

# 4 FACTORS RELATED TO ADHERENCE WITH POST-TRAUMATIC STRESS DISORDER TREATMENT: A QUALITATIVE STUDY AMONG PORTUGUESE WAR VETERANS

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## ABSTRACT

**BACKGROUND:** Research found better Post-traumatic Stress Disorder treatment outcomes among war veterans with treatment adherence. Perception of lack of benefits from medication, medication side effects, and social stigma were related to treatment non-adherence. Insight about the disease promoted medication adherence.

**AIM:** This study explored the coping strategies and perceived psychosocial resources involved in treatment adherence among traumatized patients.

**METHODS:** Sample was composed of Portuguese war veterans (N=60): 30 participants had chronic Post-traumatic Stress Disorder (non-recovered) and 30 had remission from Post-traumatic Stress Disorder (recovered). It was conducted a semi-structured interview. Content analysis was performed for interviews analysis.

**RESULTS:** Recovered group showed higher frequencies of reported treatment adherence. Participants who reported treatment adherence showed higher frequencies of problem focused coping, self-integration of incongruent experiences in personal schemas, insight, and appraisal of good social support. Participants who reported treatment non-adherence mentioned more use of acting out strategies.

**CONCLUSIONS:** Recovery from Post-traumatic Stress Disorder was facilitated by treatment adherence. Integration of discrepant experiences in personal schemas was a key process for developing higher insight about the disease. Patients' perceived control over recovery was facilitated by more effective coping strategies in patients with inadequate social support.

**KEYWORDS:** Trauma; Recovery; Patient's adherence; Treatment

## RESUMEN

“Factores asociados con la adhesión al tratamiento del trastorno de estrés postraumático: Un estudio cualitativo con antiguos veteranos portugueses”

**CONTEXTO:** La investigación encontró una mayor eficacia en el tratamiento del Trastorno de Estrés Pós-traumático en veteranos con adhesión al tratamiento. La percepción de falta de mejoría, los efectos secundarios de la medicación y el estigma social son factores de falta de adhesión. El insight de lo transtrono se asoció con una mayor adhesión al tratamiento.

**OBJETIVO(S):** Fueron exploradas las estrategias de afrontamiento, y los recursos psicosociales implicados en la adhesión al tratamiento de pacientes traumatizados.

**METODOLOGÍA:** La muestra consistió de veteranos Portugueses (N=60): 30 tenían Trastorno de Estrés Pós-traumático (no recuperados) y 30 con remisión del Trastorno de Estrés Pós-traumático (recuperados). Se realizó una entrevista semi-estructurada con cada participante que fueron analizadas por análisis de contenido.

**RESULTADOS:** Fueron encontradas tasas más altas de adhesión al tratamiento en los recuperados. Los pacientes con adhesión al tratamiento tenían mayor frecuencia de afrontamiento centrado en el problema, integración de experiencias incongruentes en los esquemas personales, insight, y evaluación de apoyo social. Los participantes sin adhesión al tratamiento mencionaron mayor uso de estrategias de acting out.

**CONCLUSIONES:** La recuperación del Trastorno de Estrés Pós-traumático fue facilitada por la adhesión al tratamineto. La integración de las experiencias incongruentes en los esquemas personales fue un proceso nuclear en el desarrollo de insight acerca del transtrono. La percepción de control sobre la recuperación fue facilitada por el uso de estrategias de afrontamiento más eficaces en pacientes con insuficiente apoyo social.

**DESCRIPTORES:** Trauma; Recuperación; Adhesión del paciente; Tratamiento

## RESUMO

“Factores asociados à adesão ao tratamento da perturbação de stresse pós-traumático: Estudo qualitativo em ex-combatentes portugueses”

**CONTEXTO:** A investigação encontrou maior eficácia no tratamento da Perturbação de Stresse Pós-traumático em ex-combatentes com adesão ao tratamento. A perceção de falta de melhoria com a medicação, efeitos secundários da medicação e estigma social eram fatores de não-adesão. O insight sobre a doença promovia a adesão ao tratamento.

**OBJETIVO(S):** Este estudo explorou as estratégias de coping e os recursos psicosociais envolvidos na adesão ao tratamento em pacientes traumatizados.

**METODOLOGIA:** A amostra era composta por ex-combatentes Portugueses (N=60): 30 sofriam de Perturbação de Stresse Pós-traumático crónica (não-recuperados) e 30 tinham remissão da Perturbação de Stresse Pós-traumático (recuperados). Foi efetuada uma entrevista semiestruturada que foi analisada através de análise de conteúdo.

**RESULTADOS:** Os recuperados apresentaram frequências mais elevadas de adesão ao tratamento. Os participantes com adesão ao tratamento apresentaram frequências mais elevadas de coping focado no problema, integração de experiências incongruentes nos esquemas pessoais, insight, e avaliação de bom suporte social. Os participantes sem adesão ao tratamento mencionaram maior uso de estratégias de acting out.

**CONCLUSÕES:** A recuperação da Perturbação de Stresse Pós-traumático foi facilitada pela adesão ao tratamento. A integração de experiências incongruentes nos esquemas pessoais foi um processo nuclear no desenvolvimento de insight sobre a doença. A perceção de controlo sobre a recuperação foi facilitada pelo uso de estratégias de coping mais eficazes em pacientes com suporte social inadequado.

**PALAVRAS-PASSE:** Trauma; Recuperação; Adesão do paciente; Tratamento

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## INTRODUCTION

Treatment adherence refers to the degree to which a client participates in a specified treatment approach (Owen & Hilsenroth, 2014). Higher adherence to Post-traumatic Stress Disorder (PTSD) treatment relates to better treatment outcomes among war veterans (Owen & Hilsenroth, 2014). Treatment non-adherence compromises recovery from PTSD (Kanninen, Salo, & Punamäki, 2000), resulting in increased likelihood of hospital admission, longer duration of hospitalization, and elevated healthcare costs (Kanninen et al., 2000; Yen et al., 2005).

Research found that veterans showed greater difficulty in remaining in treatment (Erbes, Curry, & Leskela, 2009; Fortney et al., 2011). This difficulty was related to the perception that medication was not helping and medication side effects (Fortney et al., 2011; Foster, Sheehan, & Johns, 2008), and social stigma related to psychotropic medication (Erbes et al., 2009; Owen & Hilsenroth, 2014). Medication side-effects and social stigma were associated with shame and self-blame feelings which compromised recovery from PTSD (Ajdukovic et al., 2013). These feelings may be aggravated by veterans' inability to integrate traumatic events within previous personal schemas (Litz et al., 2009; Sendas, 2010).

The gradual process of self-integration of traumatic experiences in personal schemas is achieved by placing violent behaviors committed in military duty in a specific context (Litz et al., 2009). This process promotes higher self-concept and identity coherence found in a sample of Portuguese veterans (Sendas, 2010). This may be a key achievement for the development of illness insight, i.e., the ability to re-label symptoms as being a consequence of mental illness, and recognition of the need for treatment (Yen et al., 2005). Insight was related to treatment adherence among traumatized veterans (Copeland et al., 2008; Foster et al., 2008), increased patient's perceived control over recovery, and recovery from PTSD in adult traumatized survivors (Najdowski & Ullman, 2009).

Maladaptive coping strategies compromised both perceived control over recovery and recovery from PTSD (Najdowski & Ullman, 2009). Substance abuse was a coping strategy used by veterans resulting in treatment non-adherence and PTSD relapse (Foster et al., 2008). Lower use of avoidant coping strategies was related to lower PTSD rate among a sample of Finnish veterans (Hautamäki & Coleman, 2001).

Maladaptive coping strategies were also associated with appraisal of insufficient social support (Brenner et al., 2008). Perceived social support had a beneficial effect on treatment adherence (Foster et al., 2008) and recovery from PTSD by increasing self-efficacy perceptions (Smith, Benight, & Cieslak, 2013).

Meanwhile, although all veterans with PTSD share the same diagnosis, the factors related to treatment adherence are as variable as the individuals themselves. Furthermore, no previous study has analyzed the factors related to treatment adherence in Portuguese war veterans. This study explored the factors attributed to treatment adherence among a group of Portuguese war veterans. We explored the coping strategies and perceived psychosocial resources involved in treatment adherence. Sample was composed of a group of veterans suffering from chronic PTSD and a group of veterans with remission from PTSD since negative diagnoses for current PTSD. New knowledge on the factors related to treatment adherence may enhance a better understanding of patient beliefs that lead to treatment preferences in order to optimize and better personalize PTSD patient care.

## METHODOLOGY

### Participants

Sample was composed of Portuguese war veterans (N=60), all males, mostly Whites (93.3%), four Blacks, with a mean age of approximately 64 years (age range: 59-72). More than half (53.3%) had four years of schooling, 33.3% had between six and nine years of schooling, 10% had twelve years of schooling, and 3.4% had university education. According to medical files, participants had no history of brain injury, or neuropsychological disorders. Participants had no physical disability related to war and no history of psychiatric illness previous to military duty.

All participants received a diagnosis of PTSD related to war when they started treatment, which was not discharged for at least 10 years. Non-recovered group included 30 participants with a current positive diagnosis for PTSD, as diagnosed by the Clinician-Administered PTSD Scale (CAPS). These participants were randomly selected among a group of outpatient receiving both psychiatric and psychological treatment (Cognitive-Behavior Therapy) in two clinical centers specialized in the treatment of war psychological disorders for at least the last ten years.

Recovered participants were 30 veterans previously diagnosed with PTSD who had recovered since negative diagnoses for current PTSD. These participants were randomly selected among a group of former patients from the same two clinical centers who had received treatment for at least ten years, but did not receive any treatment during the past year since negative diagnoses for current PTSD. Participants had no deterioration on their clinical condition since they had completed treatment. This condition was verified by no observation of symptoms aggravation in a periodic assessment conducted every three months after treatment. This procedure assured that recovery from PTSD status was not temporary. Both groups showed no differences for both demographic and treatment variables.

### Procedure

Participants were invited to participate in a study about the impact on their lives of their war experience. Next, one member of the research team (first author) explained the purpose of the study. There were no drop-outs. Written informed consent was obtained. Data was collected between October 2012 and March 2013. One in-depth, semi-structured, individual interview was conducted with each participant. Interviews lasted between 60 and 90 minutes focusing on description of coping strategies, perceived psychosocial resources, and treatment adherence. Interviews were audio-taped and transcribed verbatim.

Analysis of the interviews' transcripts was conducted using the Thematic and Categorical Analysis proposed by Bardin (2009). In this method, it was used an inductive analysis modality with an open coding technique. The research team consisted of the first and second authors on this article, both clinician-researchers with training in both content analysis and treatment of psychological trauma.

In a first stage, each team member separately conducted a content analysis by following these steps: transcriptions were read at least twice to ensure a holistic understanding of the data set; line-by-line analysis to infer global and specific meanings, and structure truly grounded and emerging from the data; each narrative's specific meanings that generated open codes (semantic criteria) were identified and labelled by tracking language and themes.

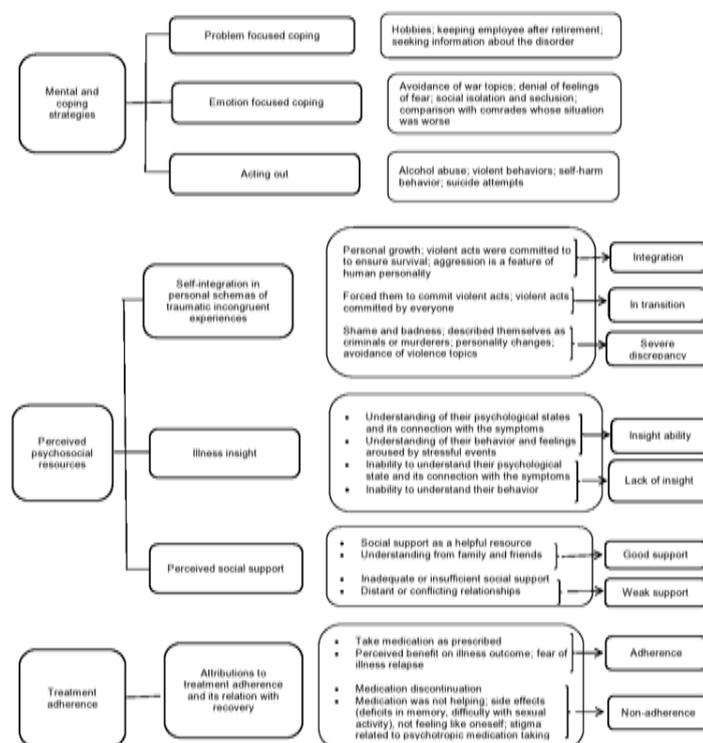
Next, the two coders convened to compare observations, sharing codes and rationales, and resolved discrepancies to reach a consensus on emerging themes.

The code lists were reviewed together and larger categories created by clustering codes that shared common themes. There was a high consensus between the two researchers, and disagreements were solved by returning to the transcripts. Following, thematic frequencies for treatment adherence were compared between recovered and non-recovered groups. Next, thematic frequencies for other categories were compared between participants who reported adherence and non-adherence to treatment. A statistical test for group differences was conducted using Fisher's exact test.

### RESULTS

The three core categories addressed by the interviews generated seven themes, each one with specific sub-themes extracted from participants' verbalizations. As can be seen in Figure 1, three themes were retrieved related to coping strategies. Three themes were retrieved from the category perceived psychosocial resources. Treatment adherence generated attributions on treatment adherence and its relation with recovery.

Figure 1 - Categories, Themes and Subthemes emerged from interviews



As can be seen in Table 1, Fisher's exact test showed that recovered and non-recovered participants differed in themes frequencies for treatment adherence. Results showed that observed frequencies were statistically significant higher than expected frequencies among recovered participants.

Table 1 - Treatment adherence frequencies among recovered and non-recovered groups

	Recovered (n=30) Observed frequencies (Expected)	Non-recovered (n=30) Observed frequencies (Expected)	$\chi^2$ sig.
Treatment adherence	28 (16)	4 (16)	38.57***

As can be seen in Table 2, participants who reported treatment adherence and participants who reported treatment non-adherence differed in frequencies for both problem focused coping and acting out. Participants who reported treatment adherence showed observed frequencies that were statistically significant higher than expected frequencies for problem focused coping strategies. Participants who reported treatment non-adherence showed observed frequencies that were statistically significant higher than expected frequencies for acting out strategies. No differences were found for emotion focused coping.

Table 2 - Themes frequencies among participants with treatment adherence and participants with treatment non-adherence

	Adherence (n=32) Observed frequencies (Expected)	Non-adherence (n=28) Observed frequencies (Expected)	$\chi^2$ sig.
<b>Mental and coping strategies</b>			
Problem focused coping	25 (18)	9 (16)	12.86***
Emotion focused coping	29 (29)	26 (25)	.03
Acting out	5 (10)	14 (9)	8.16**
<b>Self-integration in personal schemas of traumatic experiences</b>			
Integration	11 (7.5)	3 (6.5)	4.67*
In transition	17 (11)	4 (10)	9.90**
Severe discrepancy	4 (13)	21 (12)	24.00***
<b>Illness insight</b>			
Insight ability	25 (16)	5 (14)	21.70***
<b>Perceived social support</b>			
Good support	16 (10)	3 (9)	10.65*

Participants who reported treatment adherence showed observed frequencies for both integration and process of transition in the integration of traumatic events within existing personal schemas that were statistically significant higher than expected frequencies. Participants who reported treatment non-adherence showed higher observed frequencies of severe discrepancy between personal schemas and the traumatic events than expected frequencies.

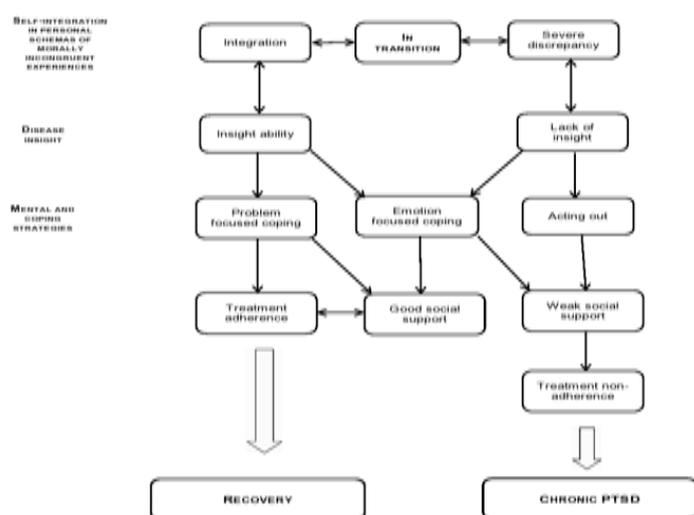
Participants who reported treatment adherence and participants who reported treatment non-adherence differed in frequencies for illness insight. Participants who reported treatment adherence showed observed frequencies that were statistically significant higher than expected frequencies. Participants who reported treatment adherence and participants who reported treatment non-adherence differed in frequencies for perceived social support. Participants who reported treatment adherence showed observed frequencies for good support that were statistically significant higher than expected frequencies (Table 2).

## DISCUSSION

Results showed that recovery from PTSD was related to treatment adherence among our sample (Owen & Hilsenroth, 2014). Treatment non-adherence compromised recovery from PTSD in non-recovered participants (Kanninen et al., 2000). High prevalence of participants who verbalized treatment non-adherence is in accordance with findings showing that veterans have difficulty in remaining in PTSD treatment (Erbes et al., 2009). Treatment non-adherence was attributed by our participants to appraisal of lack of benefits from medication, medication side effects, and social stigma related to use of psychotropic medication (Erbes et al., 2009; Fortney et al., 2011; Foster et al., 2008; Owen & Hilsenroth, 2014).

From our results, the major differences between participants who reported treatment adherence and participants who reported treatment non-adherence were related to discrepancy between personal schemas and traumatic events. In terms of recovery process, as can be seen in Figure 2, we proposed that PTSD recovery was related to integration of discrepant experiences that appeared as potentially hard to overcome and to accept by participants. The gradual process of reconciliation of discrepant experiences in personal schemas (transition followed by integration) was a key process for treatment adherence (Litz et al., 2009). This process involves the attribution of meaning and significance to the event by placing the behavior occurrence in a specific context (Litz et al., 2009).

Figure 2 - Recovery Model



## CONCLUSION

Recovery from PTSD was facilitated by treatment adherence. The gradual process of integration of incongruent experiences in personal schemas seems to be a key process for developing treatment adherence. This psychological achievement was related to development of insight about the disease related to appraisal of medication benefits and assimilation of medication side effects as personal losses involved in PTSD treatment. Development of insight may facilitate patient's perceived control over recovery through the use of more effective coping strategies to cope with both posttraumatic symptoms and current stress triggers. Meanwhile, appraisal of insufficient social support seems to compromise treatment adherence. Use of more effective coping strategies may have a beneficial effect on treatment adherence in patients with inadequate social support.

## IMPLICATIONS FOR CLINICAL PRACTICE

Assessment of patients' beliefs about medication is crucial for predicting treatment adherence. Patients' concerns about possible side effects may contribute to treatment non-adherence. Clinician's ability to help patients to build insight about their illness is a valuable resource for promoting treatment adherence. Psychoeducation provided by therapists and support from nurse care coordinators about how treatment works and acknowledging preexisting biases against pharmacotherapy for PTSD should be addressed. This could be achieved by nurturing rapport, respecting patients' explanatory models and involving them in the negotiation of treatment. Psychotherapists should focus on finding meaning to both traumatic experiences and violent behaviors committed during military duty. This process may help to restore a sense of coherence, resulting in better understanding of their symptoms, and identifying efficient strategies to cope with both posttraumatic symptoms and current stress triggers.

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This process may be crucial to restore veterans' sense of coherence (Sendas, 2010). Sense of coherence may be a key achievement for developing veterans' insight about the disease. This ability involved the awareness of psychological states and its connection with the symptoms which may promote higher understanding of the impact of trauma-related experiences on current life situations, and the ability to understand their behaviors and feelings aroused by current stressful events. Insight about the disease was especially valuable for appraisal of medication benefits on overall illness outcome and specific symptoms among participants who reported treatment adherence, even when they were faced with medication side effects (Copeland et al., 2008). Additionally, insight increased patient's perceived control over recovery (Najdowski & Ullman, 2009). This was related to use of more efficient coping strategies to cope with both posttraumatic symptoms and current life stressors among participants who reported treatment adherence (Najdowski & Ullman, 2009). Furthermore, more efficient coping strategies resulted in appraisal of social support as a good and a helpful resource (Hautamäki & Coleman, 2001). Perceived social support showed a beneficial effect on treatment adherence (Foster et al., 2008) related to veterans' perception of increased self-efficacy (Smith et al., 2013). Meanwhile, use of more efficient coping strategies showed a beneficial effect on treatment adherence even in those participants who verbalized inadequate or insufficient social support.

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