

An Analysis of the Relationship between Anger Management and Post-Event Mental Health in Trauma Patients

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Abstract

Background: Anger has a significant impact on people's mortality and is a major contributing cause to beatings and traffic accidents. The World Health Organization's statistics show that beatings and car crashes are the most common causes of trauma events. An rise in violence has a significant influence in occurrences and is an effective risk factor for traumatic and mental health impairments. The purpose of this study was to examine the association between anger management and post-event mental health in trauma patients.

Method: From July 2025 to June 2026, the Murli Bhedi Jha Community Health and Trauma Center in Araria Sangram, Jhanjharpur, Madhubani, Bihar, conducted a cross-sectional study on 214 patients who were chosen using the available sampling method and systematic randomization. The General Mental Health Questionnaire and Novaco's Anger Control Questionnaire, a common questionnaire, were used to evaluate mental health and compare anger control, respectively. The independent t-test and Pearson correlation coefficient were used in SPSS program (Version 18) to examine the gathered data. Statistical significance was defined as a p-value of less than 0.05.

Results: The demographic parameters revealed that the patients' mean age was 32.65 ± 8.318 years. 120 and 94 of the 214 patients who took part in this study suffered injuries from beatings and car crashes, respectively. Statistical research revealed a strong correlation between these respondents' mental health and their ability to regulate their anger.

Conclusion: Injuries brought on by an upsurge in beatings and traffic accidents pose a serious risk to the populace and do irreversible harm to the nation's economy. These results demonstrated a strong correlation between mental health and anger management in the two categories of beatings and traffic accidents. Consequently, the creation of anger management training programs helps lessen the harm that rage does to individuals.

Keywords: Anger, Mental Health, Trauma, Traffic Accidents.

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Introduction

One of the natural and innate emotions in humans is anger [1], which is characterized by a physiological reaction with a desire to harm a target.[2] Violence is linked to individual reactions and beatings between individuals[3] because it activates neuroendocrine processes due to the stimulation of the autonomic nervous system.[4] Psychological studies have shown a direct correlation between increased violence in people and poorer mental health status.[5] Scientists and experts have long been interested in the inability to control anger and its destructive outcomes.

When someone's aggression spirals out of control, it can cause issues with their job, relationships with others, and general quality of life.[6] Maintaining

and sustaining people's social, professional, and academic performance within the community depends heavily on mental health.[7] Numerous causes, such as a lack of social justice, unjust discrimination, and mental stress, can lead to poor mental health and, in certain situations, an increase in violence.[8] The most frequent cause of trauma, which is the most frequent cause of health risk for half a million individuals in the nation, is violence, which is also a significant risk factor for beatings and car accidents.[5]

Numerous studies have revealed that trauma causes a large number of deaths globally each year, and the costs associated with treating these injuries are high.[9] Numerous studies have demonstrated that

risk factors for violence and beating include drug and alcohol addiction, masculine gender, low socioeconomic level, low literacy, and mental illness.[10] An rise in aggression has been found to be a risk factor for driving and beating, and some research have confirmed that people's mental health is negatively impacted by their inability to manage their anger.[11] Anger was shown to be twice as likely to cause a traffic accident as regular driving, according to an analysis of driving between rough and normal persons.[12] Aggression and agitation were linked to reckless driving, according to surveys conducted in various nations.[13] Research on the relationship between anger management and mental health and the incidence of beatings and road accidents in traumatized patients generally produced contradictory results.[14,15] The role of mental health in anger management has not yet been investigated. Due to the high incidence of trauma incidents, anger management in interpersonal behavior and quality of life, assessment of anger control, and determination of a relationship between anger management and mental health are crucial for trauma patients. In order to promote mental health, this study compared the association between anger control and mental health in trauma patients following an occurrence.

Materials and Methods

From July 2025 to June 2026, the Murli Bhedi Jha Community Health and Trauma Center in Araria Sangram, Jhanjharpur, Madhubani, Bihar, conducted a cross-sectional study. Among 214 patients who participated in this study, 120 and 94 cases were injured by beatings and traffic accidents, respectively. The inclusion criteria were trauma patients hospitalized due to beatings and traffic accidents, as well as willingness to

participate in the study. The subjects in the study had Glasgow Coma Scale/Score over 13 and good verbal fluency. Furthermore, they were selected from inpatient wards, and their age was 15 years or higher. The patients were then asked to fill out the Novaco's Anger Management and Mental Health Questionnaires (GHQ) and demographic characteristics form. Novaco's standard questionnaire was employed to evaluate the prevalence and anger control management.[16] This 30-item questionnaire measures anger, aggression, and hatred. Moreover, the items are rated based on a four-point Likert scale of never (0), rarely (1), sometimes (2), and always (3).According to this scale, those with scores higher and lower than the average had higher and lower levels of aggression, respectively.[16]In this study, quantitative and qualitative were described using mean $\pm$ SD and frequency percentage (n%), respectively.Subsequently, the demographic characteristics of the two groups of accidents and beatings were compared by two independent samples t-tests.Furthermore, the total score of each anger and mental health item was calculated, and the Pearson correlation coefficient was utilized to measure the correlation between each item ($P < 0.05$).

Results

The demographic parameters revealed that the patients' mean age was 32.65 ± 8.318 years. The demographic details of the participants are tabulated in (Table 1) using frequency percentage (%). 120 and 94 of the 214 patients in this study had been traumatized by beatings and car crashes, respectively. Anatomically, limb injuries and penetrative and non-penetrative trauma patterns were reported by 57%, 39.7%, and 60.28% of the subjects, respectively.

Table 1: Demographic characteristics of the study sample n(%)

Variables		Beatings n(%)	Traffic Accidents n(%)	Total n(%)
Gender	Male	112(56.28)	87 (43.72)	199 (100.0)
	Female	8 (53.33)	7 (46.67)	15 (100.0)
Age	Under 29 years	78 (63.9)	44 (36.1)	122 (100.0)
	30-59	38 (47.5)	42 (52.5)	(100.0) 80
	60-above 60	3 (27.3)	8 (72.7)	11(100.0)
Education level	Illiterate	4 (30.8)	9 (69.2)	13 (100.0)
	Elementary	6 (33.3)	12 (66.7)	18 (100.0)
	Secondary	43 (61.4)	27 (38.6)	70 (100.0)
	Diploma	64 (62.1)	39 (37.9)	103 (100.0)
	Bachelor's degree	3 (33.3)	6 (66.7)	9 (100.0)
Occupational status	Freelancer	9 (52.9)	8 (47.1)	6 (100.0)
	Manual worker	35 (70.0)	15 (30.0)	50 (100.0)
	Unemployed	16 (59.3)	11(40.7)	27 (100.0)
	Employed	2 (25.0)	6 (75.0)	8 (100.0)
	Farmer	4 (80.0)	1 (20.0)	5 (100.0)
	Others	54 (50.5)	53 (49.5)	107 (100.0)
Marital status	Single	64 (64.0)	36 (36.0)	100 (100.0)
	Married	56 (49.1)	58 (50.9)	114(100.0)

According to (Table 2) the mean of general health disorder and anger rate was significantly higher in the beating group, compared to the accident group.

Therefore, there was a significant difference between the two groups in terms of general health disorders ($t=-15.22$; $P<0.05$) and anger ($t=-15.16$; $P<0.05$). On the other hand, a statistically significant and direct correlation was found

between anger and General Health disorders ($r=0.779$; $P<0.05$). These results suggest that an increase in violence is associated with lower overall health. (Table 3) summarizes the significant relationship of the components of aggressive feeling, aggressive thinking, and aggressive behavior with aspects, such as depression, anxiety and insomnia, social functioning, and physical symptoms in individuals.

Table 2: Comparison of the mean general health disorders and high levels of anger in the two groups of beatings and traffic accidents

	Injury Mechanism	Mean $\pm$ SD	P-value
General health disorders	Beatings	32.65 $\pm$ 8.318	<0.05
	Accident	18.41 $\pm$ 3.95	
High levels of Anger	Beatings	49.45 $\pm$ 18.04	

Table 3: Correlation coefficient between the components of anger management and mental health (N=214;P<0.05)

	Aggressive feeling	Aggressive thinking	Aggressive behavior	P-value
Physical symptoms	0.721*	0.683*	0.706*	<0.05
Anxiety and insomnia	0.786*	0.759*	0.785*	
Social Performance	- 0.223*	- 0.209 *	-0.245*	
Depression	0.401*	0.480*	0.403*	

*significant level at 0.05

Discussion

Due to the high amounts of male sex hormones, males are more likely than females to engage in violent behavior, according to demographic variables. The study's findings also showed that young, unmarried persons were more likely than married people to experience violence and mental health issues. It's also important to note that dealers had a higher beating rate than other groups. However, there were fewer traffic accidents and beatings among farmers.

The obtained findings are consistent with the results of other studies in this regard.[17-22] In this study, the majority of the patients had diploma education; moreover, most and less than half of them had penetrating and non-penetrating trauma patterns, respectively. This may be justified by the impact of non-penetrating trauma on the severity of damage among them.[23,24] These results show that a low number of participants who had accidental injury were unsuccessful in their anger control, which was consistent with the results of other studies.[25] In the present study, it was found that the mean general health disorder in people who were hospitalized due to beatings was significantly more than that in the traffic accident group ($P<0.05$). This finding showed a significant relationship between mental health disorders and an increase in violence. Accordingly, a decrease in mental health disorders can improve anger control in people. Furthermore, all components of anger control showed a statistically significant relationship with those of depression, anxiety and insomnia, as well as physical symptoms. Therefore,

an increase in violence can be associated with an increase in physical symptoms, anxiety, insomnia, and depression. In general, these results showed that an increase in violence could have a strong relationship with the social and physical performance of individuals.

As a result, the lack of anger control in people is associated with greater physical and psychological problems and injuries.

The results of this study are in line with the findings of the studies conducted by Lagote [26], Bart [27], Marcus [28], Nova [29], and Trust.[30] Studies in this field have shown a significant relationship between an increase in violence and general health disorders in the individual and community.[30]

Conclusion

Anger puts many people's general health at risk every year and does irreversible harm to the nation's economy because it is a primary source of beatings and traffic accidents. The productive population may be negatively impacted by low levels of education as well as social and economic distress as a source of rage. This result showed that the beating group's mean levels of violence and general health disorders were considerably higher than those of the traffic accident group. Thus, in both groups, there was a statistically significant correlation between mental health issues and aggression. Violence control using anger control test packages, counseling services and psychotherapy for these patients, and a thorough examination of the causes of anger can all be

crucial in preventing and minimizing such incidents, as violence was a significant risk factor in both traffic accidents and beatings. Therefore, the creation of education-level-appropriate training programs and the use of different social bases on anger management and emotional regulation can be successful in preventing and reducing the harm caused by violence. Additionally, these items can lessen the harm that the community's violence has created. Improving psychiatric and consulting services is advised for hospital managers in order to help admitted patients manage their rage.

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