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THE COPING, THE HARDINESS, AND THE SENSE OF COHERENCE AS MAINTAINING FACTORS FOR MILITARY PERSONNEL'S MENTAL HEALTH

IULIA C. GIURCĂ
ROMANIAN MINISTRY OF DEFENSE

ANAMARIA CĂTANĂ
RALUCA SASSU
MIHAELA D. BUCUȚĂ
LUCIAN BLAGA UNIVERSITY OF SIBIU

Numerous researches have been done regarding the impact of war exposure, which is seen as a major stress factor among veterans. However, only a few studies have investigated some protective factors that may prevent the onset of problems regarding the mental health of veterans after war exposure. This study examined the relationships between the personality characteristics (the hardiness, the coherence, and the trait anxiety), the coping style, and mental health indicators (the level of perceived stress and anxiety levels) in the context of anticipating confrontation with a major stressful event, in order to determine if this (the hardiness, the coherence, the coping style, and mental health indicators) will have any effect on the higher levels of resilience on military service members deployed to Afghanistan. Data from 284 participants were analyzed. The participants were evaluated before attending international army operations. We proposed the following hypotheses: 1) the high levels of coherence and hardiness will be associated with effective management of major stress factors in the context of anticipatory stress; 2) the active coping which focused on stressors will be associated with lower levels of emotional distress. The present findings influence the development of innovative and efficient psychological interventions designed for army personnel.

Key words: Hardiness; Anticipatory stress; Emotional distress; Soldiers; Pre-deployment phase.

Correspondence concerning this article should be addressed to Iulia C. Giurcă, Romanian Ministry of Defense, Bulevardul Camil Ressu 1, Bl.14 B, Sc 3, ap.79, sector 3, 031731 Bucuresti, România. Email: clarisagiurca@yahoo.com

In terms of global security, humans represent a very valuable resource for the military system (Gray, Kaiser, Hawksworth, Hall, & Barrett-Connor, 1999). The focus is not only to train polyvalent specialists capable of performing brilliantly in high risk activities, but also to develop soldiers who are able to adapt easily and quickly to different war environments, while also maintaining their operability for a long period of time. From a realistic point of view, each war differs in terms of its duration, intensity, and credibility of purpose and this makes it difficult to precisely determine the psychological price that veterans have to pay for their return (Larson, Highfill-McRoy, & Booth-Kewley, 2008). Hence, we decided to focus this research on ways in which such psychological price being paid by veterans at their return home from war could be prevented.

Given that the relationship between combat exposure and higher risk of mental health problems (Hoge, Auchterlonie, & Millikin, 2006), especially the risk of developing posttraumatic stress disorder (PTSD) symptoms (Kulka et al., 1990) is well documented, we sought to identify the factors involved in the psychological adjustment and mental health maintenance for military personnel selected and trained to be deployed in war zones of Afghanistan.

The deployment process, regarding exposure to war zones, consists of three phases: preparing for mission or pre-deployment phase, the combat missions itself, and returning home after fulfilling the mission or post-deployment phase. All these phases have their unique psychological challenges and each requires the use of specific coping strategies in order for the military personnel to adapt with minimal life disruption or to recover after a symptomatic period (Alim et al., 2008).

With regards to mental health, personality and psychosocial stress are considered topics of great interest due to their relevance in the etiology of a wide spectrum of disorders and diseases (Băban, 1998). In this study, we aimed to investigate how personality dimensions (coherence, hardiness, and trait anxiety) and the coping style influence mental health (state-anxiety and perceived stress) of the military personnel selected to be deployed in war zones of Afghanistan. Based on the fact that the exposure to combat is associated with anxiety, depression, and/or PTSD symptoms (Gray et al., 1999), we considered the presence of low levels of anxiety as an indicator of increased mental health.

We studied the relationships between these constructs in the pre-deployment phase, after the soldiers were selected and on completion of the training program, specifically designed to prepare them for combat exposure and enlightening them of the tasks ahead and the risks they will be taking. We used this period to collect data as it affords us the opportunity to properly identify soldiers who exhibit certain vulnerabilities (Larson et al., 2008), while adapting to specific war exposure rudiments. Identifying the challenges or difficulties in maintaining mental health contributes to the development of targeted intervention and prevention programs, based on the needs of the vulnerable military population, in order to prevent the loss of human resources due to psychological challenges.

In the late 70's, it was considered that the concept of stress was less useful than coping in explaining the interplay between humans and the environment (Lazarus, 1990), and consequently the concept of coping receives more interest in the psychological stress research, which gives insight in understanding the short and long term of adaptive effects, as well as the subjective state of good and mental health (Băban, 1998).

According to the transactional theory, coping is defined as "the cognitive and behavioral effort to reduce, master, or tolerate internal or external demands that exceed personal resources" (Lazarus & Folkman, 1984, p. 141). From the above mentioned definition, four essential features of coping can be highlighted: (a) cognitive processes and action play an important role in coping; (b) coping is always a process of transaction between the individual and the environment, so it involves continuous qualitative and quantitative changes of this report; it also involves an interrelation between coping, evaluation, and emotion; (c) coping distinguishes between adaptive innate mechanisms and adjustment mechanisms; and (d) emphasizes the existence of effective and less effective forms of coping. Furthermore, the coping process involves three phases: (a) anticipation (warning) phase is when the situation may be postponed or prevented, when the person can prepare in advance for the confrontation, when he/she can assess the "costs" of the confrontation; (b) the confrontation (impact) phase occurs when the response appears, when the situation is rede-

fined and re-assessed; and (c) the post confrontation phase is when the personal significance of what happened is analyzed.

Oftentimes, the anticipation phase is often more intense in terms of psycho-physiological reactions than the confrontation phase. This has resulted in shaping the so-called anticipatory stress. In those situations in which the anticipatory phase does not appear, psycho-physiological reactions may manifest after the confrontation (Lazarus & Folkman, 1986).

The hardiness concept was introduced by Kobasa (1979), as an individual variable that is crucial for stress resilience. Hardiness was defined as a personality mood, manifested at a cognitive, emotional, and behavioral level. These characteristics result from the perception of personal control, the value and significance of involvement, and from the perception of life changing events as stimulants. According to the author, hardiness has three characteristics: control, commitment, and challenge/stimulation. The control expresses the belief that the events can be controlled and influenced; this belief does not involve naive exceptions regarding a total control of events, rather, it involves the perception of personal skills to actively relate it to the environment, and to assume with responsibility their own fate. Commitment expresses the persistence and perseverance in goal achievement; it refers to the ability to believe in the importance of measures undertaken and to have a real interest in various life domains.

Challenge is a feature of hardiness derived from the perception that changes are a normal part of life, which can provide opportunities for personal development. Due to the cognitive flexibility and ambiguity tolerance, new experiences are sought and interpreted as stimulating and beneficial. Challenge is expressed as the tendency to think about the future.

In 1966, Rotter underlined that "a generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one's own behavior and its consequences might affect a variety of behavioral choices in a broad band of life situations" (p. 2) and explained the importance of locus of control. So, this orientation becomes a point of interest.

The sense of coherence was defined by Antonovsky (1987) as a global cognitive orientation that expresses the extent to which a person believes that: (a) the external and/or internal stimuli, encountered throughout life are explicable and predictable; (b) he/she has the resources to cope with different demands; and (c) each request has a meaning and a purpose, so the involvement and investment of effort is justified. The relationship between stress, coping, and mental health was first discussed by Antonovsky in the book titled "Health, stress and coping" (1979).

The sense of coherence was not conceptualized by the author as a personality trait in the classic sense of the trait concept. Despite the name, the sense of coherence does not cover the emotional aspect of personality. The sense of coherence is "essentially a cognitive characteristic that expresses how a person perceives, judges and interprets the world and himself" (Antonovsky, 1987, p. 17). Whether you call it emotion, belief, or a mental picture about the world and oneself, the sense of coherence is derived from the synthesis of the three features included in the definition: comprehension, control, and purpose.

Comprehension refers to the degree to which a person can understand and assign a meaning to the situation he or she is facing. The information generated by the situation is decoded at a cognitive level as being clear, structured, consistent and not chaotic, redundant, accidental, or not reasonable. A person with a sense of coherence anticipates future events due to their predictable character. Even when unexpected events occur, they can be explained and sequenced. Compre-

hension has to do with the desirability of the situation. Death, war, or failure may occur, but the person may find explanations to such occurrence.

Control is defined as a person's ability to identify his/her available resources while dealing with stressful events. The available resources refer not only to the personal capacities to cope with the situation; it also includes all the available resources at one's disposal in case of need: husband/wife, friends, colleagues, divinity, doctor, organization, and so forth. Provided that the individual can identify his/her personal and social resources, he/she would not fall a victim of fate, even if the experienced events have negative personal meanings.

The purpose refers to the perception that the final is required or desired. The purpose emphasizes the importance of individual involvement in decision making and in everyday situation, or in those that determine personal destiny. Events to be included in the category of those with perceived purpose tend to be seen as exciting and worthy of commitment. This does not mean losing someone close, being fired, obeying surgery events are perceived as exciting by a person with a sense of coherence. For such a person, it becomes important to take into account all efforts in order to deal with the unwanted situation and overcome it. If the first two components aim at cognitive characteristics of the construct, the last one is a motivational element of it (Antonovsky, 1991).

The current study aims to investigate how personality characteristics (coherence, hardiness, and trait anxiety) and coping style influence mental health (state anxiety and perceived stress) of the military personnel to be deployed in the war theatre. The hypothesis of the present research are: 1) the high levels of coherence and hardiness will be associated with effective management of major stress factors in the context of anticipatory stress; 2) the active coping which focused on stressors will be associated with lower levels of emotional distress.

METHOD

Participants and Procedure

The participants in this cross-sectional study are from a Romanian Battalion, nominated to participate in a combat mission in Afghanistan. Their mission is to maintain the freedom of movement in the area of responsibility and to contribute to the achievement of peacekeeping operation goals. The soldiers from this battalion are from several branches — infantry, artillery, engineering, nuclear biological and chemical defense (NBC), transmission, intendancy, automobile troops, and so forth — and all hierarchical categories — officers, non-commissioned officers, warrant officers, and enlisted personnel. In the study, we included only those participants who gave their verbal consent to participate in the study after they received the necessary information regarding the study.

This study involved 326 soldiers, but we only analyzed data from 284 participants in the study. The average age of the participants is $M = 30.79$, $SD = 5.81$. The questionnaires of 42 soldiers were excluded from the analysis due to the large number of missing responses. From our final sample ($N = 284$), 50% of the participants reported being married, while 37.8% indicated that they were unmarried, and 12.2% gave no answer.

Most of the respondents (46.2%) stated that this was their first deployment, 16.3% indicated that they had been deployed in one combat mission before this, 19.4% said they had partic-

ipated in two missions in war zones, 2.8% said they had previously participated in three of such missions, and 4.9% indicated that they had participated in four international combat missions (for the deployment history category, there were 10.4% of non-responses).

Regarding socio-professional category, we obtained the following distribution of frequencies: 7.3% stated that they are officers, 30.6% reported being non-commissioned officers, 1.7% indicated that they are warrant officers, and 47.6%, reported that they are enlisted personnel (for socio-professional category, there were 12.8% non-responses). Additionally, we collected demographic data regarding age, number of children, and educational level.

Participants filled in the questionnaires 30 days before deployment to Afghanistan, after finishing the training program specifically designed to prepare them for combat exposure. The military personnel that took part in the study were gathered into a briefing room where they received the questionnaires battery and instructions on how to fill in the tests. Before filling in the questionnaires, the participants have been informed about the confidentiality of the data to be collected.

Instruments

In order to verify the research hypotheses, we used self-reports. We gathered data on the personality characteristics (hardiness, coherence, trait anxiety), and data on coping strategies used for anticipating confrontation with major stressors, as well as data on emotional distress levels (levels of anxiety and levels of the perceived stress).

To evaluate the coherence, we used the Sense of Coherence Questionnaire, tool developed by Antonovsky in 1987 (adapted in Romania by Băban, 1998) to reflect the subjects' beliefs about life, people, and themselves. The questionnaire contains 29 items, measured on a 7-point Likert scale (1 = *never have this feeling*, 7 = *always have this feeling*), 23 of them having a reverse listing. The final score may be between 29 and 203, with the upper limit of the range indicating a high level of coherence. The author reports a good internal consistency of the questionnaire, with alpha coefficients ranging between .84 and .93 (Băban, 1998). Cronbach's alpha obtained in the current study is .84, thus, this instrument has a good internal consistency.

Hardiness was assessed using the Dispositional Resilience Scale, a tool developed in 1989 by Bartone and adapted in Romania by Băban (1998). The scale includes 45 items that measure cognitions about the person's abilities to actively relate to a constantly change environment; respondents must choose one of four possible answers (ranging from 1 = *completely untrue* to 4 = *completely true*) depending on their stand with the provided statement. Total scores can range between 45 and 180 points and are obtained, after reversing the reverse items, by summing across the scores for the 45 items. The high score indicates the presence of hardiness on the part of the evaluated participants. Cronbach's alpha reported by the author of the test is .85 (Băban, 1998), and in this study, an alpha coefficient of .80 was obtained, indicating a good internal consistency of the instrument. The Dispositional Resilience Scale has been used extensively in U.S. military and non-military samples, with excellent results obtained (Bartone, Ursano, Wright, & Ingraham, 1989).

To assess the coping, we used the COPE questionnaire, developed by Carver, Scheier, and Weintraub in 1989, adapted by Băban (1998), which measures 14 coping strategies that may be predominantly active or passive: active coping, planning, elimination of competing activities, action retention, searching for instrumental social support, searching for emotional social support,

positive reinterpretation, acceptance, denial, emotional discharge, religious orientation, mental passivity, behavioral passivity, and use of alcohol and drugs. The questionnaire contains 53 statements; each form of coping was assessed using four items except for resorting to alcohol-medication coping which is measured by a single item. Each item has four possible answers (where 1 = *not usually do this*, and 4 = *often do*); the author reported that the range of internal consistency coefficients for this questionnaire scale is between .62 and .92 (Băban, 1998). In this study, the internal consistency coefficients of this scale are between .48 and .86, highlighting the fact that the reliability of coping scales varies from low to very good. But as Băban reported, lowland moderate allegiances are specific to most of the coping subscales due to the reduced number of items. Because of this, the lower Cronbach's alpha values were considered acceptable in this context.

In order to assess the state and trait anxiety, we used the State-Trait Anxiety Inventory, a tool developed by Spielberger, Gorsuch, Lushene, Vagg, and Jacobs (1983), and adapted in Romania by Băban (1998). The scale includes 40 items, from which 20 items assessed state anxiety (X1) and the remaining 20 items measured trait anxiety (X2). The psychometric properties reported for this instrument are very good (α = .95). In this study, Cronbach's alpha for X1 is .87 and for X2 is .83.

The psychological symptoms shown in the context of anticipating confrontation with a major stress factor were measured with Perceived Stress Questionnaire, created by Levenstein et al. in 1993 (adapted by Băban, 1998). The scale includes 30 items (each with four possible answers, where 1 = *almost never have this condition*, and 4 = *almost always feel the same*) that describe the possible emotional and mental reactions to requests that exceed the response capabilities of individuals. The scores for this tool can vary between 30 and 120 points, so the final score is computed by reversing eight items. Cronbach's alpha obtained in this study is .86, indicating a good level of internal consistency.

Results

Agglomerative hierarchical cluster analysis type (the complete connection method was used as the criteria for grouping data in terms of hardiness, coherence, coping, trait anxiety, state anxiety, and perceived stress) revealed four distinct groups in our sample. Cluster analysis based on iterative partitioning, where the four groups identified above were used as initial cluster centers, validated and improved the grouping solution for the data set. Following this procedure, all participants were distributed into one of four groups by maximizing the Euclidean distance of the cases to the cluster centers. Cluster analyses allow for adjustment process capturing when anticipating confrontation with a major stress (it is about pre-deployment), highlighting how including some levels of dispositional characteristics (coherence, hardiness, trait anxiety) with certain coping styles influences the mental health of military personnel.

In Table 1 we provided the descriptive statistics for each of the four clusters, where the data are used for calculating the average statistical distribution composed of four average values as measured in this study. For the sense of coherence, distribution was: M = 171.28, SD = 0.45; for hardiness: M = 137.57, SD = 10.76; for trait anxiety: M = 31.67, SD = 4.24; for active coping: M = 13.32, SD = 0.45; for planning: M = 13.82, SD = 0.26; for elimination of competing activi-

ties: *M* = 10.70, *SD* = 0.62; for action retention: *M* = 11, *SD* = 0.29; for searching instrumental social support: *M* = 12.91, *SD* = 0.32; for searching for emotional social support: *M* = 11.49, *SD* = 0.45; for positive reinterpretation: *M* = 13.37, *SD* = 0.29; for acceptance: *M* = 11.91, *SD* = 0.67; for denial: *M* = 6.45, *SD* = 0.83; for emotional discharge: *M* = 6.98, *SD* = 0.8; for religious orientation: *M* = 9.60, *SD* = 0.7; for mental passivity: *M* = 7.03, *SD* = 1.1; for behavioral passivity: *M* = 6.29, *SD* = 0.6; for state anxiety: *M* = 26.68, *SD* = 4.7; and for perceived stress: *M* = 43.76, *SD* = 6.05.

These data were used to calculate the standardized scores (see Table 1), useful in comparing the values of the different distribution because it is expressed in *SD* from the *M*. Standardized scores allow comparison of these groups based on the measured variables.

TABLE 1
Descriptive statistics values and the standardized scores of the variables measured in this study

Variables	Cluster 1 (*N* = 35)		Cluster 2 (*N* = 70)		Cluster 3 (*N* = 119)		Cluster 4 (*N* = 60)	
	M	Score Z	*M*	Score Z	*M*	Score Z	*M*	Score Z
Sense of coherence	154.00	–1.23	176.41	0.36	187.07	1.12	167.65	–0.25
Hardiness	125.97	–1.07	131.90	–0.52	150.19	1.17	142.22	0.43
Trait anxiety	37.54	1.38	31.93	0.06	27.95	–0.87	29.28	–0.56
Active coping	12.69	–1.39	13.73	0.89	13.55	0.50	13.32	–0.005
Planning	13.46	–1.36	14.09	0.99	13.93	0.39	13.82	–0.01
Elimination of competing activities	11.00	0.47	11.40	1.11	9.97	–1.16	10.43	–0.42
Action retention	11.34	1.13	11.16	0.52	10.71	–0.98	10.80	–0.68
Searching for instrumental social support	12.89	–0.06	13.36	1.40	12.61	–0.93	12.78	–0.40
Searching for emotional social support	11.26	–0.51	10.97	–1.15	11.84	0.76	11.90	0.90
Positive reinterpretation	13.00	–1.27	13.61	0.81	13.60	0.77	13.28	–0.31
Acceptance	11.94	0.44	11.84	–1.03	11.99	1.17	11.87	–0.58
Denial	7.46	1.20	6.71	0.30	5.50	–1.14	6.15	–0.36
Emotional discharge	8.11	1.40	7.01	0.03	6.47	–0.64	6.35	–0.79
Religious orientation	10.63	1.34	8.96	–0.83	9.73	0.16	9.08	–0.67
Mental passivity	8.26	1.11	7.67	0.57	6.01	–0.92	6.20	–0.75
Behavioral passivity	7.23	1.40	6.31	0.02	5.81	–0.72	5.83	–0.69
State anxiety	32.83	1.30	27.37	0.14	21.70	–1.05	24.83	–0.39
Perceived stress	51.20	1.22	45.73	0.32	37.26	–1.07	40.85	–0.48

Cluster 1: Vulnerable Soldiers
(Use Passive Coping Strategies with Emotional Discharge and Denial)

The soldiers from this cluster showed the lowest levels for sense of coherence and hardiness (–1.23 and –1.07 *SD* below average, respectively), they had the highest levels of trait anxiety (1.38 *SD* above the *M*), and do not rely so much on active coping strategies when confronted with stressful situations (active coping, planning, positive reinterpretation being at –1.39, –1.36, –1.27 *SD* below average, respectively). Instead, these individuals experienced the highest level of emotional distress (perceived stress level is located at 1.22 *SD* above the *M* and the levels of state anxiety hovering at 1.30 *SD* above average) and often employ passive coping strategies when faced with stressors (coping by action retention, mental passivity, behavioral passivity are at 1.13, 1.11, and 1.40 *SD* above the *M*, respectively).

Furthermore, soldiers from this group rely more frequently on coping with emotional discharge (located at 1.40 *SD* above average) and they also make use of denial as a coping strategy (located at 1.20 *SD* above the *M*) in order to adjust to stress. However, when confronted with stressful situations, these people do not seek any instrumental social support (located at –0.06 *SD* below average), or emotional social support (located at –0.51 *SD* below average), but are instead religiously oriented (located at 1.34 *SD* above average). In their attempt to reduce distress, soldiers from this group use coping by the elimination of competing activities from their environments (located at 0.47 *SD* above the *M*) and coping using acceptance (located at 0.44 *SD* above the *M*).

Cluster 2: Functional Soldiers (Use Active Coping)

In this cluster we included soldiers who reported using active coping strategies most of the time to deal with stressors (active coping, planning, elimination of competing activities, positive reinterpretation, with 0.89, 0.99, 1.11, 0.81 *SD* above the *M*, respectively), moderately coping with action retention (located at 0.52 *SD* above the *M*), but at the same time reporting moderate levels of emotional distress (perceived stress hovering at 0.32 *SD* above the *M* and state anxiety hovering at 0.14 *SD* above the *M*). These individuals reported the presence of moderate levels of trait anxiety (located at 0.06 *SD* above average), low levels of hardiness (located at –0.52 *SD* below average), and moderate levels of sense of coherence (located at 0.36 *SD* above the *M*).

However, these people oftentimes make use of coping strategies comprising the search for instrumental social support (located at 1.40 *SD* above the *M*), but used least frequently coping with emotional social support (located at –1.15 *SD* below average) and religious oriented coping (located at –0.83 *SD* below average). In an attempt to reduce the level of emotional distress, soldiers from this group used moderately passive coping strategies (coping with mental passivity, denial, behavioral passivity, and emotional discharge located at 0.57, 0.30, 0.02, 0.03 *SD* above average, respectively).

Cluster 3: Resilient Soldiers (Use Preventive Coping)

Soldiers from this cluster reported the highest levels for sense of coherence and hardiness (located at 1.12 and 1.17 *SD* above the *M*, respectively), but also the lowest levels of trait anxiety (located at –0.87 *SD* below average), perceived stress (located at –1.07 *SD* below average), and state anxiety (being at –1.05 *SD* below average). These people use with moderate frequency active coping in dealing with stressors (active coping hovering at 0.50 *SD* above the *M* and coping with planning being at 0.39 *SD* above average). But they tend not to use action retention (this coping strategy being at –.98 *SD* below average) and searching for instrumental social support (located at –.93 *SD* below average) as coping strategy in stressful situations.

Instead, soldiers from this group largely used coping strategy of acceptance (located at 1.17 *SD* above the *M*), positive reinterpretation (located at 0.77 *SD* above average), and searching for emotional social support (located at 0.76 *SD* above the *M*). Religious orientation was used at a moderated frequency (located at 0.16 *SD* above the *M*). At the same time, they used denial (located at –1.14 *SD* below average) and emotional discharge (located at –0.64 *SD* below average) as emotional coping strategies to a lesser extent. However, these individuals used passive coping strategies to a lesser extent (like mental and behavioral passivity, located at –0.92 or –0.72 *SD* below average, respectively), but also elimination of competing activities (this coping strategy being at –1.16 *SD* below average).

Cluster 4: Soldiers who Are in the Process of Adjusting to Stress
(Use Emotional Social Support)

People from this cluster reported a lower level of emotional distress (perceived stress is located at –0.48 *SD* below average and state anxiety being at –0.39 *SD* below average), lower levels of trait anxiety (located at –0.56 *SD* below average), a lower level of sense of coherence (located at –0.25 *SD* below average), and a moderate level of hardiness (located at 0.43 *SD* above average). The military from this cluster use less often, as compared to soldiers from Clusters 2 and 3 but more than those in Cluster 1, active coping strategies (active coping, planning, positive reinterpretation located at –0.005, –0.01, –0.31 *SD* from the *M*, respectively). At the same time, compared with those from Clusters 1 and 2, soldiers in Cluster 4 used less emotionally coping strategies (emotional discharge and denial located at –0.79 and –0.36 *SD* below average, respectively), but used coping strategies more often in searching for emotional social support (located at 0.90 *SD* above average).

When dealing with stressful situations, the soldiers from this cluster used religious orientation and searching for instrumental social support (these coping strategies are located at –0.67 and –0.40 *SD* below average, respectively) and used (similar to those in Cluster 3) passive coping strategies to a relatively small extent (mental passivity and behavioral passivity located at –0.75 or –0.69 *SD* below average, respectively). At the same time, soldiers in Cluster 4, on the one hand, used coping by accepting the situation (located at –0.58 *SD* below average) to a lesser extent than those in Cluster 3 and, on the other hand, they used coping less often compared with those in Cluster 2 by the elimination of competing activities (located at –0.42 *SD* below average), and coping by action retention in dealing with stressors (located at –0.68 *SD* below average).

Chi square association test for independent samples revealed no significant associations between the four clusters and the demographic variables: marital status, Pearson $\chi^2(9) = 6.60$, $p = .67$; number of children, Pearson $\chi^2(9) = 7\ 91$, $p = .54$; deployment history, Pearson $\chi^2(12) = 7.14$, $p = .84$; educational level, Pearson $\chi^2(9) = 8.93$, $p = .44$; socio-professional category, Pearson $\chi^2(12) = 15.45$, $p = .21$. Also, the one-way ANOVA revealed no significant age differences in the four groups resulting from the cluster analysis, $F(3, 251) = 0.89$, $p = .44$.

Discussion

Recent studies show that the number of soldiers who seek and make use of mental health services is higher among those who were deployed to war zones (Hoge et al., 2006). The major psychological problems that these individuals face on their return home are acute stress disorders and PTSD (Larson et al., 2008). Based on this, we decided to analyze the most frequent coping mechanisms used by military personnel to preserve mental health.

Bearing this in mind as a starting point for our study, we focused on investigating how personality characteristics of military personnel like coherence, hardiness, and trait anxiety are associated with the management of the major stressor factors in the context of anticipatory stress. Furthermore, we investigated how the coping styles of military personnel are associated with mental health.

The decision to focus on the prevention is based on the need for us as psychologists to identify the vulnerable individuals as they reported difficulties in seeking mental health care due to concerns of possible stigmatization (Hoge et al., 2004). Our results revealed the existence of four distinct groups (four clusters) differentiated by the psychological adjustment in the context of anticipating confrontation with a major stress factor — in the pre-deployment phase.

The largest group, the Cluster 3, "resilient soldiers," includes military with the highest levels of coherence and hardiness and the lowest levels of trait anxiety. These personality traits are associated with the lowest levels of emotional distress. The soldiers of this group reported using to a large extent acceptance, positive reinterpretation, and searching for emotional social support as coping strategies. However, these people use the passive coping strategies and elimination of competing activities to a very small scale. They do not search for instrumental social support, they do not show mental and/or behavioral passivity, and do not use denial. The lack of using search for instrumental social support as a coping strategy can be explained by the time interval used for data collection. This coping strategy is more useful for the military personnel in the post-deployment phase, in the process of social and family reintegration (Kuterovac-Jagodic, 2003). The typology described by this cluster is the one desired by all the military personnel that are selected to be involved in combat missions in war zones of Afghanistan.

An interesting note is evidenced in Cluster 4, "soldiers who are in the process of adjusting to stress." In this cluster there are persons who, by default, have a low sense of coherence and moderate hardiness, lower level of trait anxiety and emotional distress. The most frequently used coping strategy is the search for emotional social support and this group uses this coping strategy the most. Unlike those in Cluster 3, the so called "resilient soldiers," in the process of adjusting to stress and despite individuals in this category rely less often on active coping strategies, they still do not use emotional discharge and denial as coping mechanisms.

Since it has been shown that exposure to combat is a significant predictor of PTSD development (Dedert et al., 2009) and while there are studies that show that social support play a crucial role in preventing and/or improving the symptoms of PTSD (Kuterovac-Jagodic, 2003), the military constituting this cluster have, through frequent search for emotional social support as a coping strategy, an important resource for maintaining mental health in the long term. However, in our opinion, it is important for them to receive support in order to optimize the use of active coping strategies, as planning and positive reinterpretation of the situations, in order to facilitate a quick adjustment to stress.

On the reverse, we have the military personnel, seen as "vulnerable soldiers," grouped in Cluster 1. They had the lowest levels of sense of coherence and hardiness and the highest level of trait anxiety and emotional distress. A characteristic of this group has been that oftentimes they use passive coping strategies, emotional discharge, and denial coping. Furthermore, they did not seek instrumental and emotional social support. In their attempt to reduce distress, soldiers from this group often used religious orientation, elimination of competing activities, and acceptance coping strategies. Active coping strategies, such as active coping, planning, and positive reinterpretation, were not frequently used.

Frequent use of dysfunctional coping strategies can be associated with long term adjusting difficulties. After combat exposure, military personnel reported repeatedly feeling aroused, vigilant, often irritable, dealing with insomnia, and an increased startle response (Southwick et al., 1993). In reality, these symptoms cannot be diminished through the use of emotional discharge or denial as coping strategies.

Moderate sense of coherence, low hardiness, moderate trait anxiety, and emotional distress were associated with personnel from Cluster 2. This cluster is represented by "functional soldiers." The soldiers from this group are the ones that use active coping strategies very frequently, such as planning, elimination of competing activities, and positive reinterpretation. In the psychological adjustment to stressful situations, the focus is on searching for instrumental social support suggesting that these soldiers cope with stress by seeking information and asking for advice, but at the same time, they refrain from action. They do not apply searching for emotional social support or religious orientation coping strategies.

We suggest that the intervention or prevention programs, in this case, should focus on reducing the use of passive coping strategies, as mental or behavioral passivity and denial strategies, that are used by this category at a moderate level. By analyzing the four clusters, we can conclude that soldiers who evaluate life situations as having sense and significance, and as being under control and influence, appeal mainly to preventive coping when they anticipate a situation with major stress impact. Acceptance, positive reinterpretation, searching for emotional and/or instrumental social support are among the most frequently used coping strategies by soldiers who report the lowest levels of emotional distress.

In other words, soldiers with positive convictions about themselves and the world and who mostly use functional coping strategies, such as active coping, report lower levels of emotional distress in the context of preparing for deployment in war zones. Also, they have the ability to interpret major stress situations as contexts for growth and personal development.

This research has some limitations. One limitation is that it explores the association between the variables (hardiness, coherence, state anxiety, coping, and emotional distress), but it does not test the causal relationships between the above-mentioned variables. Future studies

should address this issue, given their importance. Another important limitation is that the participants involved in this study were self-selected volunteers, and we could not collect data from the entire cohort assigned to be deployed. Also, we only examined self-report data in this research which has its limitations.

In conclusion, the study results provide an interesting person-centered approach, because the participants in this study were grouped into four clusters according to their dispositional characteristics, type of coping used when dealing with stressful situations, and their mental health status. All these information can be used in shaping a targeted program, based on the vulnerabilities that may appear during war exposure, in order to prepare military personnel to deal with both tasks they have to fulfill and the psychological risks they will be taking during deployment.

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