

Trauma Symptoms as Predictors of Emotional Dysregulation Among First Responders

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Abstract

The present study aimed to examine the relationship between trauma symptoms and emotional dysregulation among first responders, including police officers, traffic police, firefighters, and paramedics. First responders play a vital role in safeguarding communities but are routinely exposed to highly stressful and emotionally charged situations such as accidents, violence, and large-scale traumatic events. Repeated exposure to such distressing circumstances can contribute to significant psychological strain, leading to trauma symptoms that affect emotional stability and overall functioning. Trauma symptoms include responses such as intrusive memories, avoidance, and hyperarousal, whereas emotional dysregulation refers to persistent difficulties in managing and responding to emotional experiences in an adaptive manner. A quantitative correlational research design was adopted, with a sample of 200 first responders aged 20 years and above. Data were collected using standardized psychological scales: the Impact of Event Scale–Revised (IES-R) and the Difficulties in Emotion Regulation Scale (DERS). Statistical analysis revealed a significant positive correlation between trauma symptoms and emotional dysregulation ($r = .654, p < .001$). The findings also indicated moderate levels of both variables, with mean scores of 31.96 and 97.45 respectively. The results support the research hypothesis, highlighting a significant relationship between trauma symptoms and emotional dysregulation among first responders

Keywords: Trauma symptoms, Emotional dysregulation, First responders, psychological distress.

1. Introduction

First responders, including police officers, traffic police, paramedics, and firefighters, play a vital role in safeguarding communities, often serving as the first point of contact during emergencies, disasters, and critical incidents. Their professional responsibilities routinely place them in high-risk and emotionally demanding situations such as accidents, medical emergencies, violence, and large-scale traumatic events. Continuous exposure to such distressing circumstances can contribute to significant psychological strain. Over time, repeated exposure to trauma may lead to the development of trauma-related symptoms that affect emotional stability, mental health, and overall functioning. Beyond direct exposure, first responders also face irregular shifts, long working hours, sleep disturbances, organizational pressures, and expectations to remain composed under stress. The culture of emotional restraint within emergency services may further intensify psychological burden, as individuals often suppress distress to maintain professionalism. Without effective coping strategies and institutional support, chronic occupational stress can impair emotional regulation, decision-making ability, and interpersonal relationships. Sustained

psychological strain may influence both professional performance and personal well-being, affecting relationships and social functioning.

Trauma Symptoms:

Trauma refers to psychological and physiological responses to extremely threatening or distressing experiences that overwhelm an individual's coping capacity. These responses may include intrusive memories, avoidance behaviors, and hyperarousal. Intrusive symptoms involve unwanted thoughts, flashbacks, or distressing dreams related to the traumatic event, often triggered by reminders. Avoidance includes efforts to suppress thoughts or avoid places, people, or situations associated with trauma, which may provide temporary relief but hinder recovery. Hyperarousal reflects a persistent state of heightened alertness, leading to irritability, sleep disturbances, difficulty concentrating, and exaggerated startle responses. Trauma can also affect cognitive, emotional, behavioral, and physiological functioning. Individuals may experience negative beliefs, self-blame, emotional instability, or detachment. Physiological responses such as increased heart rate, muscle tension, and fatigue are common. Behavioral changes may include withdrawal, reduced participation in daily activities, or maladaptive coping strategies. Interpersonal difficulties, mistrust, and social isolation are also frequently observed. The intensity and duration of symptoms vary across individuals depending on personal and situational factors.

Emotional Dysregulation:

Emotional dysregulation refers to difficulties in understanding, managing, and responding to emotions in an adaptive manner. It involves heightened emotional intensity, poor emotional awareness, difficulty controlling emotional responses, and challenges in returning to a stable emotional state. Individuals may experience overwhelming emotions, impulsive reactions, or emotional suppression. Key features include emotional intensity, lack of emotional clarity, poor expression, and difficulty calming down after distress. Emotional dysregulation is often associated with impulsivity, avoidance, and persistent negative emotions such as anxiety, anger, and sadness. Cognitive factors like rumination and negative thinking patterns can further intensify emotional distress. Additionally, emotional dysregulation affects interpersonal relationships, leading to conflict, withdrawal, and reduced emotional communication. Physiological arousal, such as increased heart rate and tension, also contributes to prolonged distress. Emotional dysregulation exists on a continuum and is influenced by stress exposure, coping mechanisms, and individual differences. Understanding the relationship between trauma symptoms and emotional dysregulation among first responders is essential for identifying psychological risks, improving coping strategies, and promoting mental health and well-being within this population.

Need Of the Study

First responders are frequently exposed to repeated stressful and traumatic events, increasing their vulnerability to mental health problems. When trauma symptoms remain unaddressed, they can interfere with emotional regulation, leading to impulsive behavior, reduced stress tolerance, and a higher risk of stress-related disorders. Difficulties in managing emotions may negatively impact decision-making, job performance, daily functioning, workplace relationships, and overall psychological well-being. Despite the critical nature of these challenges, limited research has specifically examined the relationship between trauma symptoms and emotional dysregulation among first responders, particularly within law enforcement contexts. Understanding this relationship is essential for developing effective mental health interventions, enhancing coping strategies, and strengthening organizational support systems tailored to the unique demands of first responder roles. Such insights can contribute to improved psychological well-being, better occupational functioning, and more effective and responsive community service.

2. Literature Review

Lilly with Lim (2013) examined shared factors behind different trauma-related mental health issues, focusing especially on bonding patterns, managing feelings, or thinking skills. Using a method based on connections between variables, it looked at how problems in these domains influence both emergence and continuation of psychological struggles after harmful social experiences. Outcomes showed that trouble controlling emotions stood out as the strongest ongoing predictor of poor mental well-being post-trauma. This suggests disrupted emotional control plays a central role in turning traumatic events into lasting distress. The work highlights why therapy for those affected should prioritize improving emotional self-regulation.

Tull, Bardeen, DiLillo, Messman-Moore, and Gratz (2015) ran a forward-looking analysis to explore how trouble managing feelings affects the link between PTSD signs and serious drug use. With data gathered over time, it looked at whether emotional control problems raised chances of using substances in women with PTSD traits. Findings showed stronger emotion regulation issues led to greater substance use risk - pointing to weak coping strategies worsening dual diagnosis patterns. Instead of general approaches, focusing on improving emotional management might work better when helping traumatized women avoid reliance on drugs or alcohol.

Weiss et al. (2019) explored how PTSD symptoms relate to substance use, particularly looking at emotional regulation problems. Through a correlation-based approach, they examined whether trouble accepting distressing feelings and impulsive actions increase risk-taking in people with PTSD. Results showed that poor emotion control partly explains why PTSD leads to drug use and dangerous activities. This suggests managing emotions plays a crucial part in connecting trauma symptoms to harmful choices. Raudales et al. (2020) explored how trouble managing emotions affects reactions to trauma reminders, along with links to PTSD symptom severity. Using a mix of experimental and correlational methods, they looked at whether poor emotional control intensified distress during exposure to traumatic stimuli. Results showed individuals with greater regulation problems had stronger negative emotional responses - suggesting such issues may increase risk for PTSD onset or persistence. Overall, the research highlights emotion regulation deficits as key factors in trauma-induced mood changes.

D'Andrea, Ford, Stolbach, Spinazzola, and van der Kolk (2012) explored how different forms of child abuse relate to emotional control issues and mental health problems in adult patients. Using structural equation modelling, they analysed the effects of early stress on managing emotions - alongside how such struggles increase risk for various psychological disorders. Findings showed poor emotion regulation played a central role connecting early trauma with conditions like PTSD, dissociation, or physical symptoms without medical cause. Their analysis indicated ongoing trauma during youth may lock the nervous system into lasting high-alert mode - where trouble handling feelings becomes a key sign of disrupted stress adaptation. These supports using treatment models focused on calming emotional reactivity before addressing deeper therapeutic goals.

3. Methodology

This study seeks to find out if higher levels of trauma symptoms are closely connected to greater emotional dysregulation among first responders. It also looks into how trauma exposure influences emotional regulation challenges, using standard psychological tools in a cross-sectional correlational design.

3.1 Aim:

To explore the link between trauma symptoms and difficulties in managing emotions among first respon-

ders.

3.2 Objectives:

- To measure the level of trauma symptoms in law enforcement personnel.
- To assess emotional regulation challenges among law enforcement personnel.
- To understand the possible connection between trauma symptoms and emotional control issues.

3.3 Hypothesise:

It is assumed that there is no significant link between trauma symptoms and emotional dysregulation among first responders.

3.4 Research Design:

The study used a correlational design with a cross-sectional approach to examine the relationship between trauma symptoms and emotional dysregulation in first responders. Data were collected at one point in time, without altering any variables, which is suitable for identifying connections between the variables under study.

3.5 Sample:

The sample included 200 first responders aged 20 or older, such as police officers, traffic officers, firefighters, and paramedics. Participants were from different departments, ensuring a mix of genders.

3.6 Sampling Technique:

Participants were selected using an accessible sampling method. Individuals who met the criteria and were available during the data collection period were invited to join. This approach was chosen because of practical limitations such as time, accessibility, and participant interest.

3.7 Inclusion Criteria:

- First responders aged 20 or older.
- First responders currently working in frontline roles.
- Individuals of both genders.
- Participants who gave written consent to take part in the study.

3.8 Exclusion Criteria:

- First responders under the age of 30.
- Officers not working during the study period.
- Individuals receiving mental health support at the time of the study.
- Those who declined to participate or did not complete the assessment **tools**.

3.9 Variables:

- Independent Variable: Trauma Symptoms
- Dependent Variable: Emotional Dysregulation

4. Statistical Analysis

Data were analyzed using IBM SPSS Statistics (version 26.0).

Descriptive statistics including means, standard deviations, counts, and proportions were used to summarize demographic details, trauma symptoms, and emotional regulation scores.

Pearson correlation was used to examine the connection between trauma symptoms and emotional dysregulation. A simple linear regression was also performed to determine if trauma symptoms could predict emotional regulation difficulties in first responders.

5. Tools Used:

1. **Socio-Demographic Datasheet:** This form collected participant demographics, including age, gender, years of service, rank, and education level. It provided insight into the characteristics of the sample and placed the findings in a broader context.
2. **Impact of Event Scale – Revised (IES-R):** The IES-R (Weiss & Marmar, 1997) is a self-report questionnaire with 22 items that assesses emotional reactions following traumatic events. Participants rate each item on a 4-point scale, from “Not at all” to “Extremely.” Higher scores indicate more severe symptoms. The tool has demonstrated high internal consistency (Cronbach’s $\alpha > 0.90$) and is widely used across various populations.
3. **Difficulties in Emotion Regulation Scale (DERS):** The DERS (Gratz & Roemer, 2004) is a 36-item self-report scale that evaluates emotional regulation difficulties across six domains: identifying feelings, focusing during distress, controlling urges, maintaining goals, tolerating negative emotions, and using regulatory strategies. Participants rate each item on a 5-point scale from “Almost never” to “Almost always.” Higher scores indicate greater challenges in emotional regulation. The DERS has been validated for reliability and accuracy in assessing emotional dysregulation.

5.1 Tool Description:

1. Impact of Event Scale – Revised (IES-R)

The IES-R is a common tool people fill out themselves to show how much emotional trouble they feel after a traumatic event. This version includes 22 questions; each scored from 0 to 4 - where 0 means "not at all" and 4 stands for "extremely." Three main areas of trauma-related reactions are measured by this instrument

- **Intrusion:** Unwanted thoughts, images, or feelings related to the trauma.
- **Avoidance:** Trying to steer clear of memories or anything linked to the trauma.
- **Hyperarousal:** hyperarousal involves heightened agitation, an exaggerated reaction to sudden stimuli, also trouble focusing on tasks. Higher scores mean more severe trauma symptoms. The IES-R shows strong reliability, with Cronbach’s α above 0.90; this measure also aligns well with theoretical constructs, which supports its application in high-pressure jobs like policing.

2. Difficulties in Emotion Regulation Scale (DERS)

The DERS includes 36 questions people answer about their emotional regulation challenges. Responses use a 5-point scale, from "almost never" to "almost always." These items cover six distinct areas of difficulty. Each section focuses on a different aspect of managing emotions

- Rejection of feelings as valid reactions
- Challenges in pursuing tasks with clear objectives
- Impulse control difficulties
- Difficulty recognizing feelings
- Limited availability of techniques to manage emotions
- Lacking clear emotions

Higher overall scores suggest more difficulty managing feelings. The DERS demonstrates good consistency (Cronbach’s $\alpha = 0.93$), supports valid conclusions, yet appears frequently in studies involving people facing pressure or distress

6. Result

The purpose of the research is to present the empirical finding of quantitative analysis Examining the relationships between trauma symptoms and emotional dysregulation among first responders. The study was conducted with a sample of 200 first responders including police, firefighters, paramedics and traffic police, using a simple random sample technique. The study aimed to examine whether the severity of trauma symptoms, resulting from high stress occupational exposure, related to difficulties in emotional regulation. The data were collected using standardized tools “Impact of Event Scale-Revised (IES-R) and Difficulties in Emotional Regulation Scale (DERS).

7. Descriptive Statistics

Table1: Mean and SD of Trauma Symptoms and Emotional Dysregulation

VARIABLE	N	MEAN (M)	STANDARD DEVIATION (S)
Trauma Symptoms (IES-R)	200	31.96	21.65
Emotional Dysregulation (DERS)	200	97.45	28.53

Table 1, shows us the statistics for Trauma Symptoms and Emotional Dysregulation in the 200 responders who were part of the study. The average score for Trauma Symptoms is 31.96 and for Emotional Dysregulation it is 97.45. This tells us that the participants had a level of Trauma Symptoms and Emotional Dysregulation. The score for Trauma Symptoms shows that the first responders had a level of distress related to trauma. The score for Emotional Dysregulation shows that they had a level of difficulty in managing their emotions. The standard deviation for Trauma Symptoms is 21.65. This means that the first responders had different experiences with Trauma Symptoms. The standard deviation for Emotional Dysregulation is 28.53. This is even higher than for Trauma Symptoms. It means that the first responders had a wide range of experiences with Emotional Dysregulation. This shows that the first responders had different ways of dealing with their emotions and the demands of their jobs. The difference in the data shows that being on the frontline has an impact on the mental health of individual first responders. It affects each person in a way. The Trauma Symptoms and Emotional Dysregulation are different, for each responder. This is because each person has their way of dealing with trauma and emotions. The study looks at Trauma Symptoms and Emotional Dysregulation in the responders. It helps us understand how they are affected by their jobs.

Correlation Analysis

TABLE 2: Pearson’s correlation between Trauma Symptoms (IES-R) and Emotional Dysregulation (DERS)

VARIABLES		IES-R	DERS
TRAUMA SYMPTOMS (IES-R)	Pearson Correlation	1	.654**
	Sig. (2- tailed)		.000
	N	200	200
EMOTIONAL DYSREGULATION (DERS)	Pearson Correlation	.654**	1
	Sig. (2- tailed)	.000	
	N	200	200

****correlation is significant at the 0.01level (2-tailed).**

The current research was aimed at analysing the correlation between Trauma Symptoms (IES-R) and Emotional Dysregulation (DERS) in the first responders through Pearson product-moment correlation. The statistical test showed that the Pearson correlation coefficient of $r(198) = .654$, $p = .000$ was between trauma symptoms and emotional dysregulation. The result demonstrates that there is a positive relationship between the two variables which is strong and statistically significant therefore, implying that the greater the extent of the trauma symptoms the greater the extent of emotional dysregulation among the respondents. Since the resulting p-value ($p = .000$) was far below the acceptable threshold of statistical significance ($p < .01$), one will reject the null hypothesis that there exists no significant association between Trauma Symptoms and Emotional Dysregulation.

The finding hints at the fact that first responders suffering an increased psychological distress after traumatic exposure might be more prone to face the problems when it comes to regulating and controlling the level of their emotional response. The frequent trauma symptoms, including intrusion, avoidance, and hyperarousal, might overload the capacity of an individual to cope with them, thus, predisposing one to emotional dysregulation. Such emotional reactions are possible in the case of first responders as a professional group that continuously experiences high stress emergency cases, so the inability to adequately process traumatic experiences directly affects the ability to regulate and maintain an emotional state.

Discussion

In this study the people looked at how trauma symptoms and emotional problems affect responders. They found out that when first responders have trauma symptoms they also have emotional problems. First responders see bad things happen. This can cause them to have bad thoughts try to avoid things or get really upset. This can be too much for first responders to handle. First responders have a time controlling their emotions.

The people with the trauma symptoms had the time controlling their emotions, which shows that trauma can make first responders really emotional or not care about anything. This is a deal because first responders need to be able to control their emotions to do their jobs well and to be happy in their personal lives.

The study also shows how important it is to understand what first responders are going through. First responders have to deal with a lot of pressure see people hurt and put themselves in danger. The first responders who are better at controlling their emotions can handle trauma better. They do not get many symptoms as the first responders who are not as good, at it. This means that we need to make sure first responders get the help they need to deal with trauma and emotional problems. We need to teach responders how to be strong and give them counseling that understands what first responders are going through. This will help first responders deal with the effects of trauma and emotional problems so they can keep people safe.

Summary

This study examined the relationship between trauma symptoms and emotional dysregulation among first askers, including police, fire and deliverance labor force, and medical staff. First askers face high- threat situations that test both physical and internal adaptability. Trauma symptoms similar as protrusive studies, avoidance, and hyperarousal — do after life- changing events, while emotional dysregulation refers to difficulties in feting, managing, or managing with feelings. Understanding this relationship is important

for the internal health of frontline workers. A quantitative correlational design was used with 200 actors. Data were collected via standardized tone- report measures the Impact of Event Scale- Revised (IES- R) and the Difficulties in Emotion Regulation Scale (DERS). Confidentiality and informed concurrence were rigorously observed. SPSS software was used for descriptive and correlational analyses. Results showed a strong positive correlation between trauma symptoms and emotional dysregulation ($r = 0.654$, $p < .001$), indicating that further frequent or violent traumatic gestures are associated with lesser difficulty managing feelings. The mean scores were 31.96 for trauma symptoms and 97.45 for emotional dysregulation, reflecting moderate situations in the sample.

Conclusion

The findings of this research highlight the significance of the correlation between the trauma symptoms and the emotional outbursts among the people in the profession of first responders. People working in high-stress jobs in the emergency sector and with high degree of trauma symptoms are highly likely to have high degree of emotional dysregulation. This shows that exposure to trauma affects emotional processing and management capacities of the individual in a great way. The positive correlation observed in this study is very strong and this implies that the ability of individuals to control their emotional conditions is directly affected by the psychological distress that occurs after a critical incident. The findings show that exposure to trauma largely affects the ability of the person to be emotionally clear and control impulses and this directly influences the individual respondent in high-pressure situations during the line of duty. The findings obtained during the given research indicate that the hypotheses of the research are justified and that the special psychological assistance and emotional control measures play a critical part in the work of the frontline environment.

Limitations

The results of the current research have certain constraints that should be taken into account during their interpretation. The first weakness is that the research design used was cross-sectional and thus there was no chance of demonstrating causality between the variables. The second weakness was that it relied on self-report procedures and therefore could be influenced by response bias or social desirability particularly in a professional culture which would not encourage the disclosure of psychological distress. It has been conducted particularly in a sample of 200 first responders, and the geographical or professional location of particular setting can be regarded as one of the study limitations. Besides that the personality traits, particular coping strategies, childhood trauma, and cultural influences might have played a significant role to be taken into consideration in the research but were not accounted in the current study.

Implications

The implications of the current study can be profound to both the emergency service organizations and the practitioners in mental health. Emotional dysregulation has been detected to be closely associated with trauma symptoms. The emotional regulation skills are the possible target of interventions aimed at improving them (grounding skill or cognitive-behavioural-based interventions), which can positively influence the mental adaptation of the person in the presence of being subjected to traumatic occurrences all the time. The emergency service agencies can create initiatives that can improve the psychological assimilation and strength of the individual. The use of counseling and emotional first aid can turn out to be effective in the context of events of acute stress or emotional issues experienced by the person who has

encountered critical incidents.

Future Scope

To conduct more comprehensive research, it has been proposed that a sample population should be more multifaceted by incorporating geographical and cultural differences between first responders. To gain more insight into the response of relationships between trauma and emotion regulation across time, one will have to employ longitudinal research designs to carry out subsequent causal research. Besides, additional research is also possible to examine other psychological factors like self-esteem, attachment style, resilience, and post-traumatic growth. Research based on the intervention could also be useful in gaining deeper information about the ways to minimize trauma symptoms and enhance emotional regulation in people working in high-risk professions.

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