

# Post-traumatic stress disorder and Post-traumatic Growth among Police officials; Role of Coping Self Efficacy and Hope

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## ABSTRACT

**Background:** Post traumatic stress disorder in the after math of trauma is common. The objective of this study was to find correlation between Post-traumatic stress disorder and contributing factors of growth after trauma in active duty officials of police having direct exposure of trauma during war against terror in Pakistan.

**Methodology:** The cross-sectional study was done on active-duty police officials from Federally Administered Tribal Areas (FATA) of Pakistan in three years duration from Jan, 2019 till December 2021. Non probability purposive sampling technique was used for selection of participants. Post-Traumatic Stress Diagnostic Scale (PDS-5), short form of Comprehensive trauma inventory, Adult Hope Scale and Perceived coping self-efficacy scale were used for data collection. SPSS version 21 was used for data analysis. After descriptive analysis, correlation of variables was checked by Pearson correlation and moderation analysis was done.

**Results:** Age range of the participants was  $33.6 \pm 6.3$  years. There was a significant strong positive correlation of Hope and Perceived self-efficacy with Post traumatic growth and negative correlation with Post Traumatic Stress Disorder. There was a significant increase in post-traumatic growth in presence of hope and perceived self-efficacy.

**Conclusion:** Relationship between post-traumatic stress disorder and post-traumatic growth was moderated by perceived coping self-efficacy and hope.

**Keywords:** Hope, Post-traumatic Growth, Stress.

Authors' Contribution:

<sup>1</sup>Conception; Literature research;

<sup>1</sup>manuscript design and drafting; <sup>1,2</sup>Critical analysis and manuscript review; <sup>1,2</sup>Data analysis; Manuscript Editing.

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## Introduction

Adversities in life can be disruptive in nature and there can be considerable variation in psychological reactions to stressful and tragic events with responses ranging from mild psychological symptoms to severe psychological symptoms like

distress.<sup>1</sup> Important events that can be traumatic in nature and can leave long lasting effects on the exposed population are war, personal (violent) assault (e.g., sexual assault, and physical attack), being hostage or kidnapped, being in prison, torture, being victim of terrorist attack, exposure to severe car accidents and natural disasters. Post-traumatic

stress disorder (PTSD) is most common in the population exposed to tragic events.<sup>2</sup> Previous research showed that individuals who had higher exposure of trauma experience showed higher levels of distress. The level of distress can be measured by the severity of the symptoms like feeling of chronic sadness, worthlessness and loss of interest in interaction with other people.<sup>3</sup>

Traumatic exposure can be a precondition for severe psychological reactions like posttraumatic stress, but not all individuals who face trauma suffer from PTSD. Posttraumatic growth is also reported in aftermath of trauma.<sup>4</sup> Posttraumatic growth includes positive consequences like positive change in social interaction, like improved relationship with others, improvement in personal strength and self-assurance and an increased sense of appreciation of life and change in priorities of life. There are many studies which have reported post-traumatic growth in the survivors of trauma. Post-traumatic growth and PTSD may co-exist after trauma exposure. There are factors that can be positively associated with one out of the two outcomes but negatively with the other.<sup>5</sup>

Coping self-efficacy and Hope are important in aftermath of trauma. Coping self-efficacy is the belief that reflects control of personal actions and a personal and future view that is more optimistic.<sup>6</sup> After traumatic or tragic incidents, some individuals are more likely to find benefit and gains if they have strong self-efficacy and can avoid negative effects like post traumatic stress disorder.<sup>7</sup> Hope also plays a role between PTSD and PTG. Hope is a personal strength factor. This can prove a shield against post-traumatic stress disorder.<sup>8</sup>

Post-traumatic stress disorder development can be affected by the process adopted in face of adversities. Use of avoidant coping is linked with increased PTSD symptoms following a trauma, but on the other hand, use of active coping in relation with PTSD is equivocal.<sup>9</sup> Present study was conducted to investigate the underlying relationship between PTSD, War trauma and PTG

and to explain the role of coping self-efficacy and hope among active duty police officials who have participated in war against terror and were directly exposed to trauma.

Pakistan has played an important role in global war against terror and being front line state has faced effects of this war by conducting combined operations to remove insurgency from the tribal areas and from the whole country.<sup>10</sup> Pakistani police officials have played tremendous role along army in this war. The police troops present in federally administered areas of Pakistan remained closely engaged in combat. Police officials who participated in this war exhibited resilience in this war against terror, scarifying much more than any other police agency of any other country in the world.<sup>11</sup>

## Methodology

This cross-sectional study was conducted on active-duty police officials from Federally Administered Tribal Area (FATA) in 3 years duration (Jan 2019 to Dec 2021). Study participants were selected by using non probability purposive sampling technique. Inclusion criteria was police officials who had actively participated in war against terror and had direct exposure of trauma and were on post deployment in peaceful areas for 1 year. Sample size was calculated by Open epi calculator, and was estimated to be 192, with anticipate frequency of 50%, confidence limit 5 % and design effect 0.5. 200 police officials fitting in this inclusion criteria were included in the study with the response rate of 97%. Data was collected after approval of ethical committee of NIP (National institute of Psychology), permission from the concerned authorities, and after taking informed consent from the participants. Personal identity information was not taken and the confidentiality of the data was ensured.

Demographic data was collected by structured questionnaire. To determine the level of war related stress, Posttraumatic Stress Diagnostic Scale PDS-

5(22 items) and short form of Comprehensive trauma inventory (20 items) were used. Hope and self-efficacy were assessed by Adult Hope Scale (12 items) and Perceived coping self-efficacy scale (26 items). Posttraumatic growth was assessed by Post traumatic growth inventory (PTGI-SF). Urdu versions of all tools were used. Analysis was done by using AMOS and SPSS version 21. Internal reliability was checked by Cronbach  $\alpha$ , which was found satisfactory ( $> 0.6$ ). After descriptive analysis of socio demographic variables such as education, age, marital status, duration spent in combat area, family system etc, correlation of variables was checked by Pearson correlation and moderation analysis was done.

## Results

Mean age of study participants was  $33.6 \pm 6.3$  years (21-56 years). Descriptive analysis of demographic variables is given in table 1. The internal consistency of all translated and adapted scales like Comprehensive Trauma, PDS-5 and Adult Hope scale showed acceptable internal consistency. Moss et al., (1998) has recommended the cutoff of  $\alpha \geq .60$  for acceptable reliabilities. Skewness and Kurtosis were all in the acceptable range as suggested by Bulmer (2012) data, between -1 to +1 and -2 to +2 is considered as normally distributed. The ranges of the values of reliabilities were 0.84 to 0.93. These ranges were at satisfactory level. The skewness values also lied in acceptable range.

Variables		Frequency (percentage)
Age	21-35	126 (63%)
	36 and above	74 (37 %)
Level of Education	Matric	123 (61.5%)
	Intermediate	50 (25 %)
	Graduate	17 (8.5 %)
	Post graduate degree	10 (5%)
Marital Status	Married	154 (77%)
	Un Married	46(23%)
Family System	Extended family system	106(53 %)
	Nuclear family system	94 (47 %)
Category	Officers	9(4.5%)
	Other ranks	191(95.5%).
Duration spent in war	1 year or more	26 (13.0 %)
	2 years or more	46 (23.0%)
	3 years or more.	128 (64%)

This table shows the demographic variables, i.e. age, Level of education, marital status, family system (extended or nuclear), category, and duration spent in war.

	Variables	WT	PTSD	Hope	PSE	PTG	Mean $\pm$ SD
<u>1</u>	WT	-	<u>.49**</u>	<u>.37</u>	<u>.56</u>	<u>.53*</u>	30.78 $\pm$ 16.4
<u>2</u>	PTSD	-	-	<u>-.61*</u>	<u>-.08</u>	<u>.44</u>	28.16 $\pm$ 18.9
<u>3</u>	Hope	-	-	-	<u>.75**</u>	<u>.98**</u>	33.63 $\pm$ 7.6
<u>4</u>	PSE	-	-	-	-	<u>.99**</u>	28.35 $\pm$ 6.2
<u>5</u>	PTG	-	-	-	-	-	97.74 $\pm$ 31.8

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

Note. WT= War- trauma, PTSD= Posttraumatic stress Disorder, Hope = Hope, PSE= Perceived Self Efficacy, PTG = Post traumatic growth

Study showed significant strong positive correlation of Hope and Perceived self-efficacy with Post traumatic growth and negative correlation with Post traumatic Stress Disorder (PTSD). War trauma and PTSD were positively correlated and PTSD and PTG marginally positively correlated.

	Post traumatic growth			
	B	LL	UU	p
Constant	35.64***	29.23	42.04	.00
Perceived coping self-efficacy (Moderator)	-2.61***	-4.59	-.64	.00
War trauma (Predictor)	-.27***	-.44	-.99	.00
Perceived coping self-efficacy x PTG	.04***	.01	.01	.00
$R^2$	.12***			
$F$	9.42***			
$\Delta R^2$	.02			
$\Delta F$	6.16			

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

Study confirmed moderating effects of perceived coping self-efficacy on war trauma and post traumatic growth. Moderation was found satisfactory for perceived and self-efficacy. Findings suggested a significant increase in post-traumatic growth after math of exposure of trauma in presence of hope and perceived coping self-efficacy.

	Post traumatic growth			
	B	LL	UU	p
Constant	35.52***	27.98	45.07	.00
Hope (Moderator)	-2.16***	-4.59	-.64	.01
War trauma (Predictor)	.22***	.44	.90	.01

Hope x PTG	.02***	.09	.01	.01
$R^2$	.30***			
$F$	9.12***			
$\Delta R^2$	.01			
$\Delta F$	4.32			

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

Study confirmed moderating effects of hope on war trauma and post traumatic growth. Moderation was found satisfactory for Hope. Findings suggested a significant increase in post-traumatic growth in after math of exposure of trauma in presence of hope.

## Discussion

This study was conducted to investigate the effects of war trauma exposure among police officials who participated in war against terror. Different studies have identified that war exposure is a significant predictor of post-traumatic stress disorder among affected population. But Post-traumatic stress is not the only outcome, sometimes experiencing such an event may result in greater motivation to make positive meaning of traumatic event, which leads to experience of positive consequences like post traumatic growth.<sup>12</sup> Factors which play protective role against post-traumatic stress disorder among the affected population are still understudied.<sup>13, 14</sup> Different expert studies have suggested that there are a multitude of factors that contribute for growth and boost resilience building among trauma survivors. In the present study, identification of the contributing factors of growth like hope and coping self-efficacy (which play a protective role against Post traumatic stress disorder) suggests the direction of the future research as well as potential areas like educating the exposed population to overcome the traumatic events.<sup>15</sup> Despite the reported negative reactions to tragic events, findings of different studies have proved that some people maintain psychological stability and different factors play important role in a meaningful positive change.<sup>16</sup> The study indicates that trauma exposure results in stress which can end into post-traumatic

stress or growth. The moderating role of hope and coping self-efficacy positively predict growth in the aftermath of direct exposure of war trauma. Use of positive approach in coping leads the individuals to think positive about the trauma and promotes feelings of personal strength which turns into Post traumatic growth and reduces the chances of post-traumatic stress disorder. Results are consistent with the previous findings.<sup>17,18</sup>.

It was also confirmed from the findings that stress and PTG are positively correlated. These findings of the present study are in line with the previous studies. Present findings have confirmed that the co-existence of stress and growth is possible.<sup>19</sup>. A growing body of research has identified variables that affect the relationship between trauma exposure, post-traumatic stress disorder and growth. These variables may be conceptualized as social and personal strength factors. Studies on the personal strength factors suggest that veterans with strong coping self-efficacy and hope suffer less from PTSD.<sup>19,20,21</sup>

War against terror was not a traditional war. The active-duty officials of police who had participated in this war and had direct and repeated exposure of trauma showed high levels of PTG and scored high in personal strength factors like hope and coping self-efficacy, results are persistent with previous research.<sup>22, 23</sup>.

The cross-sectional nature of the study, utilization of the self-report measures and use of non-probability sampling technique for sample selection are the limitations of the study. Family history of psychopathology was not included. Use of random sampling and longitudinal study design provides better qualification to generalization of the findings but due to time limitations and complex sample it was not possible to conduct longitudinal study. Findings have implications for soldier's fitness programs, psychological intervention planning and health care programs for the active-duty officials of police who had faced tragedies during war on terror and other trauma survivor population.

## Conclusion

Relationship between post-traumatic stress disorder and post-traumatic growth was moderated by perceived coping self-efficacy and hope.

## Recommendation

More consideration is required to be given to enhance the role of the factors like perceived coping self-efficacy and hope as these factors may foster post traumatic growth in individuals and target stress and reduce the chances of PTSD.

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