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INTEGRATIVE REVIEW ARTICLE

TRAFFIC ACCIDENTS AND THE USE OF INDIVIDUAL PROTECTION EQUIPMENT FOR MOTORCYCLE TAXIS: AN INTEGRATIVE REVIEW

ACIDENTES DE TRÂNSITO E UTILIZAÇÃO DE EQUIPAMENTOS DE PROTEÇÃO INDIVIDUAL POR MOTOTAXISTAS: REVISÃO INTEGRATIVA

LOS ACCIDENTES DE TRÁFICO Y EL USO DE EQUIPOS DE PROTECCIÓN INDIVIDUAL PARA MOTO TAXIS: UNA REVISIÓN INTEGRADORA

Jules Ramon Brito Teixeira[1], Eduardo Nagib Boery[2], Tânia Maria de Araújo[3], Tilson Nunes Mota[4], Cezar Augusto Casotti[5], Rita Narriman Silva de Oliveira Boery[6]

ABSTRACT

Objective: describing traffic accidents involving motorcycle taxi drivers, the use of personal protective equipment and appropriate and responsible conduct in traffic. ***Method:*** an integrative review, which had as the guiding question << ***What is the relationship between occupational practice of motorcycle taxi drivers, the occurrence of traffic accidents and the use of personal protective equipment by these workers?*** >> conducted by systematic search in the Portal of CAPES and in the Virtual Health Library. ***Results:*** traffic accidents are each more frequent among motorcycle taxi drivers, causing minor, serious and very serious injuries, which can cause fractures and even lead to death in due to the failure to using personal protective equipment. ***Conclusion:*** there are several factors that can interfere with effective use of protective equipment and the appropriate conduct and responsible in traffic, measures that are of fundamental importance for the preservation of the lives of motorcycle taxi drivers. ***Descriptors:*** Motorcycle Taxi Drivers; Occupational Health; Protective Equipment; Traffic Accidents; Occupational Risks.

RESUMO

Objetivo: descrever os acidentes de trânsito envolvendo mototaxistas, o uso de equipamentos de proteção individual e condutas adequadas e responsáveis no trânsito. ***Método***: revisão integrativa, que teve como questão norteadora **<< *Qual a relação entre a prática ocupacional dos mototaxistas, a ocorrência de acidentes de trânsito e o uso de equipamentos de proteção individual por esses trabalhadores?* >>** realizada pela busca sistemática no Portal da CAPES e na Biblioteca Virtual em Saúde. ***Resultados***: os acidentes de trânsito são cada vez mais frequentes entre os mototaxistas, provocando ferimentos leves, graves e gravíssimos, podendo ocasionar fraturas e levar inclusive ao óbito, em decorrência da não utilização dos equipamentos de proteção individual. ***Conclusão***: vários são os fatores que podem interferir na efetiva utilização dos equipamentos de proteção e nas condutas adequadas e responsáveis no trânsito, medidas que são de fundamental importância para a preservação da vida dos mototaxistas. ***Descritores***: Mototaxistas; Saúde do Trabalhador; Equipamentos de Proteção; Acidentes de Trânsito; Riscos Ocupacionais.

RESUMEN

Objetivo: describir los accidentes de tránsito que involucran a conductores de taxi motocicleta, el uso de equipos de protección personal y la conducta apropiada y responsable en el tráfico. **Método:** una revisión integradora que tenía la pregunta guía << ***¿Cuál es la relación entre la práctica profesional de los conductores de taxi motocicleta, la ocurrencia de accidentes de tráfico y el uso del equipo de protección personal de los trabajadores?*** >> conducida por la búsqueda sistemática en el portal de la CAPES y de la Biblioteca Virtual en Salud. ***Resultados:*** accidentes de tráfico son cada vez más frecuentes entre los taxistas de motocicleta, causando heridas leves, graves y muy graves, que pueden causar fracturas e incluso conducir a la muerte en debido a la no utilización de equipos de protección personal. ***Conclusión*:** hay varios factores que pueden interferir en el uso eficaz de los equipos de protección y de la conducta apropiada y responsable en el tráfico, medidas que son de importancia fundamental para la preservación de la vida de los conductores de taxi motocicleta. ***Descriptores*:** Taxistas de Motocicleta; Salud Ocupacional; Equipo de Protección; Los Accidentes de Tráfico; Riesgos Laborales.

[1]Nurse, Doctoral Student, Postgraduate Nursing Program, Federal University of Bahia/PPGENF/UFBA. Salvador (BA), Brazil. Email: julesramon@gmail.com; [2]Nurse, Professor, Postgraduate Program in Nursing and Health, State University of Southwest Bahia/PPGES/UESB. Jequie (BA), Brazil. Email: eboery@gmail.com; [3]Psychologist, Post-doc Professor, Professor of the Postgraduate Program in Public Health, State University of Feira de Santana/PPGSC/UEFS. Feira de Santana (BA), Brazil. Email: araujotania@hotmail.com; [4]Nurse, Master's Student, Postgraduate Nursing Program, Federal University of Bahia/PPGENF/UFBA. Salvador (BA), Brazil. Email: tilson_uesc@yahoo.com.br; [5]Dentist, Professor, Postgraduate Program in Nursing and Health, State University of Southwest Bahia/PPGES/UESB. Jequié (BA), Brazil. Email: cacasotti@uesb.edu.br; [6]Nurse, Professor Post-doc, Postgraduate Program in Nursing and Health, State University of Southwest Bahia/PPGES/UESB. Jequié (BA), Brazil. Email: rboery@gmail.com

INTRODUCTION

The motorcycle taxi drivers are social actors involved in mototaxi phenomenon, which constitutes itself as a new branch of urban transport in the great capitals and cities in the countryside of Brazil, making it available, mostly, on an informal basis. The use of the motorcycle at work began to contributing to the increase of traffic accidents involving professional motorcyclists, including the motorcycle taxi drivers, setting up and work accidents. These accidents bring serious consequences for their health/disease process and can intervene negatively on their quality of life and health.[1-2]

According to the National Traffic Department – DENATRAN; in 2008, there was a total of 200.499 traffic accidents involving motorcycles in the country, which resulted in numerous deaths and/or grave injuries.[3] Complications in the period from 2002 to 2010 the number of fatal accidents involving motorcyclists increased 239%, and between 2002 and 2006 the number of motorcycle deaths rose to 83% in Brazil. In 2002, the deaths of motorcyclists, due to traffic accidents accounted for 11% and in 2010 increased to 19%.[3-4] Data show that each year more than 100 thousand Brazilians suffer permanent damage as a result of motorcycle accidents and 4000 have serious consequences, such as paraplegia and tetraplegia. There were 6.829 motorcycle accidents with death in 2006 and today represents 25% of transport fatal accidents in the country.[3]

Despite the traffic accidents being predictable and preventable, they are frequent due to poor infrastructure of cities and traffic and/or due to negligence, imprudence or lack of motorcycle taxi drivers. In this perspective, the proper use of personal protective equipment (PPE) can reduce the resulting consequences of such accidents and lead to a consequent reduction in morbidity and mortality among these bikers.

OBJECTIVE

- Describing traffic accidents involving motorcycle taxi drivers, the use of personal protective equipment, and appropriate conduct and responsible in traffic, based on the scientific literature.

METHOD

This is a study of integrative review type[5] of a qualitative approach that had as guiding question << What is the relationship between occupational practice of motorcycle taxi drivers, the occurrence of traffic accidents and the use of personal protective equipment by these workers? >>

Initially there was a systematic literature search in the portal of Top Level Personnel Training Coordination (Capes) and Virtual Health Library (VHL), in line with the criteria for selection and inclusion previously established.

We used the following descriptors in Health Sciences (MeSH): "motorcycles", "protective equipment", "traffic accidents", using the Boolean operator "and" between the descriptors and searching each of them separately, translated into the above languages. Inclusion criteria were: articles available in Portuguese, English and Spanish, published from 1998, year of the beginning of the force of the current Brazilian Traffic Code (CTB), to March 2013. Thus, the exclusion criteria were not analyzed: dissertations and theses, and studies that did not cover the studied subject, or publications prior to 1998.

There were identified 543 scientific articles, excluding those that were repeated in the search results with the dialogue between the descriptors. Later, there were read their summaries for further selection of those pertinent to the objective proposed in this study. Of this total, only 15 were selected for the analysis of interest in this study, so being obtained and read in full. Continuing these studies, there were read thoroughly to form the corpus.

For the corpus analysis, it was used the Thematic of Content Analysis technic,[6] which is divided into three steps to follow: pre-analysis, exploration of the material and the processing of data, inference and interpretation. In this context, initially held brief reading of the articles, then exhaustive reading was carried out to selecting relevant information, such as words and phrases endowed with meanings for the process of data evaluation; and finally, a codification of recording units, according to the analogy of the meanings and abstraction of categories.

RESULTS

The synthesis of searches carried out in databases is presented in Table 1. The main results will be presented in discursive form and through the integration of units of meaning with books, official documents, scientific articles, dissertations and theses.

Year	Journal	Author	Title	Study aim
2012	Health and Development Magazine	Macêdo, D.W.M; Oliveira, F.P.A	Epidemiology of urban accidents with mobile service of urgency, Santarém, PA, May to September 2009.	Characterizing the epidemiological occurred traffic accidents within the urban perimeter, serviced by SAMU in Santarem, Para, during the period from May 2008 to September 2009; Identifying the age groups most involved in traffic accidents in Santarem; Detecting that kind of driving is the most common in traffic accidents in Santarem and finally listing the time of day (morning, afternoon or evening) and the day of the week that have a higher incidence of traffic accidents in Santarem.
2013	Medical History	Borowy, I	Road Traffic Injuries: Social Change and Development.	Examining a selection of major publications of organizations responsible for health or international transport and contextualizes them regarding (a) scientific discussion around the period and (b) relevant data in relation to mortality from traffic accidents, the Development Fund, and roads and other transport infrastructure.
2004	The National Medical Journal of India	Dandona, R; Ashish, M	Deaths due to road traffic crashes in Hyderabad city in India: need for strengthening surveillance.	Assessing the usefulness of available data on deaths from traffic accidents to the monitoring of traffic accidents the biggest metropolitan city of southern India.
2010	Journal of the Brazilian Medical Association	Colicchio, D; Passos, A.D.C	Traffic behavior of medical students.	Studying the behavior of medical students in relation to traffic, comparing today's standards with those observed in study conducted previously at the same institution.
2013	In Public Health	Rios, P.A.A; Mota, E.L.A	Traffic deaths: recent evolution and regional differences in Bahia State, Brazil.	Describing the time evolution of the traffic accident mortality in different regions of Bahia, identifying differences of this event between these sites according to the evolutionary behavior and kind of victim.
2011	Public Health Magazine	Silva, P.H.N.V et al	Spatial study of mortality in motorcycle accidents in the State of Pernambuco, Northeastern Brazil.	Analyzing the spatial distribution of mortality from motorcycle accidents in the State of Pernambuco.
2008	Public Transport Magazine - ANTP	Vasconcellos, E.A	The social cost of motorcycle in Brazil.	Analyze the process of introduction of motorcycle mass transit environment of Brazil and evaluate their social costs, from data of hospital admissions and fatalities recorded by the Ministry of health in hospitals in the network of the Unified Health System – SUS.
2011	Public Health Magazine	Montenegro, M.M.S et al	Mortality of motorcyclists in traffic accidents in the Brazilian Federal District from 1996 to 2007.	Describing the demographic characteristics and analyzing the temporal trend in mortality of motorcyclists traumatized in transport accidents.
2009	Nursing Magazine UFPE on line	Farias, G et al	Characterization of drivers of motorcycle traffic accident victims treated at emergency hospital.	Characterizing the drivers of motorcycle motorcycle accident victims, met in an emergency room. Identifying the injuries according to the bodily region, victims of motorcycle accidents.
2008	In Public Health	Silva, D.W et al	Profile of work and traffic accidents among motorcyclists deliveries in two mid-sized	Analyzing, in the municipalities of Londrina and Maringa, the profile of motocyclists who make deliveries or perform small services (couriers), their

			municipalities of the State of Parana, Brazil.	working conditions, risk situations and the occurrence of traffic accidents.
2012	Electronic Journal of the Evangelical College of Parana	Schlichting, C; Cavalheiro, E.G; Felizari, C.T	The method of evaluation of quality of life of the professional motorcyclist WHOQOL-bref.	Recognizing the changes in quality of life for professional motocyclists. Getting information about the literature which may affect the quality of life and health of these professionals, checking what are the icons of the WHOQOL-BREF questionnaire that most affect their lives and analyzing the responses and comparing them with the literature.
2000	Public Health Magazine	Andrade, S.M; Jorge, M.H.P.M	Characteristics of victims by land transport accidents in municipality in southern Brazil.	Reporting the characteristics of land transport accidents that have occurred in Londrina, PR, specifically in relation to rates of casualties produced by vehicle type, location and time (day of the week and time) of the accident. The severity of different types of accident is also parsed, measured in terms of the coefficient of lethality.
2007	Psychology: Science and Profession	Grisci, C.L.I; Scalco, P.D; Janovik, M.S	Modes of work and of being a motoboy: experiencing contemporary spatio-temporal.	Studying the motoboys while relatively new category in the scenario of the work and the city and make some relationships with the modes of experience time in contemporary times, the aim is to be able to contribute to broaden the understanding of modes of working and living in contemporary society with regard to the imperative of monetization of the time no longer entails the wait.
2011	Brazilian Nursing Magazine	Silva, M.B; Oliveira, M.B; Fontana, R.T	Motocyclists systems activity: risks and weaknesses self-referred.	Identifying occupational hazards and weaknesses self-referred by subjects who play systems activity.
2002	Magazine CIPA	Costa, M.A.F; Costa, M.F.B	Biosecurity: strategic link of SST.	Putting the biosecurity in a scenario about visibility, allowing other professionals who work with prevention and control of occupational hazards, understand its purpose, its contradictions, and especially its importance as an instrument of protection of life, in whatever working environment.

Figure 1. Studies selected for analysis after thorough reading for constitution of corpus with potentially important data.

From a critical-reflective interpretation it was possible to establish the following four themes arranged.

♦ Traffic accidents: definition of concepts and problem dimensions

Traffic accidents can be considered as every event, with damages involving a vehicle (regardless of category), the road, man and/or animals, and to be characterized as such the presence of at least two of these factors is necessary.[7]

Currently, the World Health Organization (WHO) considers traffic accidents as a "hidden epidemic",[8] as are the 11th leading cause of death and the 9th leading cause of disability worldwide, accounting, annually, for the deaths of 1,2 million people, representing an average of 3.242 daily deaths.[9] Current projections indicate that by the year 2020, there will be an increase of 65% of deaths due to traffic accidents, becoming this the 3rd cause of death worldwide.[10]

Men, in most cases, are mainly responsible for the occurrence of such accidents,[11] being the most common direct causes the consequent failure procedures in violation of the rules of traffic laws (knowledge of specific legislation, disqualification and disobedience to the rules) physical condition of the driver (fatigue, sleep, vision and hearing disabilities, alcohol, drugs) or psychological (concerns, inattention, pathologies, etc.).

The statistics show that about 90% of deaths from traffic accidents occur in developing countries; being the hardest hit portions of males; pedestrians, motorcyclists and cyclists.[10]

The efforts of governments around the world to ensure road safety are minimal in comparison to the growing number of losses of life.[10] Although traffic accidents are preventable, its prevention depends not only drivers, but also of all other individuals involved in the process, such as: municipal, state and federal officers, public security organs, the traffic engineers and the community at large. Therefore, the reduction of traffic accidents rates depends directly on the laws of each country, which legalizes the control the speed, allowed alcohol consumption levels, the compulsory use of seat belts, helmet, regulations and inspection of vehicles and the safety of roads, and the development and maintenance of the infrastructure of roads, together with the existence of urban planning, supervision both electronic as police, availability of emergency services, emergency and rehabilitation specialize in serving this type of accident.

It should be noted that the health sector has an important role as a partner in this process, with regard to the design of this dilemma, through the production of information from its notification, where are obtained information on the severity and magnitude, which enables establish a true picture of the problem and thereby devise strategies to address them, as well as organize hospital services to meet the needs of these individuals. Thus, the health sector can contribute to the implementation and evaluation of interventions drawn to this problem by establishing popular education measures to raise awareness about the seriousness of this situation, the high rate of accidents existing in the world and the possibility of prevention thereof.[10]

Given the above, one can understand why the WHO adopts the terminology, "hidden epidemic" for traffic accidents, because this is one of the largest and most neglected global public health problems, which annually, is responsible for the loss of enormous human potential, as well as serious social and economic problems of countries affected by them, since there is an increase in the poverty rate.[10]

In Jequie, Bahia, mototaxi profession has become an important activity, regarding the public transport deficiency, began to serve the transportation needs of the population. This phenomenon has been growing in several municipalities of the country, either legally or illegally. As a result of this increase in Jequie-BA there was an exponential growth in the number of traffic deaths associated with motorcycles.[12]

A study conducted in Jequie-BA, 185 motorcycle taxi drivers who have point in the central region of the city showed that 48,6% of these had suffered traffic accident, with an average of 2,4 events per mototaxi driver. It was evident yet that occupational hazards related to the profession associated with the recurrence of accidents, increases the risk of functional impairment and death.[13]

In Brazil, from 1996 to 2008, there was an increase of approximately 600% in the motorcycle fleet, however, in the same period, the mortality rate by bike from traffic accidents increased by 660%, while in the state of Pernambuco this increase was 875%.[14] Also in Brazil, the rapid growth in the number of traffic accidents with mototaxi driver may be related to the increased number of motorcycles, but this should not be considered as the only cause. One has to consider that the actual establishment of this diagnosis may be compromised by underreporting by health institutions and traffic enforcement, and by the lack of identification of the type and cause of the accident (working or not). More importantly, the risk of accidents with motorcycles is not homogeneous in Brazil.

Studies show the need for greater attention to the deaths involving motorcycles in Brazil.[12-3,15-7] The motorcycle accidents, and the various consequences arising from them, constitute one of the most serious problems of contemporary public health in traffic context and are configured as a major challenge for public policy in Brazil and the world.

In a study conducted in Feira de Santana, Bahia, with 267 registered motorcycle taxi drivers within the Municipal Transport and Traffic (SMTT), found an incidence of 10,5% for occupational accidents per year, with 28.6% of motorcycle taxi drivers suffered more than one accident within 12 months. It is noteworthy that all professionals reported to be making use of the helmet as a safety device, at the time the accident occurred.[2]

For parts of the body most affected in accidents, a study conducted in Santa Maria-RS, 1200 motoboys and motorcycle taxi drivers, showed that the head (1,45%) was the least affected part in the accident and

the most affected were the legs (59,42%), arms (21,74%), multiple parts (15,94%) and trunk (1,45%). It was evident that these professionals were using the helmet, however, due to the non-use of specific safety equipment, left unprotected legs, and other parts of the body.[18]

Another study, conducted with 371 motorcycle taxi drivers in the city of Natal, Brazil, showed that as the affected body part 33,2% of accidents attacked the head/neck, 39,9% the outer surface; 22,7% limbs and pelvic girdle; 2,8% to face; 4% the chest and abdomen and pelvic 1,1% content.[19]

♦ **The phenomenon of mototaxi**

Over the years, the process of urban development has led to a number of problems in the functioning of transport systems. In Brazil became one of the most serious problems faced in cities. Allied to this problem, urbanization has also brought negative consequences resulting from changes in market relations, changing the organization of work processes, generating unemployment and the constant search for informal activities by the populations as a means of struggle for survival and livelihood their families.

Thus, the increase in unemployment caused the activity of mototaxi, as an alternative mode of transportation and in some cases the unique opportunity to work, to consolidate more and more as a source of income for the actors involved in the business, and in addition as a means of transportation for those who need a responsive service, economically cheaper, however, not always safe.

The mototaxists generally called mototaxi work points where agglomerate forming a kind of society. For the most part, each point of mototaxi has usually a phone number that serves as a reference for application of the services provided, although we did see a large number of motorcycle taxi drivers who do not work on these points, ie, are traveling the streets or stopped in strategic points waiting for a client to request its service verbally or through gestures.

The mototaxi service has advantages for the user, such as the availability (due to the large supply observed) and the speed of displacement. For mototaxi driver, the activity consists in the opportunity to work; however, it also stemmed with negative characteristics, such as increasing environmental pollution by exhaust gases, and an increased vulnerability of the occurrence of traffic accidents, which, in the case of motorcycle taxi drivers, are configured as work accidents.[20]

The expansion of mototaxi has contributed to the increase of accident statistics; however, there are duly registered and published statistics regarding the incidence of such accidents with the motorcycle taxi drivers.[2,21]

Given these assumptions, mototaxism, characterized, therefore, as an activity subjected to several conditions, which are due to exposure to accidents regarding external causes and/or physical, biological and psychosocial agents. Direct sunlight can adversely affect the quality of life and health of motorcycle taxi drivers, with impacts on their personal lives, in their status as workers, and even affect the lives of their families and increase the demand for care services (care and rehabilitation). That is, involves many different stakeholders related directly or indirectly with this phenomenon, implying high economic, social and individual costs.[22]

There are several factors related to the cause of these accidents and hence the change in the quality of life of motorcycle taxi drivers. The strain caused by work overload, turn-taking, journeys exceeding 10 hours, hazardous conditions due to urban violence, mechanical problems in the motorcycle and misconduct in driving, can cause stress, physical and mental fatigue, which reduces their reflexes and attention required in traffic, and thus acting as facilitators for the genesis of accidents. Regarding the reversal shifts, it is known that alter the sleep-wake cycle and bring damage to functional capacity. Similarly, the constant pressure to meet the needs of users, the work on public roads, pressure from employers and clients, high self-imposed requirement to better productivity, the demand for agility and speed to meet the goals, favor accidents.[23-25]

More importantly, driving motorcycle in noncompliance with traffic rules, such as high-speed, mobile phone use while driving, juggling and other behaviors potentiate the risk due to the chaotic traffic, traffic jams, poor condition of roads and the race against time to meet a greater number of customers, among other factors, favor the

occurrence of accidents and even affect the quality of life, health and work mototaxi driver.

♦ **Biosecurity and occupational protection**

The concept of Biosafety began in the 70s in Asilomar meeting, in California, which discussed the impacts of genetic engineering in society.[26] It was at this meeting for the first time entered into discussion the safety and protection measures adopted by researchers in the field of work.

In the 70s, the focus of attention turned to worker health front biological risks in the workplace. In this decade preventive practices for work were taken to the laboratory level and were related to pathogens to humans. In the 80s, the WHO has incorporated this so-called definition of peripheral risks present in laboratory environments working with pathogens for humans, such as chemical, physical, radioactive and ergonomic.[27]

From the 90s, the biosecurity definition has undergone significant changes, being named as the security measures set that aim to reduce workers' exposure to biological, physical and chemical agents.[28] Then comes the emphasis on occupational safety, that is, the issues of security men at work environment. In this sense, the Occupational Safety focuses on worker protection, for the prevention of occupational accidents.[29]

In this sense, the occupational health aims to promote and maintain the highest degree of physical well-being, mental and social workers in all occupations; prevention of health deviations caused by working conditions; protection in their employment from risks resulting from factors adverse to health; placement and worker maintenance adapted to physiological and psychological skills, in short: the adaptation of work to man and every man in his activity. Based on this principle, that occupational safety concerns the measures taken to reduce exposure and contact the employee to the chemical, physical, mechanical and biological agents, did you come up the incorporation of PPE, which are the instruments used to provide security, active or passive, to man.[29]

For the purpose of knowledge, active safety equipment are those that help prevent accidents and are connected to the comfort, handling and perception, as the passive safety equipment are those that minimize the effects of accidents, responsible for internal and external security, absorption of energy by deformation of the passenger compartment structure and strength.

The main functions of PPE are the reduction: from exposure to infectious agents; damage to the body caused by physical or mechanical hazards; exposure to chemicals and other toxic materials; contamination of the environment and the patients. When selected and used properly, EPI help in ensuring the quality of life, confidence in performing the tasks and safety.

Men, in case of accidents, are exposed to biological, physical, chemical and psychosocial factors. Most accidents are due to the latter factor, which provides exposure to earlier. The goal of occupational safety is to recognize danger sources, assess risk situations that this source offers and control it by taking technical and/or administrative decisions to promote changes.[30] Thus, the occupational safety as an occupation, aggregate at any activity where the risk to workers' health is present.[31] In the case of motorcyclists, especially the motorcycle taxi drivers, not using PPE can cause much damage to your health as well as the entire community involved directly or indirectly. The consequences of accidents arising as a result of not using this equipment, or improper use are more frequent among these professionals, causing minor, serious and very serious injuries, causing many injuries, which can lead even to death.

Regarding the motorcyclists, there are several standards of conduct and use of protective equipment required for the individual and collective security to be used for their protection, thus minimizing accidents and contributing to better promote their safety.

The main safety equipment that should be used by motorcycle taxi drivers are: safety helmet (with visor or goggles), closed shoes and appropriate clothing (leather jacket, overalls, trousers), mirrors, reflective bands, side flags, side handle, coating to the pipe discharge and kills dog (equipment that is located at the bottom of the motorcycle that avoids contact with the pilot or passenger motor)[32].

♦ The motorcycle taxis and the current legislation

The mototaxism, an alternative service used as a means of transport, was recently recognized as a professional activity by the Federal Government through the adoption of Law 12,009 of July 29, 2009, which regulates the exercise of professional carrying passengers defining it as "mototaxi".[32] However, there is no record of activity in the Brazilian Classification of Occupations (CBO), the Ministry of Labor on this activity, which mentions only the "motorcycle courier" under CBO No. 5191-10 (Biker in transport documents and small packages),[33] which term refers to the professional who makes delivery of goods and business services and street community services, making use of the motorcycle.

Dealing with similar activities, using the same transport vehicle as a working tool; however, that differ by the type of services that are offered, with the transport of persons divergent point between an occupation and another. Mototaxi driver for the transport of people is their main purpose.

The legislation helps reducing the precariousness of work, away from the underground, considering that the bad working conditions, such as intense rhythms to which the motorcycle taxi drivers are submitted, expose them to wear and therefore increase the conditioning factors/ determinants to be involved in traffic accidents, in addition to yielding sleep disorders, fatigue, irritability, lack of exercise, among other problems.[25]

To act as mototaxi driver, in Brazil, it requires the mandatory proof of specialized courses specifically aimed at these professionals, addressing issues such as the practice of riding, law notions of risk management on two wheels, ethics and citizenship, and health and safety, and passenger origin, given that transport passengers and exert remunerated activities in the conduct of motorcycles and scooters. This requirement is regulated by Resolution No. 410 of August 2nd, 2012, the National Traffic Council (CONTRAN). Courses are taught by the transit executive body of the State or the Federal District, or by agencies, organizations and institutions authorized by them.[34]

In Brazil, the CTB, which entered into force in 1998, by Law No. 9.503/97, emphasizing security issues and the preservation of life and establishes penalties for those who lead vehicles in violation of their rules.[35] In However, although there this regulation, often due to no awareness of motorcycle taxi drivers as their importance, these are not operationalized.

According to the Ministry of Health,[35] of the CTB features there is the significant number of preventive measures that contains and it is not therefore only a punitive instrument. Its implementation sets, so the legal and effective mechanism for the reduction of major risk factors involving driver, pedestrian, vehicle and public roads.

The reduction of violence in traffic, even with the new CTB, remains committed, as it has not yet been fully implemented in Brazil and also the oversight of implementation of laws already in place is still precarious.

The effective implementation of the CTB requires, according to the Ministry of Health,[35] to overcome the technological gap on the issues of the Brazilian traffic, as the low reliability of the statistics for the fleet of persons authorized as well as the victims and the occurrence of accidents transit; precarious traffic control, inspection and vehicle safety; the breakdown of standards and procedures for traffic engineering; inadequate supervision; and training exceeded for enabling new drivers, in addition to technical training of human resources to work in this sector. In this perspective, the young bikers require urgent admonition. These drivers are world responsible for much of collisions by motor vehicles, which partly reflects the combination of immaturity and lack of experience in driving.[36] In addition, the young motorcyclists, more than adults, driving at high speed, advance signs, practice illegal maneuvers, driving after using drugs or alcohol.[37]

Because of the immaturity and inexperience of dealing with motor vehicles, often associated with lack of familiarity with traffic laws and pressure from friends, the young driver, when in emergency situations, presents difficulties in making appropriate decisions.

For this disregard for safety standards, by bikers, both young and old, the CTB provides penalties ranging from fines to suspension of the right to drive. The Art 244

establishes the conduct subject to penalty: driving motorcycle, scooter and moped without using safety helmet with visor or goggles and clothing in accordance with standards and specifications approved by CONTRAN and passenger transportation without helmet security, as prescribed in the preceding paragraph or outside the supplementary seat placed behind the driver or in a sidecar. The penalty is a fine and suspension of the right to drive.[35]

Also find themselves as other infractions disrespect to the preferred way, the sign of progress and disrespect for other traffic signs, which multiplies by four the risk of accident. The force of the new CTB, with their innovations and dissemination in the media, triggered at the beginning of its implementation, a considerable reduction in traffic accidents, which led to the sharp decline in mortality from this cause.

With the lack of supervision and failure to follow the rules imposed by it, the impact was temporary, generating an adaptation and accommodation process, allowing motorcyclists not fulfill their commitment to citizenship, raising the mortality levels prior to the return of the new ID.

To avoiding accidents, besides the use of PPE, motorcyclists must always remain visible on the roads, avoiding travelling on the shoulders, behind large vehicles that hide and between any vehicles also must maintain the utmost attention to the other vehicles, always alert and awake.

According to Resolution No. 14 CONTRAN,[38] motorcycles to move on public roads must be fitted with active and passive safety equipment, which must be monitored constantly and find themselves in perfect working condition. This resolution also said that the worn tires, brakes deregulated, dead dampers are some of the factors related to motorcycles that predispose to traffic accidents, this fact within the accident statistics, accounts for about 12% of accidents that occur often.

Given the above, as ratified the WHO,[10] the situation is serious and requires immediate attention. For this happen it requires a joint effort of the sectors of society, especially of the health sector and infrastructure of the cities, because the earlier the interventions were established, the better the chances of reducing and controlling the problem, which will mean the preservation the lives of several workers and their quality.

FINAL REMARKS

There are several measures that can be taken to preventing accidental loss and potential losses, leading to a consequent minimization, replacement or elimination of risk. Some of these measures is of individual nature and refer to pipelines and adoption of the driver safety procedures. Another part refers to government policies that are adopted and implemented in relation to the inspection process, maintenance, preservation and signaling the appropriate conditions of roads, the provision of information and education in traffic and encouraging responsible behavior.

It is important to generate information that can help identify the factors that influence the motorcycle taxi drivers in the use of PPE and propose educational measures in health, which can reduce the morbidity and mortality arising from traffic accidents and the costs not only of life, which is considered be more important, but also the cost to the spheres of competent government, due to the subsequent reduction of pre attendance costs, intra- and post-hospital.

Finally, it is expected that this study will arouse the attention not only of motorcycle taxi drivers, but also sensitize other motorcycle riders, the Brazilian population, the managers of the three levels of government and the public security organs, which carry responsibility in the genesis these events, requiring adequate and effective implementation of the existing legislative framework.

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Corresponding Address

Jules Ramon Brito Teixeira
Programa de Pós-Graduação em Enfermagem e Saúde
Universidade Estadual do Sudoeste da Bahia
Av. José Moreira Sobrinho, s/n
Bairro Jequiezinho
CEP 45206-190 – Jequié (BA), Brazil