




The Relationship Between the Implementation of Trauma Protocols and the Results of Physical Trauma Implementation

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received Aug 30, 2025 Revised Sep 10, 2025 Accepted Sep 22, 2025</p> <hr/> <p>Keywords:</p> <p>Trauma, Emergency, Health Workers, Protocol.</p>	<p>Physical trauma is a common health problem and is considered an emergency requiring prompt and appropriate treatment. Trauma can be caused by various factors, such as traffic accidents, falls, violence, and work accidents. Trauma can cause damage to various organs, potentially leading to disability and even death if not treated promptly and appropriately. The implementation of trauma protocols such as ATLS aims to assist healthcare workers in determining priorities for the treatment of trauma patients quickly and appropriately. With a standardized protocol, it is hoped that the treatment of trauma patients can be carried out more effectively, thereby reducing morbidity and mortality due to trauma. The results of the bivariate analysis using the Chi-Square statistical test obtained a p-value of 0.021 with a significance level of $\alpha = 0.05$. Because the p-value < 0.05, it can be concluded that H_0 is rejected and H_1 is accepted, which means there is a relationship between the implementation of trauma protocols and the results of physical trauma management in trauma patients.</p> <p style="text-align: right;"><i>This is an open access article under the CC BY-NC license.</i></p> 

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1. Introduction

Physical trauma is a common health problem and is considered an emergency requiring prompt and appropriate treatment. Trauma can be caused by various factors, including traffic accidents, falls, violence, and workplace accidents. (Puspongoro & Sujudi, 2016), (Purwanto, 2024) Trauma can cause damage to various organs, potentially leading to disability and even death if not treated promptly and appropriately. The implementation of trauma protocols such as ATLS aims to assist healthcare professionals in quickly and appropriately prioritizing the treatment of trauma patients. (Wahyuni et al., 2024), (Susilo et al., 2025) With standardized protocols, it is hoped that trauma patient care can be carried out more effectively, thereby reducing morbidity and mortality rates due to trauma. (Purwanto, 2024), (Fatriani, Masfuri, & Waluyo, 2020).

The general objective of this study is to determine the relationship between the implementation of trauma protocols and the results of physical trauma management in patients. (Situmeang, 2024), (Wijayanto, Tiara, & Maryadi, 2022).

2. Methods

This study employed a quantitative research method with a correlational design. The approach used in this study was cross-sectional, meaning data collection was conducted at a specific point in time without any follow-up with respondents. (Toulasik, 2019), (Abduh, Alawiyah, Apriansyah, Sirodj, & Afgani, 2023) In this study, researchers wanted to determine the relationship between the implementation of trauma protocols and the outcomes of physical trauma management in patients presenting to the emergency department. Location and Time of the Study (Banoet, 2019), (Kemala, 2023).

This research will be conducted in the Emergency Room (ER) at the Parombunan Community Health Center in Sibolga. The population will be all physical trauma patients who arrived and received services at the Emergency Room (ER) at the study location during the study period. (SARMILA, 2024), (Valentina, 2024) The sample in this study was a portion of physical trauma patients who came to the emergency room and met the inclusion and exclusion criteria set by the researcher. Inclusion criteria may include: Patients with physical trauma cases who came to the emergency room. Patients who received trauma treatment by health workers. (Khusaeni, 2025), (ALIF, 2024).

3. Results and Discussion

Respondents in this study were trauma patients who visited the emergency services unit during the study period. The number of respondents in this study was 50 trauma patients.

Table 1. Distribution of Respondents by Gender

NO	TYPE OF CLASS MIN	NSI FREQUENCY	PRESENT AS
1	Women	32	64%
2	Man- Man	18	36%
	Total	50	100%

Based on the table above, the majority of trauma protocol implementations were in the good category, namely 30 cases (60%).

Table 2. Distribution of physical trauma management outcomes

NO	Results Management	The frequency	Presentatio n
1	Good	34	68%
2	Enough	10	20%
3	Not enough	6	12%
	Total	50%	100%

Based on the table above, most of the results of physical trauma management are in the good category, namely 34 cases (68%).

Bivariate Analysis

Bivariate analysis was conducted to determine the relationship between the implementation of trauma protocols and the results of physical trauma management in trauma patients.

Table 3. The Relationship between Trauma Protocol Implementation and Physical Trauma Management Outcomes

Implementatio n	Good Result	Hassi l Cuku	Less than	Total l
Trauma protocol				

		p	Result	
Good	25	4	1	30
Enough	7	3	2	12
Not enough	2	3	3	8
Total	34	10	6	50

Based on the results of the analysis using the chi-square test, the p-value obtained was 0.021.

3.1 Discussion

This study aims to determine the relationship between the implementation of trauma protocols and the outcomes of physical trauma management in patients attending a healthcare facility, namely the Parombunan Community Health Center in Sibolga. Based on the results of the study, which included 50 respondents, several findings were obtained related to respondent characteristics, implementation of trauma protocols, and the outcomes of physical trauma management in patients.

Based on respondent characteristics, the majority of trauma patients were male. This indicates that men are at a higher risk of experiencing trauma than women. This may be due to men engaging in more activities outside the home and being at greater risk of traffic accidents and workplace accidents.

Based on age distribution, the majority of respondents were in the productive age group, 20–40 years old. This age group is the most active in daily activities, making it at higher risk of injury or trauma. This aligns with various studies that indicate that trauma is more common among those of productive age.

Univariate analysis results showed that the majority of trauma protocol implementations were in the good category. This indicates that healthcare workers at healthcare facilities have endeavored to implement trauma care in accordance with applicable standard procedures.

Proper implementation of trauma protocols is essential to ensure that patients receive prompt and appropriate treatment.

Furthermore, the research results also showed that the majority of physical trauma management outcomes were good. This was evident in the improvement in patients' condition after receiving trauma treatment, such as stable vital signs and reduced symptoms.

4. Conclusions

The implementation of trauma protocols for trauma patients in healthcare facilities was largely good. The outcomes of physical trauma management in these patients were largely good. There was a correlation between the implementation of trauma protocols and the outcomes of physical trauma management in these patients.

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