Work accidents and occupational risks identified in the Mobile Emergency Service

ABSTRACT

Objective: To analyze the occurrence of work accidents among Mobile Emergency Service workers and the association with the identified occupational risks. Method: A quantitative, exploratory, descriptive and cross-sectional study conducted with Mobile Emergency Service workers in Rio Grande do Sul, between January 2016 and November 2017, using an online instrument. Results: A total of 265 workers participated. There was a significant association between the occurrence of accidents at work and professional category (p = 0.041); as well as the occurrence of work accidents and the mesoregion (p = 0.015). In the significant associations between the occurrence of accidents at work and occupational risks, accidents with sharps, physical aggression, animal bites, verbal aggression, traffic accidents during commuting and falls were highlighted. In addition, a significant association between the occurrence of an accident at work and work leave (p = 0.000) was found. Conclusion: The occurrences of work accidents during pre-hospital service activities are related to the professional category of workers, the work mesoregion, work leave and the exposure of workers to different occupational risks.

DESCRIPTORS

Accidents, Occupational; Emergency Medical Services; Ambulances; Occupational Risks; Occupational Health.

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INTRODUCTION

The care actions provided by health workers in the pre-hospital environment are full of favorable situations for illness and the occurrence of work accidents(3). Workers’ exposure to work accidents arising from the presence of different occupational risks occurs at different times of care, whether in providing direct care to the patient or even when getting involved in an accident while commuting the team to the place where the care will be performed(1)(2).

This type of care in Brazil is provided by the Mobile Emergency Service (SAMU – Serviço de Atendimento Móvel de Urgência), which seeks to address health problem situations to the population in urgent and emergency conditions in the most different places, providing a better response to situations which have a risk of death and can reduce the sequela resulting from illness(3). The work in the pre-hospital environment comprises characteristics such as complexity of the functions performed, a fast pace, and inappropriate work conditions which can generate occupational risks, the occurrence of work accidents and physical and psychological wear(4).

By definition, a work accident is defined as events which occur during work activities which generate physical or mental damage to workers on a temporary, permanent or fatal basis, causing functional limitation or disability(5). The work in SAMU has characteristics which favor the occurrence of work accidents due to the particularities of work inside the ambulance, which has limited space, little ventilation, dynamic traffic movements, sharp curves, as well as the types of service which involve stressful situations due to the emergency situations and the need to perform procedures to maintain patients’ lives(6).

Identification of work accidents is a factor which requires attention, given that pre-hospital workers are exposed to different types of occupational risks(6). SAMU workers are exposed to more occupational risks in pre-hospital care than workers who perform activities in the hospital environment, since the care provided to victims occurs in different locations and in the most different circumstances(7).

Occupational risks are due to specific factors in the environment and working conditions, as well as characteristics such as length of service, training, and professional category. Occupational risks include contact with fluids such as blood and secretions, microorganisms such as viruses and bacteria, contact with sharps, among other generators of work accidents during the performance of work activities(8).

In addition, given the complexity of the work developed and the presence of risks which can cause illness in workers in the pre-hospital environment, accidents and even death, measures aimed at their health are therefore necessary(6). However, healthcare actions for workers are still poorly developed by service managers or even they do not exist(9). Among the factors which can generate better working conditions is a reduction in workload, adequate personnel size, and availability of sufficient material inputs for providing care(2).

In this sense, it is justified to carry out this study in view of the specificity of the pre-hospital service which requires constant attention, agility and knowledge to provide care to patients, victims and the population in different causal situations. It should also be noted that the work performed by the pre-hospital team has high social relevance, as it is the first service to be performed by a prepared team which contributes to the survival and stability of the attended patients or victims.

In addition to the specificities of the service, the different environments in which the workers perform the service such as public roads, homes and places with difficult access which expose the worker to different occupational risks are emphasized. Thus, this study can collaborate jointly with the Municipal Health Departments and managers of the Mobile Emergency Service municipalities involved in the study with a reflection on implementing strategies and actions which can minimize the exposure to occupational risks that may cause work accidents.

Given the above, this study aimed to: analyze the occurrence of work accidents among workers from the Mobile Emergency Service and the association with the occupational risks identified.

METHOD

STUDY DESIGN

This is a quantitative, exploratory and descriptive study with a cross-sectional design.

POPULATION

This study was conducted with 192 SAMU workers, distributed across 57 municipalities in the state of Rio Grande do Sul, Brazil, with a population of 1352 workers comprising emergency vehicle drivers, nursing technicians and assistants, nurses and doctors. Participating municipalities were grouped by mesoregions to better present the results, according to the standard adopted by the Brazilian Institute of Geography and Statistics (IBGE – Instituto Brasileiro de Geografia e Estatística), as shown in Figure 1.
A minimum sample of 225 participants was obtained using EPI Info™ 7.2.2.6 software for the sample calculation from the population of 1352 workers, with a reliability level of 90% and a sampling error margin of 5%. However, a total of 265 workers participated in this study, distributed according to the professional categories: 72 ambulance drivers, 4 motorcycle ambulance drivers, 83 nurses, 87 nursing technicians or assistants, and 19 doctors.

**Selection criteria**

Workers who met the following inclusion criteria were invited to participate in the study: to have any type of work relationship with the SAMU 192 Mobile Emergency Care Service, regardless of working time and to be performing work in mobile units (ambulances and motorcycle ambulances). Motorboat ambulance drivers and aircraft pilots were excluded from the study, considering that these devices are not operating in the state of Rio Grande do Sul, as well as professionals who work exclusively in administrative functions or in the Medical Regulation Centers.

**Data collection**

Data were collected between January 2016 and November 2017 using a digital instrument through the free Google Forms platform and applied online. The instrument comprised sociodemographic issues, the occurrence of work accidents, the frequency of the presence of occupational risks and work-related leave from work.

Prior contact was made with the municipal health departments and managers of the Mobile Emergency Care Services to obtain authorization for developing the study and to obtain the list of workers’ emails. The invitation to participate in the study was subsequently sent, together with the link to access the instrument individually, and a copy of the Informed Consent Form to the entire study population.

**Data analysis and processing**

Microsoft Excel 2013 software was used to tabulate the data using double entry, and the Statistical Package for the Social Sciences (SPSS) v.24 for the statistical analysis of the data. A descriptive statistical analysis was carried out based on absolute and relative frequencies to characterize the participants and the occurrence of accidents. The Kruskal-Wallis test was used to verify the statistical associations between the occurrence of accidents at work and the professional category, accidents at work and the mesoregion of workers’ performance, and the Pearson’s $\chi^2$ test was used for the association between the occurrence of work accidents and exposure to occupational risks. The statistical significance level for all tests was $p>0.05$.

**Ethical aspects**

The study was approved by the Research Ethics Committee in the Health Area under Opinion no. 118/2015 and met the ethical aspects according to Resolution 466/12 of the National Health Council. This study was developed with the participation of the State Health Secretariat of the State of Rio Grande do Sul through the SAMU 192 State Regulation Department.

**RESULTS**

Among the 265 workers participating in the study, 72 (27.2%) were ambulance drivers, four (1.5%) motorcycle ambulance drivers, 83 (31.3%) nurses, 87 (32.8%) nursing technicians or assistants, and 19 (7.2%) doctors. Regarding gender, it was found that 142 (53.6%) were male and 123 (46.4%) female. The predominant age group was between 30 and 45 years old with 198 (74.7%) workers, followed by 31 (11.7%) workers below 29 years old, and 36 (13.6%) over 45 years old.

Regarding the occurrence of work accidents, it was identified that 139 (52.5%) had already suffered some type of work accident during their work activities in the pre-hospital environment. Table 1 shows the significant association between the occurrence of work accidents and the professional category ($p = 0.041$), identifying an association between falls in the workplace with the professional category ($p = 0.038$).

| Variable | Nurses (n=83) | Nursing Tech./Assist. (n=87) | Doctors (n=19) | Ambulance drivers (n=72) | Motorcycle ambulance drivers (n=4) |
|----------|--------------|-----------------------------|---------------|--------------------------|----------------------------------|
| Work accident | 38 (45.8) | 56 (64.4) | 11 (57.9) | 31 (43.1) | 3 (75) | 0.041 |
| Types of accidents | | | | | | |
| Sharps | 17 (20.5) | 23 (26.4) | 2 (10.5) | 11 (15.3) | 2 (50) | 0.179 |
| Physical aggression | 9 (10.8) | 20 (23) | 4 (21.1) | 8 (11.1) | 1 (25) | 0.152 |
| Animal bite | 7 (8.4) | 9 (10.3) | 2 (10.5) | 4 (5.6) | 1 (25) | 0.624 |
| Verbal aggression | 30 (36.1) | 43 (48.4) | 11 (57.9) | 23 (31.9) | 2 (50) | 0.087 |
| Traffic accidents during commuting | 7 (8.4) | 17 (19.5) | 1 (5.3) | 9 (12.5) | 1 (25) | 0.182 |
| Hit by a vehicle at the service scene | 1 (1.2) | 1 (1.1) | 0 (0) | 0 (0) | 0 (0) | 0.891 |
| Falls | 15 (18.1) | 21 (24.1) | 5 (26.3) | 6 (8.3) | 2 (50) | 0.038 |
| Burning by chemicals | 0 (0) | 1 (1.1) | 1 (5.3) | 0 (0) | 0 (0) | 0.163 |
| Burn with fire | 0 (0) | 1 (1.1) | 0 (0) | 0 (0) | 0 (0) | 0.727 |

Kruskal-Wallis test; $p>0.05$. 

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There was also a significant association between the occurrence of an accident at work and the mesoregion (p = 0.015), and a statistically significant association between the worker’s mesoregion with an accident with sharps (p = 0.016), animal bite (p = 0.016), falls (p = 0.002) and burning with fire (p = 0.024), according to Table 2.

### Table 2 – Relationship between the occurrence of work accidents according to the mesoregion of workers – Rio Grande, RS, Brazil, 2018.

| Mesoregion | 1 (n=12) | 2 (n=20) | 3 (n=43) | 4 (n=52) | 5 (n=28) | 6 (n=93) | 7 (n=17) | p  |
|-----------|---------|---------|---------|---------|---------|---------|---------|----|
| Work accident | 6 (%) | 50 (%) | 25 (%) | 31 (%) | 72.1 (%) | 42.3 (%) | 15 (%) | 53.6 (%) | 49 (%) | 52.7 (%) | 11 (%) | 64.7 (%) | 0.015 |
| Types of accidents | | | | | | | | |
| Sharps | 1 (%) | 8.3 (%) | 10 (%) | 13 (%) | 30.2 (%) | 17.3 (%) | 2 (%) | 7.1 (%) | 20 (%) | 21.5 (%) | 8 (%) | 47.1 (%) | 0.016 |
| Physical aggression | 1 (%) | 8.3 (%) | 3 (%) | 15 (%) | 12 (%) | 27.9 (%) | 4 (%) | 7.7 (%) | 3 (%) | 10.7 (%) | 15 (%) | 16.1 (%) | 4 (%) | 23.4 (%) | 0.169 |
| Animal bite | 2 (%) | 16.7 (%) | 1 (%) | 5 (%) | 9 (%) | 20.9 (%) | 1 (%) | 1.9 (%) | 1 (%) | 3.6 (%) | 6 (%) | 6.5 (%) | 3 (%) | 17.6 (%) | 0.016 |
| Verbal aggression | 5 (%) | 41.7 (%) | 5 (%) | 25 (%) | 26 (%) | 60.5 (%) | 16 (%) | 30.8 (%) | 11 (%) | 39.3 (%) | 38 (%) | 40.9 (%) | 8 (%) | 47.1 (%) | 0.078 |
| Traffic accidents during commuting | 0 (%) | 0 (%) | 1 (%) | 5 (%) | 9 (%) | 20.5 (%) | 4 (%) | 7.7 (%) | 4 (%) | 14.3 (%) | 12 (%) | 11.9 (%) | 5 (%) | 29.4 (%) | 0.105 |
| Hit by a vehicle at the service scene | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 1 (%) | 3.6 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 1 (%) | 5.9 (%) | 0.103 |
| Falls | 0 (%) | 0 (%) | 1 (%) | 5 (%) | 9 (%) | 39.5 (%) | 9 (%) | 17.3 (%) | 3 (%) | 10.7 (%) | 15 (%) | 15.1 (%) | 5 (%) | 29.4 (%) | 0.002 |
| Burning by chemicals | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 1 (%) | 2.3 (%) | 1 (%) | 1.9 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0.725 |
| Burn with fire | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 0 (%) | 1 (%) | 5.9 (%) | 0.024 |

Legend: 1 (Central-West Rio-Grandense); 2 (Central-East Rio-Grandense); 3 (Metropolitan region of Porto Alegre); 4 (Northeast Rio-Grandense); 5 (Northwest Rio-Grandense); 6 (Southeast Rio-Grandense); 7 (Southwest Rio-Grandense). Kruskal-Wallis test; p>0.05.

Table 3 identifies the associations between the occurrence of work accidents and the occupational risks identified by workers. The occurrence of work accidents was significantly associated with the following occupational risks: inadequate posture (p=0.012); prolonged working hours (p=0.001); stress (p=0.000); work overload (p=0.002); inadequate lighting (p=0.000); anxiety (p=0.000); physical exhaustion (p=0.000); mental exhaustion (p=0.000); inadequate physical arrangement (p=0.006); and defective equipment (p=0.013).

Accidents with sharps had a statistically significant association with the risks of: prolonged working hours (p=0.038); stress (p=0.032); work overload (p=0.028); inadequate lighting (p=0.001); anxiety (p=0.005); physical exhaustion (p=0.013); mental exhaustion (p=0.006); inadequate physical arrangement (p=0.001); and unprotected machinery and equipment (p=0.001).

Accidents with animal bites also showed a statistically significant association with: anxiety (p=0.008); physical exhaustion (p=0.028); and mental exhaustion (p=0.039).

Considering the occurrence of verbal aggression, a statistically significant association was identified with: inadequate posture (p=0.003); prolonged working hours (p=0.011); stress (p=0.000); work overload (p=0.003); inadequate lighting (p=0.000); anxiety (p=0.000); physical exhaustion (p=0.000); mental exhaustion (p=0.000); inadequate physical arrangement (p=0.001); unprotected machinery and equipment (p=0.001); and defective equipment (p=0.001).

Traffic accidents during commuting showed a significant association with: prolonged working hours (p=0.022); inadequate lighting (p=0.000); anxiety (p=0.041); physical exhaustion (p=0.023); and mental exhaustion (p=0.013). Furthermore, falls had a statistically significant association with: inadequate posture (p=0.022); prolonged working hours (p=0.027); stress (p=0.016); inadequate lighting (p=0.029); anxiety (p=0.007); physical exhaustion (p=0.037); mental exhaustion (p=0.002); and defective equipment (p=0.018).

### Table 3 – Association between the occurrence of work accidents and occupational risk observed by the worker – Rio Grande, RS, Brazil, 2018.

| Occupational risks | Occurrence of work accidents | Sharp puncture | Physical aggression | Animal bite | Verbal aggression | Traffic accident while commuting | Falls |
|--------------------|------------------------------|----------------|--------------------|-------------|------------------|--------------------------------|-------|
| Inadequate posture | 0.012                        | 0.452           | 0.125              | 0.364       | 0.003            | 0.123                         | 0.022 |
| Shift and nightshift work | 0.053                     | 0.786           | 0.074              | 0.721       | 0.300            | 0.182                         | 0.197 |
Regarding work leave, 39 (14.7%) workers have already had to be on leave due to an accident at work, and of these 20 (7.5%) were away for up to seven days, 14 (5.3%) were away from seven up to 14 days, two (0.8%) from 15 to 30 days, three (1.1%) from 30 to 60 days, two (0.8%) workers from 60 to 180 days and three (1.1%) for more than 180 days. In addition, a significant association was verified between the occurrence of work accidents and time off work ($X^2 = 41.453; \text{df} = 1; p = 0.000)$.

**DISCUSSION**

The occurrence of work accidents in performing pre-hospital environment work activities was identified by 139 (52.5%) workers; this finding is in line with a study carried out at a SAMU Central Unit in a city in Paraíba state with 37 workers, in which 30% of whom reported having previously suffered a work accident(6).

Work accidents showed a statistically significant association with the professional category of SAMU workers. Among work accidents, it is noteworthy that accidents with sharps was identified as the most frequent among workers, and this type of work accident exposes the worker to biological fluids. In the pre-hospital service in the municipality of Goiânia, Goiás state, it was found that the professional category which suffered the most work accidents involving exposure to biological material was nurses, followed by doctors, nursing technicians and ambulance drivers(10). This characteristic may be related to the frequent presence of nurses in performing care. In a study(11) at a SAMU Central Unit in Cuiabá, Mato Grosso state, it was found that the nurse was present during the care in 926 (91.9%) out of 1007 visits made by the unit.

There was also a statistically significant association between work accidents and the mesoregion in which workers carried out their activities, while accidents involving sharps, animal bites, falls and fire burns stand out among the accidents. In an analysis of burn consultations performed in an emergency room in the city of Pelotas, Rio Grande do Sul state, it was verified that the predominant place of accident occurrence in 529 burn consultations performed by the service was at work and in the home environment, with SAMU being the service which took 5% of these patients to the Emergency Room(12), with the care provided by SAMU to these victims potentially exposing the workers to work accidents.

There was a statistically significant association between the occurrence of work accidents and the occupational risks identified by these workers in their work environments. Among the mentioned occupational risks, inadequate posture, prolonged working hours, stress, work overload, inadequate lighting, anxiety, physical exhaustion, mental exhaustion, inadequate physical arrangement, unprotected machinery and equipment and defective equipment stood out. A study with 572 Emergency Medical Services (EMS) workers identified sprains and strains, bodily injuries resulting from lifting, transporting and transferring patients and equipment, as well as exposures to harmful substances to health among the injuries suffered by workers. The workers also related these work accidents to physical effort, inadequate body posture, repetitive movements, exposure to chemicals, as well as slips, falls, traffic accidents and aggressions or violence(13).

There was a significant association with several occupational risks according to the occurrence of accidents with sharps suffered by workers, such as anxiety, stress, physical exhaustion, work overload and prolonged working hours. Accidents involving sharps mainly occur during venipuncture, capillary blood glucose, intradermal medication and intravenous catheter removal. In addition, work accidents are associated to providing care to the patient inside the ambulance while on the move, or even at the scene where care is provided(14). Animal bites showed a significant association with occupational risks anxiety and physical and mental exhaustion. In addition to injuries resulting from bites, animal bites are also potentially capable of transmitting contaminated biological material to workers, as they cause the transfer of pathogenic microorganisms(15).

Physical and verbal aggressions are characterized as violence in the work environment, verbal aggression increases

| Occupational risks                          | Occurrence of work accidents | Sharp puncture | Physical aggression | Animal bite | Verbal aggression | Traffic accident while commuting | Falls |
|--------------------------------------------|-----------------------------|----------------|---------------------|------------|------------------|---------------------------------|-------|
| Prolonged working hours                    | 0.001                       | 0.038          | 0.007               | 0.682      | 0.011            | 0.022                           | 0.027 |
| Stress                                     | 0.000                       | 0.032          | 0.000               | 0.188      | 0.000            | 0.062                           | 0.016 |
| Work overload                              | 0.002                       | 0.028          | 0.000               | 0.671      | 0.003            | 0.101                           | 0.152 |
| Inadequate lighting                        | 0.000                       | 0.001          | 0.010               | 0.085      | 0.000            | 0.000                           | 0.029 |
| Anxiety                                    | 0.000                       | 0.005          | 0.003               | 0.008      | 0.000            | 0.041                           | 0.007 |
| Physical exhaustion                        | 0.000                       | 0.013          | 0.000               | 0.028      | 0.000            | 0.023                           | 0.037 |
| Mental exhaustion                          | 0.000                       | 0.006          | 0.002               | 0.039      | 0.000            | 0.013                           | 0.002 |
| Inadequate physical arrangement            | 0.003                       | 0.001          | 0.007               | 0.321      | 0.001            | 0.154                           | 0.347 |
| Unprotected machinery and equipment         | 0.006                       | 0.001          | 0.008               | 0.434      | 0.001            | 0.256                           | 0.409 |
| Defective equipment                        | 0.013                       | 0.004          | 0.029               | 0.569      | 0.001            | 0.177                           | 0.018 |

Pearson’s $X^2; \text{p}<0.05$
and is the one which most affects workers, especially occurring due to patients’ dissatisfaction because of the difficulty of accessing healthcare and deficits in reception\cite{19}. A significant association for the physical aggressions suffered during work was identified with occupational risks: work overload, stress, physical exhaustion, mental exhaustion and inadequate physical arrangement. Tension and stress during pre-hospital care usually occur in critically ill, psychiatric and aggressive patients\cite{16}. Physical aggression among workers in the pre-hospital environment is a characteristic with increasing frequency, as pointed out by a study\cite{7} with 300 records of serious accidents which had interpersonal aggression as the main injury mechanism, representing 62% of the analyzed cases.

Regarding the verbal aggression accident, significant associations with the following occupational risks stand out: inadequate posture, prolonged working hours, stress, work overload, inadequate lighting, anxiety, physical exhaustion, mental exhaustion, inadequate physical arrangement, machinery and equipment without protection, and defective equipment. Verbal aggressions are identified as insults and name-calling by the population or the patient, which also occur frequently during care delivery\cite{17}, as well as work-related harassment or moral harassment in the work environment itself\cite{7}. Verbal abuse was investigated in a study with 72 professionals (nurses, midwives, kinesiologists) and 148 paramedical technicians (nursing assistants) in pre-hospital care in three regions in southern Chile, noting that patients, their families, the general public (80%), and colleagues outside SAMU (34.6%) stand out among the main verbal abusers\cite{18}.

With regard to traffic accidents during the movement of vehicles, there was a significant association with prolonged working hours, inadequate lighting, anxiety and physical and mental exhaustion. This fact is related to the difficulties faced in traffic, and above all to disrespect to traffic laws and holes in the roads, factors which trigger stress and irritation among workers while providing assistance\cite{19}. Furthermore, the work at SAMU exposes workers to occupational risks such as tension and stress, mainly triggered by traffic and the siren noise\cite{16}, as well as the population’s incomprehension about the need for rapid ambulance movement, generating accidents\cite{7}. It is noteworthy that traffic accidents involving ambulances and other vehicles are considered frequent in labor practice; one study\cite{20} shows the involvement of 81.4% of 901 records of work accidents in at least one accident of this nature.

Falls were significantly associated with occupational risks: inadequate posture, prolonged working hours, stress, inadequate lighting, anxiety, physical exhaustion, mental exhaustion and defective equipment. Another study\cite{20} identified a higher incidence of falls resulting from exposure to occupational risks due to the characteristics of performing uninterrupted care for patients, as well as organizational and behavioral factors of workers.

The occurrence of work-related accidents also showed a statistically significant association with work leave; in addition, 14.7% of workers reported that they had to ask for sick leave due to some work-related accident. In a study with EMS workers in the United States analyzing 950 records of events involving workers’ health, 705 of them were related to some type of work accident. Moreover, the study highlights that the impacts of health problems on these workers reflect the need for temporary leave and loss working days, which can compromise the performance of the activities provided\cite{21}.

The results obtained herein can contribute to scientific knowledge and to the field of Nursing regarding the discussion of care practices in pre-hospital service, envisioning worker safety during the performance of their activities and exposure to occupational risks which generate work accidents. It is evident that although the use of technology and social networks are advancements in the research area, access to participants through digital means was a limitation in this study, as difficulties were observed related to the participation of workers from different municipalities in the interior and the metropolitan region of Rio Grande do Sul.

**CONCLUSION**

This study made it possible to analyze the occurrence of work accidents among health workers in the SAMU Mobile Emergency Care Service and to identify a statistically significant association between the occurrence of work accidents and the professional category, considering that different professional categories perform activities in the pre-hospital environment, and each of them has attributes which expose them to risks and accidents. Moreover, an association between the occurrence of work accidents and the work mesoregion of the workers was found, indicating that each region presents risks according to the characteristics of the place.

Identifying the significant association between work accidents with the presence of occupational risks and with work leave suggests the need to plan preventive actions for these risks and consequently to avoid work accidents. In this sense, it is expected to promote reflection on professional practices among these workers and service managers with the aim of promoting improvements in working conditions and worker safety in the work environment in order to reduce the occurrence of work accidents.
Conclusão: As ocorrências de acidentes de trabalho durante as atividades no serviço pré-hospitalar estão relacionadas à categoria profissional dos trabalhadores, mesorregião de atuação, afastamentos do trabalho e a exposição dos trabalhadores a distintos riscos ocupacionais.

DESCRIPTORES
Accidentes de Trabalho; Serviços Médicos de Emergência; Ambulância; Riscos Ocupacionais; Saúde do Trabalhador.

RESUMEN
Objetivo: Analizar la ocurrencia de accidentes de trabajo entre trabajadores del Servicio de Atendimiento Móvil de Urgencia y la asociación con los riscos ocupacionales identificados. Método: Estudio cuantitativo, exploratorio, descriptivo y transversal, realizado con trabajadores, entre enero de 2016 y noviembre de 2017, por medio de un instrumento online, en el Río Grande do Sul. Resultados: Participaron 265 trabajadores. Verificó-se associação significativa entre ocurrence de acidente de trabalho y categoría profesional (p=0,041); ocorrência de acidente de trabalho y la mesorregión (p=0,015). En las asociaciones significativas entre la ocurrencia de accidentes de trabajo y los riscos ocupacionales, destacaran-se los accidentes con objetos punzantes, agresión física, mordida de animal, agresión verbal, accidente de tránsito en el desplazamiento y quedas. Así como, la asociación significativa entre la ocurrencia de accidentes de trabajo y las retiradas del trabajo (p=0,000). Conclusión: Las ocurrencias de accidentes de trabajo durante las actividades en el servicio de emergencia están relacionadas a la categoría profesional de los trabajadores, mesorregión de actuación, retirada del trabajo y la exposición de los trabajadores a distintos riscos ocupacionais.

DESCRIPTORES
Accidentes de Trabajo; Servicios Médicos de Urgencia; Ambulancias; Riesgos Laborales; Salud Laboral.

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