	45.4%		$r_{(108)} = -0.24^*$	$r_{(108)} = -0.45^{**}$						
4. Captivity duration (Months)	14.08	9.83	$r_{(105)} = 0.11$	$r_{(105)} = 0.08$	$r_{(105)} = -0.03$					
5. How many captives with you	32.30	80.64	$r_{(105)} = 0.07$	$r_{(105)} = 0.03$	$r_{(105)} = -0.13$	$r_{(105)} = 0.17$				
6. K6	3.20	0.81	$r_{(108)} = 0.16$	$r_{(107)} = -0.11$	$r_{(105)} = -0.05$	$r_{(105)} = 0.05$	$r_{(108)} = -0.10$			
7. Resilience	3.13	0.82	$r_{(107)} = -0.37^{**}$	$r_{(108)} = 0.02$	$r_{(104)} = 0.21^*$	$r_{(104)} = -0.09$	$r_{(107)} = 0.02$	$r_{(107)} = -0.22^*$		
8. PTSD	21.43	4.47	$r_{(108)} = 0.21^*$	$r_{(108)} = 0.02$	$r_{(105)} = 0.01$	$r_{(105)} = 0.09$	$r_{(108)} = 0.04$	$r_{(108)} = 0.12$	$r_{(108)} = 0.07$	
9. CPTSD	20.12	4.72	$r_{(108)} = 0.40^{**}$	$r_{(108)} = 0.10$	$r_{(105)} = -0.18$	$r_{(105)} = 0.06$	$r_{(108)} = -0.14$	$r_{(108)} = 0.51^{**}$	$r_{(108)} = -0.16$	$r_{(108)} = 0.42^{**}$

Note. $N \leq 108$. Correlation values represent Pearson Correlation coefficients except for coefficients for marital status that represent point-biserial coefficients. [a] Marital status (1 = married, 2 = single).

* $p < 0.05$.
** $p < 0.01$.

psychiatric CPTSD and insomnia diagnoses.

Small, albeit significant, differences in PTSD severity between the CPTSD and PTSD groups (5.6 vs. 5.0, respectively, $t = 3.565$, $df = 76$, $p < 0.0001$) necessitated controlling for PTSD levels. Due to multi-collinearity (high correlation between group type and PTSD symptom level, $r = 0.80$), PTSD symptom levels could not be controlled for in this first analysis. Consequently, a second analysis was conducted on continuous scores, where PTSD symptom level was entered in Step 1 to verify that the continuous self-organization syndrome score-insomnia association (Step 2) was significant over and beyond PTSD symptom level. Finally, to reveal which specific self-organization syndrome is associated with insomnia, we conducted a third analysis, where the three PTSD (continuous) cluster scores were entered in Step 1 (recurrent thoughts, avoidance and hyper-arousal), and the three CPTSD (continuous) self-organization cluster scores were entered in Step 2 (affective dysregulation, negative self-concept and interpersonal problems).

3. Results

Descriptive statistics appear in Table 1. According to some pilot data, participants felt safer being surrounded with other captives, and presumably more protected. However, the current data (see Table 1) indicated that the number of fellow captives was not correlated with any other variable. As opposed to captivity duration, which is an estimation of trauma exposure level, the only rationale for including number of captives was the pilot data. Thus, following this null effect, we dropped this variable (number of captives) from remaining analyses. In light of the actual distribution of marital status (58 married, 49 single, 1 divorced) this variable was dichotomously recoded into married vs. single. As shown in Table 1, married people had higher levels of insomnia, a point addressed in the discussion.

Table 2 depicts correlations of the continuous scores of the three PTSD clusters (arousal/recurrent thoughts) with the three CPTSD impaired self-organization clusters (affective dysregulation/negative self-concept/disturbed relationships). These correlations were largely similar to other results (Nickerson et al., 2016); differences are addressed below in Section 4.1. Next, we turn to the analyses focusing on the dichotomized PTSD and CPTSD scores.

The distribution of trauma symptoms was as follows: Fifty-five (50.9%) women had probable CPTSD, while 23 (21.3%) had probable PTSD. There were no group (no-PTSD/PTSD-only/CPTSD) differences in age, captivity duration, number of captives, resilience, psychological distress ($Fs < 1$) and marital-status ($\chi^2_{(4)} = 0.16$, $p > 0.99$). However, there was a significant between-group difference in the ISI scale: no-PTSD = 15.88 (7.80); PTSD-only = 16.39 (6.50); CPTSD = 21.06 (6.16), $F(2,93) = 6.90$, $p = 0.002$. ISI significantly correlated with age ($r = 0.25$, $p < 0.01$) and with being married ($r = -0.24$, $p < 0.05$). Using a cutoff-score of 10 for clinical insomnia (Morin et al., 2011), we

Table 2
Correlations between PTSD and C-PTSD subscales.

	1	2	3	4	5
1. PTSD Re-experiencing	–				
2. PTSD Avoidance	0.20*	–			
3. PTSD Arousal	0.35**	0.42**	–		
4. C-PTSD Affect Dysregulation	0.51***	0.10	0.21*	–	
5. C-PTSD Disturbance Negative Self concept	0.15	0.00	−0.09	0.16	–
6. C-PTSD Disturbed Social Relationships	0.51***	0.10	0.27**	0.52***	0.27***

Note. $N = 108$. Correlation values represent Pearson Correlation coefficients.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Table 3
Regression coefficients for predicting clinical insomnia.

	B (SE)	Wald	OR (95% CI)
Step 1	$\Delta R^2 = 0.04$ (Nagelkerke)		
Age	0.03 (0.06)	0.28	1.03 (0.91–1.17)
Marital status (1 = single)	−0.67 (0.71)	0.90	0.51 (0.12–2.04)
Step 2	$\Delta R^2 = 0.04$ (Nagelkerke)		
Duration captivity (Months)	0.04 (0.03)	1.96	1.04 (0.98–1.11)
Step 3	$\Delta R^2 = 0.03$	0.80	0.67 (0.28–1.59)
Resilience	(Nagelkerke)	0.38	1.28 (0.58–2.82)
K6	−0.39 (0.43)		
Step 4	.25 (0.40)		
	$\Delta R^2 = 0.20$ (Nagelkerke)		
Group (0 = no PTSD; 1 = PTSD; 2 = CPTSD)		8.90*	
0 vs. 1	0.78 (0.77)	1.02	2.19 (0.47–10.05)
0 vs. 2	2.88 (0.97)	8.80**	17.78 (2.65–19.08)

Note. N = 92. In each subsequent step, only the new variables are shown (and not those from previous steps).

* $p < 0.05$.
** $p < 0.01$.

found significant Group by Clinical insomnia dependencies, $\chi^2_{(4)} = 11.92$, $p < 0.01$ (no-PTSD = 66.7%; PTSD-alone = 78.3%; CPTSD = 96.54%).

Next, the logistic stepwise regression showed that women with CPTSD were 17.9 times more likely to have clinical insomnia relative to those who did not have PTSD. Clinical insomnia prevalence was similarly high and statistically the same for the no-PTSD and PTSD groups. Regression coefficient values and significance are depicted in Table 3. No other effects were significant.

To reiterate, the rationale for the second analysis was the significant difference in PTSD symptom severity between the PTSD and CPTSD groups (5.6 vs. 5). Follow up analysis revealed that the PTSD and CPTSD groups significantly differed in the PTSD cluster of recurrent thoughts (PTSD = 1.47; CPTSD = 1.85), $t = 3.725$, $df = 76$, $p < 0.0001$; but differences were neither evident in avoidance (PTSD = 2, CPTSD = 2), $t < 1$, nor arousal (PTSD = 1.47, CPTSD = 1.74), $t = 1.80$, $df = 76$, $p = 0.08$.

The second regression analysis examined the association between the continuous PTSD, continuous self-organization syndrome score and insomnia scores across the entire sample (no categorical division). The continuous variables related to the sum of six PTSD symptoms, sum of the six CPTSD self-organization disturbance items, and the sum of the seven insomnia symptoms. Results showed that PTSD symptoms (Step 1) significantly predicted insomnia levels ($B = 1.25$, $\beta = 0.45$, $p < 0.01$). Critically, the continuous self-organization syndrome score in Step 2 predicted insomnia levels beyond PTSD symptoms ($B = 1.48$, $\beta = 0.43$, $p < 0.001$).

To obtain greater resolution in discerning which trauma syndrome robustly predicted insomnia, we conducted a third regression analysis, where again the continuous insomnia variable (ISI) was regressed on continuous scores of the three PTSD syndromes in Step 1 (recurrent thoughts, avoidance and hyper-arousal) and continuous scores of the three self-organization syndromes in Step 2 (affective dysregulation, negative self-concept and interpersonal problems). In Step 1, only hyper-arousal predicted insomnia levels ($B = 3.17$, $\beta = 0.29$, $p < 0.01$). Out of the self-organization syndromes entered in Step 2, only interpersonal problems were a significant predictor of insomnia level (beyond the effects of PTSD syndromes, $B = 2.58$, $\beta = 0.34$, $p < 0.001$).

4. Discussion

In addition to exposing and further highlighting the plight of Yazidi suffering, the current findings show that probable CPTSD prevalence was very high. More critically, fulfilling CPTSD diagnostic criteria almost completely overlapped with diagnostically fulfilling clinical insomnia criteria (96.5%). Although the PTSD-insomnia association is well established (Sinha, 2016), the current results did not reveal higher insomnia prevalence in the PTSD group relative to the no-PTSD group. It seems that after experiencing such severe trauma of sexual-slavery during prolonged captivity, even those in the no-PTSD group had a high insomnia prevalence. Accordingly, potential differences in insomnia levels between the no-PTSD and PTSD-only groups may have not emerged. In any case, the current results call attention to the more robust and less explored Insomnia-CPTSD association.

Inspection of the group (no-PTSD/PTSD/CPTSD) results may merely suggest that the Insomnia-CPTSD association reflects a stronger association between insomnia and more severe PTSD levels found in the CPTSD group. Although such a result is interesting, the follow-up analyses controlling for PTSD levels reveal that the self-organization syndromes which are unique to CPTSD are associated with insomnia net of PTSD symptom levels. Such results further support CPTSD as a unique disorder. Moreover, the results suggest that self-organization issues are associated with self-reported insomnia (Gruber et al., 2014), over and beyond the widely reported PTSD elements of hyper-arousal (Riemann et al., 2010) and recurrent thoughts (Cox et al., 2018). Most critical, given the latter regression model, the Insomnia-CPTSD link is related to the interpersonal problems syndrome of self-organization. These results are in line with recent findings showing robust associations between insomnia and loneliness (Hom et al., 2017), as well as findings directly showing an association between social support and reduced insomnia (Kamen et al., 2017). It is possible that among the Yazidi female captivity survivors, the CPTSD component of interpersonal problems is an expression of this social factor. It may be alternatively speculated that CPTSD persons who feel socially cut-off and are sorely lacking social support, may also feel that it is not safe enough to sleep. This may be relevant to the feeling that the post-ISIS camps may be perceived as unsafe by some of the Yazidi survivors (Hoffman et al., 2018). Evidence supporting this idea found that feeling one's environment is unsafe coupled with less social cohesion is associated with insomnia (Chen-Edinboro et al., 2015). The issue of safety is important for both sleep (Charuvastra and Cloitre, 2009) and CPTSD (Cloitre et al., 2012). Further longitudinal research is required for addressing in depth the mechanism underlying the insomnia-CPTSD association.

This association between social support and reduced insomnia (Kamen et al., 2017) may be seemingly challenged by the finding that married Yazidi captive survivor women reported higher levels of insomnia symptoms than single women (see negative correlation in Table 1). However, we believe given the aforementioned description of the current sample that it is actually in line with these results. As described above, the Yazidi genocide involved the killing of men and taking of women into captivity. Accordingly, as the vast majority of these married female captives have no husbands. These husbands are legally defined as missing, but are in fact suspected of being dead. Thus higher reports of insomnia can be expected from these "married" women (Elger, 2007). Moreover, such women are in limbo, as their legal status remains "married" they cannot bereave, receive support as widows or remarry. In many (if not most) cases they opt to stay with the husband's family especially if they have children. By contrast, single women have their own family support and can marry. Thus, being "married" in such a situation is only in status, and is speculated to actually be accompanied with significantly less social support than that available to singles.

4.1. Limitations

Limitations of this study include a relatively small cross-sectional sample and reliance on subjective measures of sleep. In effect, the insomnia measure here was a self-report measure. As noted by Bastien et al. (2001) the "gold standard for assessing sleep disorders is polysomnography or structured interviews" (p. 297). Yet these authors also note however, that "brief clinical instruments, such as the ISI are reliable and valid methods to quantify perceived insomnia severity" and that the "ISI is brief and easy to administer and score, and provides relevant information towards diagnosis and treatment planning" (p. 305–6). Thus, the current results may indeed be limited to the self-report instrument, which may reflect perceived insomnia, yet given the above, it was the best way of assessing relevant diagnostic information under the current circumstances. Another limitation may be that results could be specific to this unique sample, which included only females who endured a very horrific trauma, comprising both sexual slavery, torture and captivity. Indeed earlier studies (see Elger, 2007) noted that being female, less educated, separated from your spouse and being in recent stress are all risk factors for insomnia. The population we sampled comprised these very characteristics, placing it at high risk of insomnia. Thus, conclusions drawn from these results to other populations with different and less extreme trauma exposure may require caution.

Another pertinent issue is that the correlations between PTSD and CPTSD clusters (Table 2) revealed both that correlations were slightly lower than in other studies (e.g., Nickerson et al., 2016) and that the avoidance cluster was unrelated to CPTSD clusters. Both the correlation strength and the pattern observed with avoidance may be related to the uniqueness of the sample. For example, after being released from ISIS, these participants were placed in crowded post-ISIS camps where both physical and sexual abuse may be experienced (see Hoffman et al., 2018), and avoidance is perhaps less relevant.

In any event, for this given sample of female captives who were/are separated from their spouses and endured sexual slavery, their self-reported insomnia levels were predicted by CPTSD levels over and beyond other variables including PTSD severity. A future longitudinal study with a cross-lagged analysis would be informative with regard to the causal relationships between insomnia levels and CPTSD. In addition, studies can be conducted to address underlying specific mechanisms connecting CPTSD with insomnia over time. Future studies can also assess if these findings replicate to other complex trauma, such as continuous sexual abuse without captivity. Such studies establishing causality should be revealing in terms of interventions, namely if insomnia interventions may mitigate CPTSD symptoms or vice versa.

4.2. Implications and conclusions

The current results also suggest that intervention/training centers under formation in Kurdistan may need to focus both on CPTSD interventions, which are distinctive from PTSD interventions (Cloitre et al., 2012), and on insomnia interventions (Morin, 2015). Although causality was not yet established for the CPTSD-insomnia association, given the above theoretical framework, one may speculate that interventions aimed at ameliorating insomnia may decrease the risk of subsequent trauma disorders. In any event, until such interventions become more available, psycho-education focusing on sleep-hygiene (Charuvastra and Cloitre, 2009), which includes awareness of a safe/comfortable environment, should be very helpful for both insomnia and CPTSD. It is important to note that although general sleep hygiene behaviors in the post-ISIS camps may be more challenging to implement, certain issues such as avoiding caffeine and/or lying in bed only when you are truly tired may be easier. Most importantly would be the striving to sleep in the place one feels safest.

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