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Occupational risks at work of professional motorcyclists of fast deliveries

Riscos ocupacionais no trabalho de motociclistas profissionais de entregas rápidas**Riesgos laborales de motociclistas profesionales de entregas rápidas****RESUMO**

Objetivo: Identificar as evidências disponíveis na literatura nacional e internacional referente aos riscos ocupacionais dos motociclistas profissionais que trabalham nas entregas rápidas de alimentação. Método: Revisão Integrativa de Literatura realizada no período de outubro a dezembro/2019, nas bases de dados do Portal da BVS, SciELO, CAPES. Foram utilizados os descritores cadastrados no Descritores em Saúde: "Comida Rápida" AND "Trabalhador" AND "Riscos Ocupacionais" e seus respectivos correspondentes nos idiomas inglês e espanhol, publicados no período de 2008 a 2019. Resultados: A revisão resultou em 14 artigos. Com relação ao número de estudos, a maioria, 8(57,1%) foi publicado na BVS; no que se refere ao ano em que foram publicados, 2008 teve maior quantidade com 21,4% das publicações. Conclusão: O objetivo proposto foi atingido, uma vez que foram identificadas evidências disponíveis na literatura nacional e internacional referente aos riscos ocupacionais dos motociclistas profissionais.

Palavras-chaves: Comida Rápida; Trabalhador; Motocicleta; Riscos Ocupacionais

ABSTRACT

Objective: To identify the evidence available in the national and international literature regarding the occupational hazards of professional motorcyclists who work in fast food deliveries. Method: Integrative Literature Review carried out from October to December/2019, in the databases of the VHL Portal, SciELO, CAPES. The descriptors registered in the Health Descriptors were used: "Quick Food" AND "Worker" AND "Occupational Risks" and their respective counterparts in English and Spanish, published from 2008 to 2019. Results: The review resulted in 14 articles. Regarding the number of studies, the majority, 8 (57.1%) were published in the VHL; with regard to the year in which they were published, 2008 had the highest amount with 21.4% of publications. Conclusion: The proposed objective was achieved, since evidence available in the national and international literature regarding occupational risks of professional motorcyclists was identified.

Keywords: Fast Food; Worker; Motorcycle; Occupational Hazards.

RESUMEN

Objetivo: Identificar la evidencia disponible en la literatura nacional e internacional sobre los riesgos laborales de los motociclistas profesionales que laboran en el reparto de comida rápida. Método: Revisión Integrativa de la Literatura realizada de octubre a diciembre / 2019, en las bases de datos del Portal BVS, SciELO, CAPES. Se utilizaron los descriptores registrados en los Descriptores de Salud: "Comida Rápida" Y "Trabajador" Y "Riesgos Laborales" y sus respectivas contrapartes en inglés y español, publicado de 2008 a 2019. Resultados: La revisión resultó en 14 artículos. En cuanto al número de estudios, la mayoría, 8(57,1%) fueron publicados en la BVS; Con respecto al año en el que se publicaron, 2008 tuvo el mayor monto con el 21,4% de las publicaciones. Conclusión: Se logró el objetivo propuesto, ya que se identificó la evidencia disponible en la literatura nacional e internacional sobre los riesgos laborales de los motociclistas profesionales.

Palabras llave: Comida rápida; Obrero; Motocicleta; Riesgos laborales.

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INTRODUCTION

In recent years, there has been a gradual growth of services performed by motorcyclists to transport people, by means of motorcycle taxis or delivery of goods, including food/meals, where many travel large distances in a short time, working in an intense and dangerous manner. 1,2

It is noteworthy that the profession of professional motorcyclists has grown significantly in the informal Brazilian labor market in recent years, and has been occupying significant space in transport systems, especially in small and medium-sized cities. 3,4

It is noteworthy that the profession had as its precursor the British Army motorcyclists, in the beginning of the 20th century, as they had important functions for the integration of the military information system and later, in the 70s, this service became effective in civilian practice. 5

As a profession, according to the Brazilian Classification of Occupations (CBO - Classificação Brasileira de Ocupações), Law No. 12.009, of July 29, 2009, regulates the types of activities being the exercise of professionals in passenger transport "motorcycle taxi", in the delivery of goods and in community street service, and "motorboy", with the use of a motorcycle. 6

In this sense, motorcycle taxi drivers and motoboy are professionals who work in the transport of passengers, documents, valuables, goods and orders and have gradually become one of the fastest growing professions in the informal Brazilian labor market. 3,4

In 2014, the Brazilian government published Law No. 12,997 of June 18, 2014, which establishes that employees who use motorcycles in the exercise of their professional activities, regardless of what is included in the registration of their function, are entitled to an additional 30% of the basic salary, without the additions resulting from gratuities, prizes or participation in the company's profits. 7

Professional motorcyclists serve the various classes and sectors of society, as they transport goods to both: from banks to industries and vice versa, from banks to marketers, from seamstresses to banks, from banks to other banks, from pizzerias for its customers, among others. Its performance allows it to encompass the different economies of society. 8

There is a sharp increase in the number of motorcyclists in urban centers who provide fast delivery services by means of motorcycles, as these workers are able to provide their services quickly. 9

Studies report that one of the reasons

for the growth of this class of workers is the ease of access to this profession, the autonomy and excitement provided by driving fast vehicles, finding in adults and young males their main profile of workers. 10

Another attraction of this profession is the flexibility of working hours and forms of hiring, where such flexibilities are summed up in a solution for the worker's life, with flexible hours and employers with flexible contracts. 11

Also according to the author, this style of worker and way of working meet the modes of action of the multinational company Uber Technologies Inc. - Uber, considered a start-up that offers individual passenger service through an application that is installed in mobile phones. 12 In it, it is up to the worker to bear the costs of his business, being responsible for his work tool, as well as for the costs of production and maintenance of this tool. 11

Recently, the same company expanded its business, and started operating in the area of food delivery service, known as Uber Eats, in which people choose the restaurant and food in the app, and delivery is performed by motorcyclists. 13

The services of Uber Eats (called UE), were launched in December 2016 in São Paulo and in June 2017 in Rio de Janeiro and Belo Horizonte. For consumers, it

allows them to view neighboring restaurants and track the order in real time by cell phone, with an average delivery time of 30 minutes. 14

Other companies started to carry out the same type of services and different food establishments, 1 organized themselves to serve customers through applications and make deliveries by professionals without employment.

It is noticed that these workers represent a population at high risk of incurring accidents, from accidents arising from their work activity as well as traffic accidents, which often occur on their work paths. 16

It is noteworthy that this sharp growth linked to precarious working conditions and high exposure to risky situations lead to an increase in the rate of traffic accidents among this working class. 3

It stands out in relation to the risks of the motorcycle profession that traffic accidents are the ones with the highest incidence of occurrence among motorcyclists. The formal concept of risks for traffic accidents according to the World Health Organization is summarized in: a) risks that influence exposure, such as socioeconomic factors; b) risks of being involved in accidents (such as defects on the tracks, abuse of speed); c) risks that influence the severity of the accident (inadequate or unused protective equipment, speed, for example); d) risks that influence the severity of trauma in the post-accident phase (such as delay in the rescue of victims, lack of adequate medical/hospital care). 17

Another study demonstrates that motorcyclists are the main occupational risk of traffic accidents, also citing other risks inherent to the profession, such as: assault, stress, hemorrhoids, heat stroke, risk for skin cancer, dehydration, loss of vision due to excess of light and lack of protection for the eyes, and finally there is the risk of low back pain, because he does not stay in an ergonomic position and spend hours sitting and bent over the motorcycle seat. 18

A study carried out with motorcyclists showed that the most frequent causes of accidents among this group were collisions with another type of vehicle, followed by

falls from the motorcycle, and such accidents were associated with lack of attention, disrespect for existing signs and high speed. 19

It is understood that these professionals who work in the delivery of goods and in community street service are one of the most vulnerable groups susceptible to various occupational risks in the development of their activities. The use of motorcycles as a work tool has been contributing to the increase in incidents and constituting work accidents. From this perspective, the present study addresses a topic that is still little referenced in the literature, hence the interest in the theme.

This integrative literature review will contribute to identifying evidence available in the national and international literature regarding occupational hazards to which professional motorcycle workers who carry out fast food deliveries are exposed.

The guiding question of this study is: "What are the strengths and weaknesses of the professional activity of professional motorcyclists?" and it aims to identify the evidence available in the national and international literature regarding the occupational risks of professional motorcyclists who work in fast food deliveries.

METHOD

This is a bibliographic, descriptive study, integrative review type, consisting of six stages: 1st: elaboration of the guiding question, 2nd: search or sampling in the literature, 3rd: data collection, 4th: critical analysis of the included studies, 5th: discussion of results and 6th: presentation of the integrative review. 20

In order to answer the guiding question, a search for online access in the Portal of the Virtual Health Library (BVS), SCIELO (Scientific Electronic Library Online) and CAPES (Coordination for the Improvement of Higher Education Personnel) was used. The descriptors registered in DeCS – Health Sciences Descriptors were used: "Quick Food" AND "Worker" AND "Occupational Risks" and their respective counterparts in English and Spanish.

The following inclusion criteria were adopted: articles available in full and complete, in Portuguese, English and Spanish, published in the period 2008 to 2019 because they bring relevant and current information to the topic. Exclusion criteria were repeated articles in incomplete data sources, letters, thesis, book, reviews, monograph and articles that did not meet the research's guiding question.

It is noteworthy, with respect to the level of evidence (LE), that the data were presented in 7 levels: Level 1: evidence from a systematic review; Level 2: evidence obtained from clinical trial; Level 3: evidence from randomized controlled trials; Level 4: evidence from a case-control or cohort study; Level 5: evidence from a systematic review of qualitative and descriptive studies; Level 6: evidence from a single descriptive or qualitative study; Level 7: evidence from official opinion or committee reports. 21

It is described that this study complied with the guidelines and criteria established in Resolution 466/12 of the National Health Council (CNS - Conselho Nacional de Saúde), and the authors used were duly referenced, respecting and identifying the sources of research, observing ethical rigor regarding intellectual property of the scientific texts that were analyzed, with regard to the use of content and citation of parts of the consulted works.

In total, the methodology and descriptors mentioned above, 658 productions were found. After applying filters and inclusion and exclusion criteria, as well as reading and critically analyzing the studies in accordance with the objectives of this research, the sample of this study consisted of 14 (fourteen) articles.

Table 1 shows the data referring to the articles included in this study, addressed by title, authors, year of publication and journal in which it was published. Table 2 shows the results that characterize the studies in this review, including the study code, type of study, city/state of study and level of evidence used by the authors. 21

In this integrative review, 14 (fourteen) articles were selected that met the inclusion criteria, being the same Portuguese, English

and Spanish. After reading, the selected articles were classified, which allowed the construction of groups where two categories emerged for discussion: a) Occupational risks experienced in the exercise of the profession and b) Motorcyclists' performance in fast delivery.

It is pointed out that the results are presented with tables containing the data extracted from the articles, including: study code, type of study, city/state of the study and level of evidence.

The search for articles was evidenced through controlled descriptors, duly registered in DeCS (Table 1) and non-controlled descriptors (Table 2) and their respective correspondents in English, Spanish and Portuguese.

The initial collection was carried out using the descriptors "Worker" and "Quick Food" with the Boolean term AND, whose results are shown in Table 3 below.

The Boolean term AND was used in all research modalities, since, among the inclusive criteria, there were articles in Portuguese, English and Spanish, as shown in Table 3. Which descriptors indexed in the DeCs were used.

The flowchart below shows the intersections between the descriptors and Boolean terms "Worker" AND "Fast Food" AND "Occupational Risks", and the search resulted in 658 productions: 23 on the SCIELO Portal, 458 on the regional portal of VHL and 177 on the CAPES Portal.

As shown in Figure 1, the titles and abstracts were read in order to refine the sample by applying the inclusion and exclusion criteria, selecting 68 articles. After a thorough reading of the texts, 54 (fifty-four) articles that did not answer the guiding question were excluded. Thus, the final sample was composed of 14 (fourteen) articles.

The articles were stored, once the sample was defined, in virtual databases. Figure 1 shows the flowchart containing the crossings of descriptors used, the development of data collection, as well as the number of articles found and the respective number of articles included, which made up the sample of this study.

In this study, after the process of analy-

zing and interpreting the results, two categories were established: The risks experienced in the exercise of the profession and performance of motorcyclists in fast delivery.

RESULTS

In this integrative review, 14 (fourteen) articles were selected that met the inclusion criteria, and they were presented in English, Spanish and Portuguese. Table 4 presents the findings of this research, organized in order of study code, starting in A1 and ending in A14, also including the following information in the table: Author/year; Title of the article; Journal where it was published; Study objectives; Methodology

The results are presented, after applying the inclusion and exclusion criteria, concentrating the findings regarding the database, year of publication and number of studies, with 01 (7,1%) being published in SciELO; 8 (57,1%) on the VHL and 5 (35,7%) on the Capes Portal; with regard to the year in which the articles were published, 2008 had the highest amount with 21,4% of publications, the years 2008, 2012, 2015 and 2017 had 14,3% of the publications respectively, and the years 2016, 2018 and 2019 containing 7,1% of publications each year.

Regarding the design, with the highest prevalence, five qualitative studies were identified, two of which were of the quanti-qualitative type. The other studies were

Table 1: Descriptors and their equivalents in Portuguese, English and Spanish. Uberlândia (MG), Brazil (2020).

DESCRIPTORS	ENGLISH	SPANISH	PORTUGUESE
Comida Rápida	Fast Foods	Comida Rápida	Comida Rápida
Trabalhador	Workers	Trabajadores	Trabalhador
Riscos Ocupacionais	Occupational Risks	Riesgos laborales	Riscos Ocupacionais

Source: The authors, 2021

Table 2: Uncontrolled Descriptors and their equivalents in Portuguese, English and Spanish. Uberlândia (MG), Brazil (2020).

DESCRIPTORS	ENGLISH	SPANISH	PORTUGUESE
Motociclistas	Motorcyclists	Motociclistas	Motociclistas
Entregas Rápidas	Fast deliveries	Entregas Rápidas	Entregas Rápidas
Alimentação	Alimentation	Alimentación	Alimentação

Source: The authors, 2021

adopted; Level of research evidence and narrative excerpt.

DISCUSSION

cross-sectional, empirical research and documentary research.

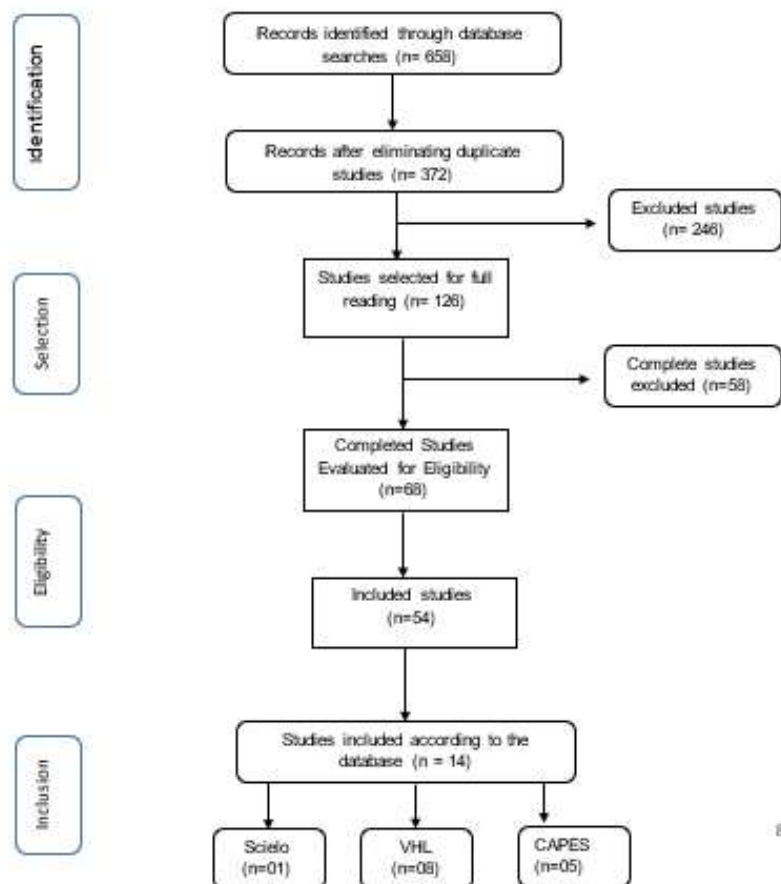
The results of this analysis were grouped into two categories discussed below:

Table 3: Descriptors searched with the Boolean term AND, Uberlândia (MG), Brazil (2020).

SEARCHED DATABASE				
DESCRIPTORS	SCIELO	BVS	CAPEIS	TOTAL
Worker AND Fast Food	0	18	61	79
Worker AND Occupational Risks	200	2.575	718	3.493
Fast Food AND Occupational Risks	0	9	9	18
Total	200	2602	788	3590

Source: The authors, 2021

Figure 1: Flowchart of the selection of studies according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2009). 22 Uberlândia (MG), Brazil, 2020.



Source: The authors, 2021

Occupational risks experienced in the exercise of the profession

In this category are the articles 3,18,23,24,25,26, 27, 32.

It is verified, in the study 3 that moto-boys point out as disadvantages: constant climate changes (sun, rain), physical and emotional wear and tear due to long time on the motorcycle, risk of robberies and, especially, traffic, and also report other environmental difficulties faced during the daily life, such as wasp stings, dog bites and collisions caused by the motorbike being chased by animals.

It is observed, in the study 18, that in addition to the risk of traffic accidents, motorcycle couriers are susceptible to assault, stress, urological and skin diseases and exposure to sudden and sudden changes in temperature, such as heat, cold and rain.

A study carried out by drivers residing in the State of São Paulo showed that of the total number of surveyed 14.567 accident records, motorcyclists represented 11,0% (1610) of the injured professionals, and the type-accidents in this category were mainly motorcycle crashes/collisions (55,9% of cases). Then come falling from the motorcycle (25%) and hit by an object while driving (4,9%). 23

It is observed that factors such as agility, need for speed, consumer society and chaotic traffic make moto-boys become a group of workers at high risk of being involved in traffic accidents, which can cause anything from small scares to serious permanent injuries and/or deaths. 24

It was shown, in the study 25, that the main complaints of these professionals are back and head pain, circulation problems and muscle fatigue at the end of the work shift.

A study developed with motorcycle taxi drivers showed that, according to the subjects' perception, the greatest risks they suffer in the exercise of their profession are accidents and robberies, and the greatest disadvantage of the job is not having a formal contract. 26

In another study, the interviewees characterized risks as a "constant danger" of their work and most of them expressed the

Table 4: Synthesis of the studies included in the integrative review according to the assessment of the ability to work in the Nursing team. Uberlândia (MG), Brazil, 2020

Nº	AUTHOR/YEAR	TITLE	JOURNAL	OBJECTIVES	METHOD	LEVEL	NARRATIVE EXCERPT
A1	SILVA et al3, 2008	Working Conditions and Risks in Urban Traffic from the Perspective of Motorcyclists Workers	Physis Revista de Saúde Coletiva	Identify and analyze the perception of motorcycle couriers regarding aspects related to their work process, traffic risks and the occurrence of accidents in the city of Londrina (PR)	Qualitative approach, using the focus group technique	VI	The profound changes undergone by the world of work since the 1980s are called flexible accumulation
A2	TEIXEIRA, M. La P.; FISCHER, F. M23.. 2008	Reported accidents and illnesses at work, of professional drivers in the state of São Paulo	São Paulo em Perspectiva	Describe occupational accidents, according to groups created specifically for drivers residing in the State of São Paulo, in the period 1997-1999	Descriptive study	VI	Professional drivers connected to the transport sector are subject to a high number of risks at work, which make them more exposed to the occurrence of occupational accidents
A3	SOARES, D.F.P.P. et al.24, 2011	Delivery motorcyclists: some characteristics of traffic accidents in southern Brazil	Rev Bras Epidemiol	Know the characteristics of traffic accidents that occurred with motorcycle couriers working in two municipalities in the State of Paraná, Southern Region of Brazil	Cross-sectional study	V	Studies have shown that transport accidents involving motorcyclists are important causes of morbidity and mortality in Brazil
A4	LUNA, J. P.; OLIVEIRA, R. V.25, 2011	The new reproduction of precarious work and motorcycle taxi drivers in Campina Grande	Revista Latinoamericana de Estudios do Trabalho	Characterization of labor relations and forms of sociability present in this new segment of workers in Campina Grande	Documentary research, direct observation and application of questionnaires	V	This article deals with the constitution of the segment of motorcycle taxi drivers in Campina Grande, Paraíba, as well as their condition of informal and precarious workers
A5	SILVA, M. B.; OLIVEIRA, M. B.; FONTANA, R. T.26. 2011	Motorcycle taxi driver's activity: self-reported risks and weaknesses	Rev Bras Enferm	Identify occupational risks and weaknesses self-reported by subjects who perform the activity of motorcycle taxi drivers.	Descriptive research with a qualitative approach	VI	The motorcycle represents, in Brazil, a socially important means of transport, especially for the working class who use it for driving and/or for mototaxi, courier or motorcycle freight services.
A6	ALBURQUEQUE MES et al18, 2012	Quality of life at work and occupational risks of motorcycle taxi drivers: a case study	Revista CPAQV – Centro de Pesquisas Avançadas em Qualidade de Vida	Identify the occupational risks to which the motorcycle taxi driver is exposed and their perception of quality of life at work	Descriptive study, under a qualitative approach, of the case study type	VI	Quality of life can be defined as the subject's perception of their position in life, in the context of the culture and value systems in which they live

artigo

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A7	OLIVEIRA, T. S.; MATOS FILHO, S. A.; ARAÚJO, F. A27. 2012	Knowledge of motorcycle taxi drivers regard- ing occupatio- nal risks	Revista Baiana de Saúde Pública	Assess the knowledge of motorcycle taxi drivers in Jequié (BA) regarding occupational risks	Descriptive study, with exploratory and descriptive design, and qua- litative approach	VI	Work plays an essential role in the social relationships of man's life.
A8	MORAES, ROHR, ATHAYDE28, 2015	Entry, per- manence and abandonment in the motoboy profession: constitution of the self and the profession	Laboreal	Analyze the entry, permanence and abandonment of work in this profession and its subjective and collective effects	Qualitative study	VI	Epidemiological data indicate an increase in deaths involving mo- torcycle drivers and occupants between 2000 and 2012 in Brazil
A9	OLIVEIRA, R. A.; SILVEIRA, C. A.; VASCONCELOS, M. V29. 2015	Work profile and accidents in the occupa- tional activity of professional motorcyclists	Rev enferm UFPE on line	Characterize the profile of professional motorcyclists, working conditions, as well as the occurrence of accidents and illnesses at work	Descriptive study with a quantita- tive approach	VI	Occupational risk agents can be of the physical, chemi- cal, biological and psychological types or anti-ergonomic situ- ations that, together with the way in which work is organized, provide workers with a risky, unsafe and unhealthy work process.
A10	MASCARENHAS, M. D. M30.; et al. 2016	Characteristics of motorcy- clists involved in transport accidents attended in public urgent and emergency services	Ciência & Saúde Coletiva,	Describe the characte- ristics of motorcyclists involved in transport accidents, assisted in urgent and emergency public services in state capitals and the Federal District	Cross-sectional study		Trauma resulting from traffic accidents is a global problem, resulting in social, psychological, eco- nomic, social security and environmental impacts, in addition to overloading health services
A11	CARVALHO; MORAES; MEN- DES31, 2017	Work risks for professional motorcyclists: prevention and regulation strategies	Revista SUSTI- NERE	Recognize, according to the interviewees' point of view, the forms of prevention employed and the causes of collision accidents that occurred with profes- sional motorcyclists (PM) during the working period	Qualitative rese- arch, which uses records through interviews	VI	The capitalist world has contributed de- cisively in the way of being and doing work and has provoked conflicts and debates on the relations be- tween work-capital
A12	OLIVEIRA, SIL- VEIRA32, 2017	Perception of risks and ef- fects on occu- pational health of professional motorcyclists	Saúde Santa Maria	Identify the perception of risks and consequences of professional motorcy- clists' work	Descriptive, quantitative- -qualitative study, using a semi-structured instrument	VI	In recent years, the Brazilian motorcycle fleet has grown sig- nificantly, either due to the low acquisition costo

A13	DE CONTO, J.; GERGES, S.; GONÇALVES, C. G. 033. 2018	Hearing risk in motorcycle taxi drivers from a city in southern Brazil	Rev. CEFAC.	Characterize the audio- logical profile of motor- cycle taxi drivers working in a coastal city in Santa Catarina and analyze the risk of exposure to noise in these professionals..	Preliminary, cross-sectional study ¹		The growth of urban populations in recent decades has gene- rated an increase in the circulation of vehicles and, conse- quently, an increase in the fleet of cars, motorcycles, buses and trucks, among others, making cities increasingly noisy
A14	ABILIO ³⁴ , 2019	Uberization: from entre- preneurship to subordinate self-manage- ment	Psicoperspectivas	Construction of a defini- tion that contributes to the understanding of a new phenomenon	Empirical resear- ch and compara- tive analysis	V	This article analyzes uberization as a ten- dency to reorganize work that brings new forms of control, management and subordination.

concept through daily examples of the occupation, demonstrating that they understand the existence as well as the concern with occupational risks. ²⁷

A study carried out on assistance in traffic accidents involving motorcyclists showed that young people aged 20 to 39 years and males were the main victims of RTIs involving motorcyclists, among SUS urgent and emergency care services selected in state capitals and the Federal District. ³⁰

In a study carried out in 2017, the participants identified as risks: those related to violence, traffic and occupational hazards themselves, and as consequences of work: physical, financial and social security impacts. They also highlighted the concern with motorcycle theft, the routes and their risk factors, the long working hours and, finally, the ergonomic risk. ³²

When verifying the audiological profile of motorcycle taxi drivers and analyzing the risk of their exposure to noise, it was found that the research participants have exposure doses above 100%, with an average dose of 124% and of the 17 respondents, 11 (65%) they have already been involved in traffic accidents, but they did not consider collisions and falls from the motorcycle as work accidents and did not relate any change in health to work-related illness. ³³

The risks inherent in the motoboy profession are related to precarious working conditions, arising from long working hou-

rs with time pressure and demands for productivity, which can have negative effects on the health of these professionals. ⁴

The flexibility of work, which is one of the great attractions for the performance of motoboys who work with quick deliveries, can also be the trigger for the occurrence of risks and insecurity for workers and their families, as this flexibility to which workers are subjected, leaves them exposed and vulnerable to various risk situations. ³⁵

It is emphasized that the occupational risks inherent to the profession are in the long working hours, alternating weather conditions and ergonomic risks, which can worsen health conditions, pain throughout the body or specific regions due to staying for a long time in a certain position. ³⁶

It is noteworthy, even according to the study ³⁹ that the precariousness of the work method and high exposure to risk situations are also important factors for the occurrence of accidents and that in many of them, they leave sequelae and injuries, which can result in death or in consequences (temporary or definitive) for life, making it difficult to return to work and productivity.

As the author of the study highlights, the precarious working conditions that motoboys are susceptible to can trigger loss of quality of life and other health problems, caused by factors such as stress, physical fatigue, remuneration for productivity, in addition to pressure from customers and

employers to provide the service with intense speed. ³⁹

Motorcyclists' performance in fast deliveries

In this category are the articles ^{24,28,29,34,31}.

Professional motorcyclists work with speed and agility, facing the chaotic traffic in large cities, whose society is characterized by urgency, instantaneity and speed. ²⁴

It is observed that motoboys provide transport services for documents, food and objects, using a motorcycle as a vehicle, delivering orders flexibly and in a timely manner, such as the delivery of pizzas to customers who prefer to consume them at home or workplaces, avoiding facing the chaotic and complicated traffic common in large cities, which is disrupted by the agility and ease of movement of motorcycles. ²⁸

In a survey conducted with 131 participants, it was found that 23(17,6%) of the motorcyclists had another employment relationship, increasing the predisposition to accidents due to work overload and extended working hours, and 111 (84,7%) of the interviewees stated that they do not have a resting place in their workplace. ²⁹

In the study ³¹ it is noteworthy that the motoboys who work with food delivery and in pharmacies, in great majority carry out their activities in more than one workplace, in unconventional periods, with

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an extension of the workload to the night shift.

Many delivery people are linked to the UberEATS app, which makes it possible to create a network of partner drivers with motorcycles, working together with registered restaurants, where the person places their meal order through the app, makes payment through the Uber network and receives their order in the place you want, within an estimated time of 30 minutes. 37

The monopoly of application-companies, popularly known as uberização, made the motoboy professions, providers of fast delivery services, undergo profound transformations, making them subordinate to new forms of control, remuneration and distribution of work. 34

It was shown, for the authors of the study, that the speed of delivery is the meaning of the motoboy's work, being considered as one of the reasons for the existence of the

profession, and to optimize the delivery time, they often drive in the spaces between the cars in traffic, the so-called runners, risking their lives for speed. 31

Delivery services, or delivery, helped to reduce traffic problems, minimizing the traffic difficulties observed in large cities and contributing to the improvement of traffic and the environment, as it reduces the use of private vehicles. 40

It is defended that the motoboys, when performing their daily activities and making their deliveries, enable the achievement of the production-distribution-consumption cycle, allowing the city to have greater fluidity and this cycle to have the necessary turnover. 41

It is noteworthy that the activity of motoboy suffered job precariousness due to the requirement of agility, competitiveness, a lot of labor and little demand and accumulation of activities through the work

process. 42

CONCLUSION

It was found in the studies included in this integrative review that professional motorcyclists have several occupational risks in the development of their activities and linked to these risks, including: long working hours, alternating weather conditions and ergonomic risks and that they are aware of the dangers and risks inherent to their profession, but they are justified by the need for agility, flexibility and speed in delivering their products.

It is concluded that the proposed objective was achieved, since evidence available in the national and international literature was identified regarding the occupational risks of motorcyclists who work in rapid deliveries.

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