Bionorte, Montes Claros, v. 10, n. 2, p. 155-159, jul./dec. 2021.
https://doi.org/10.47822/bionorte.v10i2.119
ISSN 2526-6349 *On-line version*
ISSN 2175-1943 *Print version*

Original Article

Profile of victims of traffic accidents in a city in the north of Minas Gerais

Perfil das vítimas de acidentes de trânsito em uma cidade do norte de Minas Gerais

Marcus Vinícius Faria Dantas[1]
orcid.org/0000-0003-1149-7289

Eva Cristiane Silva Aguiar[2]
orcid.org/0000-0003-1668-2838

Lucas Faustino de Souza[2]
orcid.org/0000-0003-2565-1080

Nadine Antunes Teixeira[2]
orcid.org/0000-0001-7875-2921

Leila das Graças Siqueira[1,2]
orcid.org/0000-0002-1538-6722

[1] Universidade Estadual de Montes Claros, (UNIMONTES).

[2] Faculdades Unidas do Norte de Minas (FUNORTE)

Author for correspondence: Marcus Vinícius Faria Dantas. Campus Universitário Prof. Darcy Ribeiro, Av. Prof. Rui Braga, s/n - Vila Mauricéia, Montes Claros - MG, Brazil. E-mail: marcusdantas769@hotmail.com

How to cite this article

ABNT
DANTAS, M. V. F. *et al*. Profile of victims of traffic accidents in a city in the north of Minas Gerais. **Bionorte**, Montes Claros, v. 10, n. 2, p. 155-159, jul./dec. 2021.
https://doi.org/10.47822/bionorte.v10i2.119

Vancouver
Dantas MVF, Aguiar ECS, Souza LF, Teixeira NA, Siqueira LG. Profile of victims of traffic accidents in a city in the north of Minas Gerais. Bionorte. 2021 jul-dec;10(2):155-59.
https://doi.org/10.47822/bionorte.v10i2.119

Received: 01 February 2021.
Accepted: 03 May 2021.

Abstract

Objective: This study aimed to characterize traffic accidents in the city of Montes Claros, Minas Gerais, in 2016. **Materials and Methods:** A documentary, descriptive, retrospective study was carried out with a quantitative approach that covered all victims of traffic accidents attended by the Mobile Emergency Service in Montes Claros, according to the data records obtained in the Medical Regulation Sheets of the Emergency Service. Mobile Emergency Care. **Results:** The results show that 3,074 victims were rescued. Of these, 92.6% of the occurrences were triggered by the Basic Support Unit, largely related to the male gender, which represents 65.1%, in the age group between 20 and 59 years (84.1%). **Conclusion:** When portraying the characteristics of traffic accidents, it is concluded that they are, in their majority, victims attended by the Basic Support Unit, the most affected age group are young adults between 20 and 59 years old and the male sex is more frequently involved in occurrences.

Key words: Traffic accident. Epidemiology. SAMU. Health information system.

Resumo

Objetivo: este estudo teve como objetivo caracterizar os acidentes de trânsito na cidade de Montes Claros, Minas Gerais, em 2016. **Materiais e Métodos:** realizou-se um estudo documental, descritivo, retrospectivo com abordagem quantitativa que abrangeu todas as vítimas de acidente de trânsito atendidas pelo Serviço de Atendimento Móvel de Urgência em Montes Claros, de acordo com os registros de dados obtidos nas Fichas de Regulação Médica do Serviço de Atendimento Móvel de Urgência. **Resultados:** os resultados demonstram que foram socorridas 3.074 vítimas. Destes registros, 92,6% das ocorrências foram acionadas pela Unidade de Suporte Básico, grande parte relacionada ao sexo masculino que representa 65,1%, na faixa etária entre 20 e 59 anos (84,1%). **Conclusão:** ao retratar as características dos acidentes de trânsito, conclui-se que são, em sua maioria, vítimas atendidas pela Unidade de Suporte Básico, a faixa etária mais acometida são os adultos jovens entre 20 e 59 anos e o sexo masculino está mais frequentemente envolvido nas ocorrências.

Palavras-chave: Acidente de trânsito. Epidemiologia. SAMU. Sistema de informação em saúde.

INTRODUCTION

A traffic accident is defined as an unintentional event involving a vehicle, motorized or not, traveling on a road for vehicular traffic[1]. Traffic accidents are part of a worldwide problem. Many lives are lost or injured both in urban areas and on highways. In 2012, more than 1 million deaths were recorded worldwide[2]. In Brazil, in 2013, according to the National Health Survey (PNS), more than 1,800 respondents were involved in a traffic accident[3].

It is noteworthy that, in Brazil, assistance involving traffic accidents is mostly provided by the Mobile Emergency Care Service (SAMU), which has two types of Support Units, the Basic Support Unit (USB) and the Advanced Support Unit (USA). The difference between the two is that the USB is used in urgent cases in which urgent care is required, but there is no imminent risk of death. This unit is composed of at least two professionals, being an emergency vehicle driver and a nursing technician or assistant, who are professionals trained in non-invasive techniques. The intensive care unit is activated in cases of emergency care and is composed of at least three professionals, being an emergency vehicle driver, a nurse and a physician, professionals who work with complex, invasive procedures that require specific materials to be performed in an out-of-hospital environment[4].

Thus, studies that propose to portray the characteristics of traffic accidents and their victims are necessary, allowing in the future to propose interventions that contribute to avoid the occurrences and the reduction of these accidents that can be prevented through the safety behavior adopted. Besides generating information pertinent to people's health, it will also be possible to establish action plans and appropriate health policies to prevent the various occurrences of traffic accidents and, therefore, contribute to a better quality of life for everyone who uses some means of transportation. In this context, this study aimed to characterize the traffic incidents attended by the SAMU in the city of Montes Claros/MG in 2016.

MATERIAL AND METHODS

An epidemiological, documental, descriptive, retrospective study with a quantitative approach was conducted using information contained in the records of cases of Traffic Accidents (TA) attended in the city of Montes Claros/MG in the period from January to December 2016, according to data from the System of the Intermunicipal Health Consortium of the Northern Minas Emergency Network (CISRUN) of the city of Montes Claros/MG.

Data collection for the research was performed through the analysis of the pre-hospital care forms (FAPH) of the USB and USA ambulances of SAMU Macro Norte, filled out by the CISRUN team at the time of each occurrence of urgency and/or emergencies regarding the period from January to December 2016, which are available in the physical database of the institution provided that they met the following inclusion criteria, such as: being a record of the type of traffic accident occurrence in the city of Montes Claros/MG in 2016. The exclusion criteria were records of patients seen for other causes, for reasons other than traffic accidents, records with missing, illegible and/or erased data. Thus, considering the criteria described above, this study had a sample of 3,074 occurrence reports that were considered as sample according to the inclusion criteria.

It is also noteworthy that this research meets the ethical precepts of Resolution 466 of 2012, of the National Health Council4. Therefore, the research project was previously reviewed by the Ethics and

Research Committee of Unimontes and was authorized to be carried out, according to consolidated opinion no. 2,425,800, from December 2017.

RESULTS

In the period studied, a total of 16,419 calls made by the SAMU in Montes Claros/MG in 2016 were recorded, and of these, 3,074 representing 18.7% of the calls made by the CISRUN were related to traffic accidents.

In the following two tables we present the sociodemographic characterization of the occurrences and the description of the variables referring to the 3,074 attendances involving motor vehicles and traction vehicles.

Table 1 shows that, out of a total of 3,074, the Basic Support Units that had, in their rescue teams, drivers and technicians in emergency medicine, performed 2,845 (92.6%) of the assistances when compared to the Advanced Support Units (6.6%).

Table 2 allows us to describe the sociodemographic characteristics related to male and female gender and age. From the total of 3,074 attendances, 2,002 (65.1%) were male and 943 (30.7%) were female. In addition, it was found that the attendance prevails among adults between 20 and 59 years old, about (84.1%), followed by teenagers between 10 and 19 years old, which represent (5.2%). It is also noteworthy that there is lack of registration with a frequency of 111 (3.6%) of forms not filled out.

Table 1 - Characterization of the type of Mobile Unit used by the SAMU for traffic incidents in the city of Montes Claros - MG in 2016. (n=3.074).

Unity	n	%
USA	203	6.6
USB	2,845	92.6
Not Registered	26	0.8
Total	3,074	100

Source: SAMU Prehospital Care Sheets - Macro Norte, 2016.
USA: Advanced Health Unit. USB: Basic Health Unit.

Table 2 - Sociodemographic characterization of victims of traffic incidents attended by the SAMU in the city of Montes Claros - MG in 2016. (n=3.074).

Variables	n	%
Gender		
Male	2.002	65.1
Female	943	30.7
Not registered	129	4.2
Age		
0 to 9 years old	94	3.1
10 to 19 years old	161	5.2
20 to 59 years old	2.586	84.1
60 and over	122	4.0
Not registered	111	3.6

Source: SAMU Prehospital Care Sheets - Macro Norte, 2016.

DISCUSSION

In this study, it was observed that most of the calls made by the SAMU are related to the USB and, to a lesser extent, to the USA. These same findings reinforce studies carried out in the state of Paraíba regarding 89.2% related to the USB call[5].

The justification for most accidents to be received by the Basic Support Units lies in the severity criteria related to the classification of emergencies by levels, made by the Medical Regulation Center, which considers the questioning done with the requester, besides other criteria, such as type of resource needed, means available, cost/benefit ratio, time-distance evaluation, and are thus classified[7]:

- **Level 1:** Emergency or Urgency of absolute priority. Circumstances in which there is immediate risk to life and/or the existence of immediate or secondary risk of serious functional loss.
- **Level 2:** Moderate priority urgency. It comprises the circumstances in which there is a need for medical attention, not necessarily immediately, but within a few hours.
- **Level 3:** Low priority emergency. Circumstances in which there is a need for medical evaluation, but there is no risk to life or loss of function, and it can wait several hours.

- **Level 4:** Low priority emergency. These comprise events where the regulating physician can give advice over the phone, provide guidance on medication use, general care, and other referrals.

When observing the profile of the victims of traffic accidents as to sociodemographic characteristics, it was found that males represented a higher percentage of traffic accidents when compared to females. The results represented were reaffirmed with the studies by Mendonça5, who described that 76.8% of the victims were male, with a predominance of males between 20 and 29 years of age, around 31.5%. Similar data were also found in a study about factors associated with traffic accidents in the state of Bahia, where about 86.8% of the injured were between 15 and 59 years old6. The results seen in this study were corroborated in other studies, related to age and gender, such as those found in a research in the state of Paraná, in the SAMU attendance records, which also describe a higher occurrence among men who totaled 68.2%, and that adults between 20 and 39 years of age accounted for 74.7% of the total of these attendances.

The high incidence of male-related accidents in the 20 to 59 age group is justified by the fact that, during this period, men travel more frequently to cities and women seek closer proximity to their homes, which makes traffic occurrences among men a higher risk[8].

CONCLUSION

In this study, when portraying the characteristics of traffic accidents, it can be observed that most of them are victims attended by the USB, and the most affected age group is young adults between 20 and 59 years old. These data are related to the researched period. As for gender, it is noteworthy, especially, that males are more often involved in the occurrences.

Therefore, this study, based on the analysis of the data from the SAMU/CISRUN, showed important and fundamental results for a more efficient planning to the city's emergencies, identifying regions of higher risk, such as the most vulnerable neighborhoods and groups, later creating forms of traffic education focusing on the most affected group (men between 20 and 59 years old).

It is also noteworthy that the way the FAPH are filled out needs to be improved, considering that one of the important limitations of this study was the precariousness of the records.

REFERENCES

1. Brasil. Ministério da Saúde. Código de Trânsito Brasileiro. Lei n° 9.503 de 23/12/1997. Acesso em 13 mar. 2015. Available from: http://www.planalto.gov.br/ccivil_03/leis/l9503.htm

2. Abreu DROM, Souza EM, Mathias TAF. Impacto do Código de Trânsito Brasileiro e da Lei Seca na mortalidade por acidentes de trânsito. Cad saúde pública. 2018;34(8):e00122117. Available from: 1678-4464-csp-34-08-e00122117.pdf (scielo.br)

3. Andrade FR, Antunes JLF. Tendência do número de vítimas em acidentes de trânsito nas rodovias federais brasileiras antes e depois da Década de Ação pela Segurança no Trânsito. Cad saúde pública. 2019;35(8):e00250218. Available from: https://www.scielo.br/pdf/csp/v35n8/1678-4464-csp-35-08-e00250218.pdf

4. Brasil. Ministério da Saúde. Portaria nº 1.010, de 21 de maio de 2012. Redefine as diretrizes para a implantação do Serviço de Atendimento Móvel de Urgência (SAMU 192) e sua Central de Regulação das Urgências, componente da Rede de Atenção às Urgências. Diário Oficial da União. Brasília, 2012. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2012/prt1010_21_05_2012.html

5. Mendonça MFS, Silva APSC, Castro CLC. Análise espacial dos acidentes de trânsito urbano atendidos pelo Serviço de Atendimento Móvel de Urgência: um recorte no espaço e no tempo. Rev bras epidemiol. 2017;20(4): 727-41. Available from: https://scielosp.org/pdf/rbepid/2017.v20n4/727-741/pt

6. Rios PAAR, Mota ELA, Ferreira LN, Cardoso JP, Ribeiro VM, Souza BS. Fatores associados a acidentes de trânsito entre condutores de veículos: achados de um estudo de base populacional. Ciênc saúde coletiva, 25(3):943-55, 2020. Available from: 1413-8123-csc-25-03-0943.pdf (scielo.br)

7. O'dwyer G.O, Mattos RA. Cuidado integral e atenção as urgências: o serviço de atendimento móvel de urgência do Estado do Rio de Janeiro. Saúde soc. 2013;22(1):199-210. Available from: https://www.scielo.br/pdf/sausoc/v22n1/18.pdf

8. Oliveira ZC, Mota ELA, Costa MCN. Evolução dos acidentes de trânsito em um grande centro urbano, 1991-2000. Cad saúde pública. 2008 fev; 24(2):364-72. Available from: https://www.scielo.br/pdf/csp/v24n2/14.pdf