

RESEARCH OF UNDOCUMENTED INJURIES OF PASSENGERS IN BUSES FOR CITY TRANSPORT

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Abstract. *Today, buses for public transport are used by a large number of people around the world. Passenger safety is one of the primary goals that needs to be provided. In this regard, the design of the interior of buses is one of the primary factors which affects the safety of passengers. In addition, passenger injuries are one of the basic indicators of bus safety. However, when it comes to injuries of passengers on buses for urban transport, the conclusions about safety are primarily based on documented injuries in some of the official institutions, such as for example hospitals. The basic assumption in this paper is that there are also undocumented passenger injuries, which may indicate some failure in the design of the bus. This paper presents a research related to undocumented passenger injuries in city buses.*

Key words: *City buses, safety, injuries, passengers, bus interior design.*

1. INTRODUCTION

In case of serious injuries in buses, the usual practice is to provide first aid to passengers on the spot, and then passengers are transported to a medical facility for further examination and medical treatment if necessary. In such cases, the injuries are recorded and archived. However, there are situations where, due to different circumstances, the passengers suffered physical pain and were subjected to minor injuries. In these situations, passengers usually do not opt to go to a medical facility for treatment. These injuries are usually easier in nature, whereby travelers assume on the basis of a personal assessment that such injuries do not have more serious consequences for their health and that they

can not be compensated by an insurance company for such a type of injuries.

However, from the point of view of bus safety, such injuries may also be significant because they potentially point to the lacks in the interior design of the buses for urban passenger transport. An insight into the literature dealing with this issue [1-10] has shown that this aspect of bus safety has not been adequately treated before. It is difficult to find any research that has been focused on this topic.

Bearing in mind the foregoing, the aim of the research in this paper is to examine the possibility of the existence of formally unreported injuries in buses for city passenger transport. The basic hypothesis is that there are formally unreported injuries in buses for city transport of passengers on the territory of the city of Belgrade.

2. METHOD

On the basis of insights into the literature dealing with injuries of passengers in buses [1-10], it was not possible to find a methodology dealing with the problem of systematically collecting information about the unrecorded passenger injuries in urban transport. In view of this, it was necessary to develop a tool that would enable the collection of the said data. Bearing in mind that this information can be collected only from passengers, a questionnaire has been developed, which enables the recording of the necessary data.

The questionnaire was filled by 140 people. The criterion for completing the questionnaire was that all people at some time during a lifetime used public bus transport. The survey was conducted in the territory of the city of Belgrade. The questionnaire was primarily given to the respondents when they were sitting on the bus during the driving. Basic data on the structure of respondents are given in Table 1.

3. RESULTS AND ANALYSIS OF RESULTS

The average age of the respondents was 41 years ($M=40,85$; $SD=15,29$). Half of the respondents had up to 39 years, and a half had more ($M_e=39$). The age of respondents ranged from 19 to 73 years. Among the respondents the most frequent were respondents with 21 years of age ($M_o=21$). Quantitatively measurable data from the questionnaires were analyzed and summarized in Table 1.

Table 1. Analysis of the answers to the questions from the questionnaire on unreported injuries on the bus.

An ordinal number of the question from the questionnaire		Frequency	Percent	N
1. Respondents who have suffered an injury in a city bus		5	3,6	140
2. Unreported injuries to a health institution		2	40,0	5
3. The reason for the failure to report the injury is the initial		2	100,0	2
5. Respondents who did not report the injury to the driver		4	80,0	5
6. Respondents who did not report the injury to the company		4	80,0	5
7. Respondents who did not report the injury to the insurance		4	80,0	5
8. Respondents who did not report the injury to any other		5	100,0	5
10. The presence of the consequences of an injury		4	80,0	5
Gender	Male	81	57,9	140
	Female	59	42,1	

The frequency of injuries per individual parts of the body is shown in Figure 1.

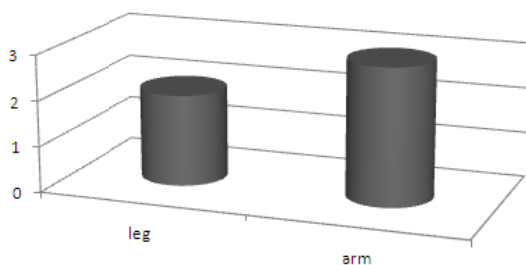


Figure 1. Parts of the body of passengers who were injured and the number of such injuries obtained in buses for the city transport of passengers in Belgrade on a sample of 140 respondents.

Figure 2 shows the types of injuries and the frequency of their occurrence.

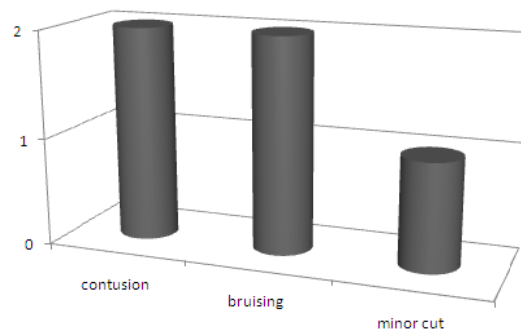


Figure 2. Types of injuries of passengers and the number of such injuries that travelers obtained in buses for city transport of passengers in Belgrade on a sample of 140 respondents.

Figure 3 shows the situations that resulted in passenger injuries and their frequencies.

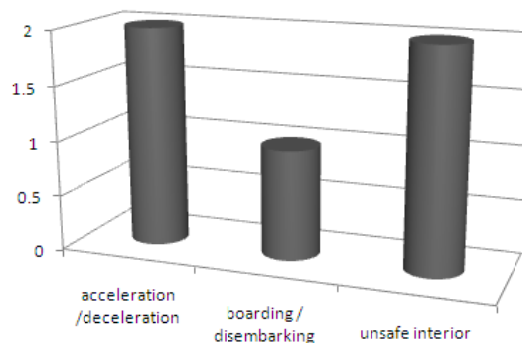


Figure 3. Causes of injuries of passengers in buses for city transport in Belgrade and the frequency of their appearance on a sample of 140 respondents.

4. CONCLUSION

This study confirmed the starting hypothesis that there is a certain percentage of undocumented injuries in buses intended for city passenger transport. This percent is relatively small and in this study, it is 1.42% of the total number of respondents. Of the total number of injuries, 40% constitute unregistered injuries. However, this survey was done on a sample of 140 respondents, which is a relatively small percentage relative to the number of inhabitants in Belgrade. Taking into account the number of inhabitants in Belgrade and the resulting percentage of injuries, a considerable number of people who have suffered some kind of injuries during driving around the city will be obtained. As can be seen from the analysis, these injuries are milder in their character. Nevertheless, they indicate that should be given additional attention to certain

aspects of interior design, in order to further reduce the percentage of injuries of passengers in city buses.

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