Personality Factors as Determinants of Coping Resources among Indian Air Force Officers

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ABSTRACT

Officers personality traits define he/she will respond in different situations. Officers in the Indian Air force face a variety of hazards in day to day life. To face these hazards they use different coping styles which in turn influence their performance. No studies have been conducted in the Indian Air force scenario on coping styles of officers. Indian Airforce officers (N=303) undergoing course at Institute of flight safety took part in this study. They were administered CRI (coping resource inventory) of 60 items and NEO-PIR of 260 items by the first author. The present study revealed a significant correlation between personality factors and coping styles of officers. Regression analysis predicted Extraversion and Neuroticism affected the coping resources among the officers.

Keywords: Personality factors, Coping resources, Indian Air Force, Neo-PIR

Coping processes have been the focus of intensified research, with earlier conceptualisations often equating it with coping styles. It was felt that individuals usually relied exclusively on one characteristic strategy (such as denial, positive thinking, or direct action) in coping with stresses. Lazarus and Folkman (1984) made it clear that people use a wide range of coping strategies and the particular coping mechanism chosen in a given situation depends on a variety of demands and opportunities of the situation (McCrae,1984).

Coping has remained a key feature of stress research. Various studies have shown that coping can reduce the intensity of stress. Coping is an individual effort to meet the demands of a situation. `The psychological coping capacities referred to by the coping resource construct as defined by Hammer (1988) are Cognitive, Social, Emotional, Spiritual and Physical. Cognitive resources refer to the extent to which individuals maintains a positive sense of self-worth, a positive outlook towards others, and optimism in general. Social resources are the degree to

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which individuals are embedded in a social network able to provide support in times of stress. Emotional resource is the degree to which individuals are able to accept and express a range of affect, aiding the amelioration of long term negative consequences. Spiritual resource is the degree to which actions of individuals are guided by stable and consistent values such as those derived from religious, familial or cultural traditions or personal philosophies. Physical resources are the degree to which individuals enact health-promotion.

Coping Resources of Air Force Personnel

Serving military personnel have a constant threat to life and limb. Persevering under stress of unfamiliar tasks and situational demands of combat or alternately, mental breakdown under enemy fire, is determined by a complex interplay of many factors, coping resources being one such vital aspect (Milgram, 1991). Hence, it is important to understand coping resources of combat veterans operating under stressful conditions in military environment. In the present study, dimensions of coping resources include cognitive, social, emotional, spiritual and physical coping resource.

Majority of studies have demonstrated the factors that help military personnel to adjust to stressors of combat which include rigorous military life and training (Bartone, 1996; Csikszentmihalyi, 1975; Fontana & Rosenheck, 1998; Fotion & Elfstrom, 1986; Schnurr, Rosenberg, & Friedman, 1993), positive cognitive appraisal (Aldwin et al., 1994; Dohrenwend et al., 2004; Jennings et al., 2006) and higher cognitive skills (Gibertson, McNulty cited in Winerman, 2006), keeping focused and fostering self worth (King, Vogt, Knight, & Samper, 2006; Moore, cited in Munsey, 2006), personality factors like ideological commitment (Kanagaratnam, Raundalen, & Asbjornsen, 2005), beliefs and attitude (Britt, Castro, & Adler, 2005; Day & Livingstone, 2001; Kraaij & Garnefski, 2006; Marsella & Scheuer, 1995), fighting spirit (Hautamaki & Coleman, 2001), resilience and optimism about life (Seudfeld, 1997). Unit cohesion has a moderating effect on relation of stress observed at individual soldier level (Bartone & Kirkland, 1991; Hunt & Phillips, 1991; Jacobs & Jaques, 1991; Lau, 1998; Manning, 1991; Salas et al., 1998). It is reported that soldiers in life threatening danger are likely to gain solidarity and cohesiveness; shared danger enhances common bond and develops strong sense of belongingness amongst troops.

Research evidence states that military personnel may have a tolerance for ambiguity and work overload due to nature of their postings and regular changes in job and geographical locations. It is reported that heavy workload is considered a challenge to military personnel who work as a team and a combination of positive affect, hard work, physical fitness, and esprit-de-corps may well provide buffer against work stress (Beehr, 1976; Plumridge & Brown, 2001; Watson, Clark, & Tellegen, 1998). Vickers, Kolur, and Hering (1990) studied personality correlates of coping resources in military personnel. It has been found that conscientiousness is related to problem solving orientation to stress, while neuroticism is related to negative self-evaluation and wishful thinking in response to stress. However, Desmond and MacLachlan (2006) studied coping

strategies of U.K. veterans and reported that coping styles were important predictors of psychological adaptation. It has been found that avoidance is strongly associated with psychological distress and poorer adjustment. The researchers reported that seeking social support is negatively associated with symptoms of depression and positively associated with social adaptation. Similarly, in a study by Peterson, Seligman, and Vaillant (1988) on difficulties experienced by World War II combat veterans, it has been found that those with internal pessimistic style of coping with no apparent hope for escape resulted in poorer health than those veterans who described negative experiences of war with reference to external factors.

Military research based studies have demonstrated that social identity plays an important role in protecting group members from adverse reactions to stress since it provides a basis for group members to receive and benefit from social support. These research studies have reported that there is a strong positive correlation between social identification and both social support and lifestyle. There is also a strong negative correlation between social identification and stress (Bartone, 2006; Sohilberg, cited in Selye, 1980). Gruber (2004) studied relationship between psychosocial coping resources, stress and task completion during military training. The researcher concluded that soldiers with high psychosocial coping resources of social support, mattering, and self-efficacy were likely to perceive less stress than soldiers with less psychosocial coping resources.

George and Verma (2010) studied the relationship of risk perception and safety attitudes of IAF fixed wing pilots. A sample of 130 pilots were asked to complete a demographic data sheet and three questionnaires; Aviation safety attitude scale (Hunter, 1995), risk perception (other) scale(Hunter,2006), and Hazardous event scale (Hunter,1995). The results showed high level of self-confidence was significantly associated with decreased delayed, nominal and immediate risk perception.

A large body of research on combat veterans demonstrates that problem-focused and non-avoidant coping has been associated with better emotional functioning (Clemons, 1996; Watson & Pennebaker, 1989; Watson et al., 1998; Wolfe, Keane, Kaloupek, Mora, & Wine, 1993). It has been indicated that meaning in one's life (Visotsky, Hamburg, Goss, & Lebovitz, 1961), sense of humor (Cousins, 1979; Moody, 1978), trust in others (Barefoot et al., 1998), and religion (Contrada et al., 2004; George, Ellison, & Larson, 2002) have all been suggested as internal coping resources that may deal with stress. Hence above studies indicated that Air Force personnel coping resources includes family support, unit cohesion, teamwork, training and military leadership. Hence CRI was an appropriate tool to assess the coping styles of officers and NEO-PIR as determinants of personality factors.

Rationale

Limited studies have been conducted on coping styles of Air force personnel globally. No studies have been conducted on coping styles of officers using CRI to see what personality factors (using NEO-PIR) determine their affects.

Aim

- To study the correlation among personality factors which determine the effects on coping resources of officers of the Indian Air Force.

Hypotheses

H 1 There will be significant relationship between personality factors and coping resources among officers of the Indian Air force.

H 2 The personality factors will predict the affect of coping resources among officers of the Indian Air Force.

METHOD

A cross sectional and correlational design was used in the present study

Participants

This study evaluated Indian Air Force officers who were attending a course in the Institute of Flight Safety. There were 303 participant officers. All participants were males. The officers were in the age range of 22-51 with the mean age being 35.45 and SD being 6.

Measures

Coping with resources. (Marting, Hammer 1988, 2004)

The Coping Resources Inventory (CRI) measures five basic ways people handle stress. For counsellors, the CRI can help clients recognize or bolster their coping resources, which in turn can help them minimize the impact of change and stress in their lives. For researchers, this is an efficient and valid measure of coping. The CRI may be administered to individuals or to groups and was found appropriate for a wide range of ages. The instrument has been administered to people of fourteen to eighty-three years of age. The inventory can normally be completed in about ten minutes. The ranges and median correlations indicate that the development procedures for the CRI were successful in achieving fairly good homogeneity of item content per scale. The obvious exception is the physical item "I am tired ", whose correlation is .11 with the rest of the scale. This item, however, correlated .29 and .40 with the physical scale score in the adult and college student samples, respectively. The low correlation comes from the high school sample (N= 242) where the corrected item-to-scale correlation was r = -.26.

NEO-PIR (Costa and Mc Crae, 1985, 1992)

The NEO-PIR was used to study the five main personality domains which include Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. The NEO-PIR with 240 questions was used in this study. The internal consistency information of the NEO presented in the manual was derived from the full job performance sample (n=1,539). The internal consistency of the facet scales ranged from .56-.81. The internal consistency of the NEO-PI-3 was consistent with that of the NEO-PI-R, ranging from α=.89-.93 for domains and α=.54-.83 for facets.

RESULTS

The descriptive and inferential statistics i.e. mean, standard deviation, correlation and regression were used to test the hypotheses.

Table 1 : Mean scores of officers coping resources and Personality factors.

Variable	Mean	SD
Cognitive	30.95	3.12
Social	41.08	4.91
Emotional	46.58	6.68
Spiritual	32.58	4.86
Physical	32.65	4.66
Neuroticism	75.02	18.69
Extraversion	118.44	16.96
Openness	110.81	15.49
Agreeableness	117.55	14.89
Conscientiousness	125.19	19.46

The mean scores of officers in table 1 on coping resources was low on cognitive resources (30.95) , where as emotional resources (46.58) was higher. The mean score of personality factors was higher on Conscientiousness (125.19) and low on Neuroticism (75.02)

Table 2: Correlations between personality factors and coping resources (n=303).

Variables	N	EX	O	A	CN	COG	SOC	EMO	SP	PHY
N	1									
EX	**-0.524****	1								
O	**-0.331****	**0.569****	1							
A	**-0.533****	**0.325****	.351**	1						
CN	**-0.644****	**0.561****	.259**	.437**	1					
COG	**-0.190****	**0.217****	.087	-.011	.233**	1				
SOC	**-0.289****	**0.407****	.277**	.095*	.202**	.300**	1			
EMO	**-0.160****	**0.239****	.155**	-.059	.199**	.408**	.543**	1		
SP	-0.38	0.083	0.083	-.020	.170**	.355**	.308**	.351**	1	
PHY	**-0.293****	**0.188****	0.076	0.057	**0.316****	**0.247****	**0.364****	**0.306****	**0.244****	1

N=Neuroticism,Ex=Extraversion,O=OpennessA=Agreeableness,CN=Conscientiousness, COG= Cognitive, SOC=Social, EMO=Emotional, SP=Spiritual, PHY=Physical

The findings indicated that there was significant relationship between personality factors namely Extraversion, Conscientiousness, Openness, Agreeableness, Neuroticism and Coping resources such as Emotional, Social, Physical, Cognitive and Spiritual.

The correlations between the personality factors and coping resources at .05 and .01 levels of significance, showed that Neuroticism has significant negative correlation ship with all the factors of personality and coping (Ex -.52, O -.33, A -.53, CN -.64, S -.19, E -.16 and PH -.29), whereas spiritualism is not significantly correlated (SP -.03) with Neuroticism. Extraversion has significantly positive correlation with openness (.56), conscientiousness (.56), cognitive (.21), social (.40), emotional (.23), and physical factors (.18), whereas spiritualism is not significantly correlated (.08). Openness has significantly positive correlation with agreeableness (.35), conscientiousness (.25), social (.27) and emotional factors (.15) whereas cognitive (.08), spiritual (.08) and physical factors (.07) are not significantly correlated. Agreeableness has significantly positive correlation with conscientiousness (.43), social (.09) and physical (.05) factors where as there is negative but not significant correlation with cognitive (-.01), emotional (-.05), spiritual (-.02) resources. Conscientiousness has a significant correlation with all the coping factors like cognitive (.23), social (.20), emotional (.19), spiritual (.17) and physical (.31).

Table. 3. Regression Results of Personality Factors with Cognitive Coping resources among Officers

Predictors	Beta	Sig	F	R^2	Adj R^2
Neuroticism	-2.6	.60	5.97		
Extraversion	-.94	**.01****			
Openness	.39	.13		.14	.12
Agreeableness	.36	.24			
conscientiousness	-1.16	**.00****			

As shown in table 3, these findings show that Extraversion and Conscientiousness personality factors are significant predictors of cognitive coping resources. This variance has been explained as 14%.

Table. 4. Regression Results of Personality Factors with social coping resources among Officers

Predictors	Beta	Sig	F	R^2	Adj R^2
Neuroticism	-0.1	.97	7.30		
Extraversion	1.60	**.00****			
Openness	-.33	.15		.16	.14
Agreeableness	-.28	.30			
Conscientiousness	.35	.23			

As shown in table 4, the results indicate that extraversion and conscientiousness significantly predicted social copying resources in officers. These personality factors accounted for 14% variance.

Table. 5. Regression Results of Personality Factors with emotional coping resources among Officers

Predictors	Beta	Sig	F	R^2	Adj R^2
Neuroticism	-.52	.24	2.83		
Extraversion	.81	**.01****			
Openness	-.07	.74		.07	.04
Agreeableness	.39	.15			
Conscientiousness	-.02	.92			

Table 5 shows that, out of all five personality factors in officers, only extraversion (.81) is a significant predictor of Emotional coping resource, which explains 7% of variance.

Table. 6. Regression Results of Personality Factors with spiritual coping resources among Officers.

Predictors	Beta	Sig	F	R^2	Adj R^2
Neuroticism	.04	.94	3.96		
Extraversion	.23	.56			
Openness	-.06	.83		.10	.07
Agreeableness	.20	.56			
Conscientiousness	1.12	**.00****			

In table 6, the finding shows that conscientiousness personality factor is significant predictors of spiritual coping resources in officers, which is explained by 10% variance.

Table. 7. Regression Results of Personality Factors with physical coping resources among Officers

Predictors	Beta	Sig	F	R^2	Adj R^2
Neuroticism	.06	.88	1.10		
Extraversion	.24	.44			
Openness	-.45	**.04***		.03	.00
Agreeableness	.14	.59			
Conscientiousness	.29	.30			

As shown in table 7 only Openness personality factor is a significant predictor of physical coping resource in officers, which is explained by 3% variance. As was hypothesized, personality factors are affected by the coping resources of personnel was found to be true. Though it does not affect it very significantly.

DISCUSSION

It was found that personality does influence the coping resources in different ways. Therefore it is of prime importance to see the predictions of personality factors on the coping resources of officers. The results of regression analysis showed that the prediction of Neuroticism being affected by coping resources is 14%, Extraversion is 16% and Agreeableness is 10%.

This means that extraversion, openness and agreeableness affect the coping resources of officers. Studies which support these findings are by Dillinger, Wiegmann and Taneja. They studied personality and related it with stress coping strategies among student pilots in a collegiate programme (2003). They found personality characteristics were differently and significantly related to specific stress coping strategies adopted by student pilots. This means that the personality factors are affected to some extent due to seniority of experience and situations.

Our findings are further supported by studies showing strong positive correlation between social identification, social support and lifestyle and negative correlation between social identification and stress (Bartone, 2006; Sohilberg, cited in Selye, 1980). Gruber (2004) assessed the relationship between psychosocial coping resources, stress and task completion of military training soldiers and found that soldiers with high psychosocial coping resources of social support, mattering, and self-efficacy were likely to perceive less stress than soldiers with less psychosocial coping resources.

Tshabalala (2011) investigated how air traffic controllers cope with stress and also found out whether there were statistically significant differences in the coping behaviours of air traffic control staff from different groups. The coping resources inventory (CRI) assessment was used to collect data and analysed to determine how controllers cope with stress and whether there were differences in the coping behaviour of air traffic control staff from different groups. The results showed that air traffic controllers use emotional coping resources to cope with stressful work situations and make less use of cognitive coping resources. The results also showed that there were no statistically significant differences in the coping behaviour of air traffic control staff from different groups.

From the Lazarus and Folkman perspective (Lazarus, 1983; Lazarus & Folkman, 1984), Alkov and colleagues suggested that young aggressive Naval aviators, forced into emotion focused coping, are more likely to adopt externalizing or 'acting out' strategies likely to be manifested in interpersonal relationships problems (familial and job-related), rather than adopt internalizing coping strategies characterized by quiet anxiety and depression.

LIMITATIONS
The results are confined to the population of male individuals attending the course at Institute of Flight Safety (IFS). All the participants were graduates, their additional qualification were not taken into consideration. Marital status (married/unmarried/divorcee/widower) of participants have not been taken into consideration.

DIRECTIONS FOR FUTURE RESEARCH
Coping resources can be used more frequently by officers by being trained in crew resources management techniques (CRM).

CONCLUSION

Coping resources processes appear to play a significant role on development of personality. Findings of the present study point to possible expansions and refinements of the conceptual frameworks guiding mental health promotion personality research, as well as coping mechanism. Psychological safety may not be easily instilled through traditional CRM training, as this positive team or organizational climate needs to be established through the way people interact with each other over time on the basis of interpersonal trust and respect. A leader can help create a sense of psychological safety by the way they interact with their subordinates. Therefore, as a first step, it is suggested that CRM training should be used to make both leaders and their team members aware of the importance of psychological safety in promotion of speaking up. Then, with raised levels of self-awareness, team members and leaders together can slowly start to build and cultivate such a climate of openness and trust during their daily collaboration on board.

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