ORIGINAL ARTICLE

FACTORS ASSOCIATED WITH HARMFUL DRUG USE IN "PIRATE" DRIVERS*
FATORES ASSOCIADOS AO USO NOCIVO DE DROGAS EM MOTORISTAS "PIRATEIROS"*
FACTORES ASOCIADOS CON EL USO NOCIVO DE DROGAS EN CONDUCTORES "PIRATA" *

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ABSTRACT

Objective: to verify the factors associated with harmful drug use among alternative transportation drivers. **Method**: this is a quantitative, descriptive study, carried out with 40 "pirates". The data were collected through a questionnaire and the Alcohol, Smoking and Substance Test (ASSIST). In the statistical analysis, simple frequency tables were initially used to characterize the sample. At the second moment, the chi-square test of Pearson was used, with a significance level of 5%, for the association test. **Results**: the following variables were associated: tobacco use with marital status (p=0.022); amphetamine with age (p=0.002); alcohol with marital status (p-value=0.013). **Conclusion**: it is concluded that there should be prevention and health promotion measures among drivers, since these professionals are performing daily work activities, highlighting the need for local public policies. **Descriptors**: Alcoholic Beverages; Illicit Drugs; Substance- Related Disorders; Automobile Driving; Occupational Health; Border Health.

RESUMO

Objetivo: verificar os fatores associados ao uso nocivo de drogas entre os motoristas de transportes alternativos. **Método**: trata-se de um estudo quantitativo, descritivo, realizado com 40 "pirateiros". Os dados foram coletados por meio de um questionário e o *Alcohol, Smoking and Substance Test* (ASSIST). Na análise estatística, inicialmente, empregou-se as tabelas de frequência simples no sentido de caracterizar a amostra. Utilizou-se, no segundo momento, o teste qui-quadrado de Pearson, com nível de significância de 5%, para teste de associação. **Resultados**: verificou-se associação nas variáveis: uso de tabaco com estado civil (p=0,022); anfetamina com idade (p=0,002); álcool com estado civil (p-valor=0,013). **Conclusão**: conclui-se que deve haver medidas de prevenção e promoção da saúde entre os motoristas, haja vista que estes profissionais estão diariamente exercendo atividades laborais, destacando a necessidade de políticas públicas locais.

Descritores: Bebidas Alcóolicas; Drogas Ilícitas; Transtorno Relacionados ao Uso de Substâncias; Condução de Veículo; Saúde do Trabalhador; Saúde na Fronteira.

RESUMEN

Objetivo: verificar los factores asociados al consumo de drogas nocivas entre los conductores de transporte alternativo. *Método:* se trata de un estudio cuantitativo, descriptivo, realizado con 40 "piratas". Los datos fueron recolectados a través de un cuestionario y el *Alcohol, Smoking and Substance Test* (ASSIST). En el análisis estadístico, inicialmente, se empleó las tablas de frecuencias simples en orden para caracterizar la muestra. Se utilizó en el segundo paso la prueba de chi-cuadrado de Pearson, con un nivel de significancia del 5%, para la prueba de asociación. *Resultados:* hubo asociación en las variables: consumo de tabaco con estado civil (p = 0,022); anfetamina con la edad (p = 0,002); alcohol con el estado civil (p-valor = 0,013). *Conclusión:* se concluye que deben existir medidas de prevención y promoción de la salud entre los conductores, dado que estos profesionales están realizando diariamente actividades laborales, destacando la necesidad de políticas públicas locales.

Descriptores: Bebidas Alcohólicas; Drogas Ilícitas; Transtornos Relacionados com Substancias; Conducción de Automóvil; Salud Laboral; Salud Fronteriza.

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INTRODUCTION

The use of Psychoactive Substances (PASs) is considered a worldwide public health problem, as it causes serious consequences in the most diverse segments and contexts. It is known that the World Health Organization (WHO) report aims at reinforcing the prevention and treatment of substance abuse.[1]

It is informed that, worldwide, the harmful use of alcohol resulted in around three million deaths (5.3% of deaths worldwide). It is estimated, in 2017, that 271 million people (5.5% of the world population between 15 and 64 years old) used drugs in the previous year. It is added that, although this estimate is similar to 2016, a long-term view reveals that the number of people using drugs has increased by 30% compared to 2009, and the most widely used drug in the world is still cannabis, with about 188 million people.[2]

A survey showed that the frequency of universal drug use between 2006 and 2015 was legible, as well as the fact that about 29.5 million of these drug users are more worried about their use disorders. It is evident from this context that habitual drug use is harmful to the point where users can become dependent and require treatment. The same study also showed that 17 million people lose years of their lives due to the disorders caused by the use of psychoactive substances.[3]

It was verified, at the national level, according to the III National Survey on Drug Use, that 3.2% of Brazilians used illicit substances in the 12 months preceding the survey, which is equivalent to 4.9 million people. It is pointed out that the most consumed illicit substance is marijuana (7.7%), in second place, cocaine powder (3.1%), and crack corresponds to 0.9% of the population surveyed.[4]

In view of this situation and reflecting on the labor population, drivers stand out in this segment, since they are workers who need maximum attention when driving, being alert to all stimuli around them and their conduct when driving a transport, being necessary, therefore, not to make use of such substances during the working day, being one of the premises to avoid accidents added to other factors, such as: regular work hours with rest breaks, not driving with the use of cell phones or other mechanisms that divert attention, as well as performing training and health monitoring in order to ensure a safer traffic.

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accidents added to other factors, such as: regular work hours with rest breaks, not driving with the use of cell phones or other mechanisms that divert attention, as well as performing training and health monitoring in order to ensure a safer traffic.[5]

In Arizona, the use of psychoactive substances among drivers was also examined, a study showing that one in four injured drivers aged between 16 and 20 tested positive for alcohol, marijuana or both, thus showing the need to apply existing laws in order to reduce injuries and aiming at the non-access of minors to alcohol and driving.[6]

It is pointed out that the current and global trend in the legislation of driving under the influence of alcohol, according to a study that carried out a historical review covering a period of approximately 100 years, about driving under the influence of psychoactive substances showed the importance of zero tolerance or low concentration levels; this legal competence emphasizes the need for precise, exact and adequate methods for toxicological analysis for forensic purposes, because many drivers are repeat offenders in this problem. It is observed that in addition to conventional penalties and sanctions for drug-related traffic offences, many offenders would likely benefit from medical intervention such as counseling, rehabilitation and treatment of substance use disorders, which generally coexist with a mental health problem.[7]

It is also an example of legislation in Florida that an individual is not guilty of driving under the influence of drugs unless the disability is observed and due to one or more controlled drugs listed in the Florida Statutes. It is noted that many prescription, over-the-counter drugs and new psychoactive compounds that can cause significant harm are not included in this list, so if the intent of the harmed driving laws is to improve safety by removing harmed drivers from the road, a more comprehensive law on "any harmed drug" would be more appropriate. It is believed that tying the charge to a legal drug-possession structure or using other restrictive language is not the most effective means of improving road safety.[8]

The municipality of Oiapoque, located in the North of the state, 600 km from Macapá, capital of Amapá, with an area of just over 22 thousand km^2 and 25,514 inhabitants, according to IBGE, stands out in this conjuncture.[9] This distance is covered by the BR-156 highway, which cuts the state from south to north and currently has 110 km without asphalt, which brings great inconvenience to the community, because during the local winter, large quagmire areas are formed that isolate the city.[10]

This research is justified taking into account the harmful effects of the abuse of psychoactive drugs and the delicate and close relationship of the consumption of such substances with the driving, in addition to the lack of data on the factors associated with the harmful use of PASs among alternative transportation drivers in the city of Oiapoque. It is also understood, when

considering the work routine of these professionals, with exposure to exhaustive overload, stressful conditions and the process of vulnerability by the border area, that this is a public that deserves and needs investigation, with special attention so that the results are used as a guide to outline strategies to improve the quality of life of these individuals and, perhaps, adopt measures to prevent the abusive and problematic use of PASs by this category.

In view of this, the concern arose: What factors associated with the harmful use of drugs among alternative transportation drivers in the municipality of Oiapoque, known as "pirates"?

OBJECTIVE

To verify the factors associated with harmful drug use among alternative transportation drivers.

METHOD

It is a descriptive study, with a quantitative approach, whose participants were 40 drivers from the municipality of Oiapoque, Amapá (AP), Northern Region of Brazil. The study was carried out in February and March 2018.

The criteria for inclusion were drivers who had been working as a "pirate" driver for at least one year and, for exclusion, drivers who, at the time of the interview, presented clinical signs or symptoms suggestive of drunkenness/intoxication due to the use of psychoactive substances.

In a discreet and cautious way, the drivers were approached at the point of embarkation and disembarkation of passengers, located at the edge of the city. This place is strategic due to the large flow of immigrant tourists from the territories of France. At the time of collection there was no active entity, association or competent body representing them, so it was not possible to estimate the exact amount of such workers in the city, nor how to interview them in a closed place and due to their high work dynamics, it was decided to take the participant, after accepting participation, to a more reserved place where he could feel more comfortable and safe to answer questions.

The data was collected through a sociodemographic questionnaire with the following variables: age; marital status; schooling; place of residence; number of people living in the same house. All participants were informed about the objective of the study, justification and procedures for reading and signing the Free and Informed Consent Term (FICT).

It is informed that the instrument called screening test for involvement with alcohol, tobacco and other substances that was used in this study was the Alcohol, Smoking and Substance Test (ASSIST), in a Brazilian version, because it presents good sensitivity, specificity, internal consistency and validity, besides a multicentric project coordinated by the World Health Organization (WHO). It is a useful tool for the identification of the abusive use of

alcohol and other drugs mainly in primary health care. ASSIST is composed of eight questions, addressing nine classes of psychoactive substances. The instrument allows the identification of the frequency of use in life and during the previous three months, damage during the execution of the tasks to be performed, unsuccessful attempts to cease use or decrease use, feelings of compulsion and problems related to use. For reading and scoring, the values of each response corresponding to a score ranging from zero to four are added up, with the sum total ranging from zero to 20, with the score range from zero to three indicating occasional use; four to 15 indicating abusive use and above 16 indicating dependency.[11]

It is stated that the time needed to fill out the questionnaire took approximately six to ten minutes. The data was inserted in a spreadsheet in the Microsoft Excel® editor, analyzing them by the Statistical Package for the Social Sciences (SPSS) software, version 22.0. Initially, simple frequency tables were used in the statistical analysis in order to characterize the sample. The chi-square test of Pearson, with a significance level of 0.05 (5%) for the association test, was used in the second moment.

The research was approved by the Research Ethics Committee (REC) of the Federal University of Amapá for approval under CAAE: 80771817.1.0000.0003, meeting the guidelines and references described in Resolution 466/2012 of the National Health Council, which prescribes the guidelines and standards related to research with human beings.[12]

RESULTS

The results correspond to the analysis for convenience of forty questionnaires; however, there may be changes in the numbers of some tables, because some questions were not answered.

Table 1 shows information tangent to the socio-demographic characteristics of the sample.

Table 1. Distribution of sociodemographic characteristics of alternative transportation drivers in Oiapoque (AP), Brazil, 2017.

Alternative transport drivers (N=40)			
Variables	N	%	Mean (± standard deviation)
Age			
29 or under	17	42.5	
30 to 39	15	37.5	33.2 (± 9.07)
40 to 49	4	10.0	
More than 50	4	10.0	

Marital Status			
Single	24	60.0	
Married	6	15.0	
Divorced	4	10.0	
Others	6	15.0	
Education			
Elementary school	21	52.5	
Highschool	11	27.5	
Higher education	6	15.0	
Origin			
Amapá	11	27.5	
Bahia	1	2.5	
Maranhão	10	25.0	
Pará	14	35.0	
Paraíba	2	5.0	
Piauí	1	2.5	
Place of Residence			
Oiapoque	35	87.5	
Macapá	5	12.5	
Number of people living in drivers' homes			
One person	2	5.0	
Two people	2	5.0	3.7 (± 1.41)
Three people	16	40.0	
Four people	10	25.0	
Five or more	9	22.5	

Table 2 shows the distribution of scores due to the use of SPAs by the respondents, according to ASSIST. In this context, the score with average classification for the use of alcoholic beverages was 20.21. It was also verified, in the maximum category, the alcoholic beverages, with 33, and as for the minimum score, all the substances presented three, as it is seen in the table below.

Table 2Distribution of ASSIST scores by drivers, Oiapoque (AP), Brazil, 2017. (N=40).

Alternative transport drivers (N=40)			
Variables	Mean	Maximum	Minimum	Starda deviation

Tobacco products	14.44	28.00	3.00	8.67
Alcoholic beverages	20.21	33.00	3.00	8.64
Marijuana	8.25	23.00	3.00	8.40
Cocaine and crack	6.40	17.00	3.00	6.07
Amphetamine	18.59	27.00	3.00	6.15

In table 3, it was verified an association in the variables tobacco use with marital status (p=0.022); amphetamine with age (p=0.002); alcohol with marital status (p-value=0.0130).

Table 3 - Association between the sociodemographic characteristics and the ASSIST classification among drivers. Oiapoque (AP), Brazil, 2017, (N=40).

	TOBACCO							ALCOHOL							AMPHENTAMINE						
	Low risk		Medium risk		High risk		P-value	Low risk		Medium risk		High risk		P-value	Low risk		Medium risk		High risk		P-value
	N	%	N	%	N	%		N	%	N	%	N	%		N	%	N	%	N	%	
Age							0.177							0.397							0.002
29 or under	2	5.9	12	35.3	1	2.9		1	2.6	11	28.2	5	12.8		0	0.0	11	50.0	0	0.0	
30 to 39	4	11.8	9	26.5	0	0.0		4	10.3	7	17.9	4	10.3		0	0.0	7	31.8	1	4.5	
40 to 49	2	5.9	1	2.9	0	0.0		0	0.0	2	5.1	1	2.6		0	0.0	1	4.5	0	0.0	
More than 50	2	5.9	1	2.9	0	0.0		2	5.1	1	2.6	1	2.6		2	9.1	0	0.0	0	0.0	
Origin							0.956							0.789							0.613
Paraíba	1	3.0	0	0.0	0	0.0		0	0.0	1	2.6	1	2.6		0	0.0	0	0.0	1	4.8	
Maranhão	2	6.1	5	15.2	1	3.0		3	7.9	4	10.5	2	5.3		1	4.8	3	14.3	0	0.0	
Oiapoque	1	3.0	3	9.1	0	0.0		2	5.3	2	5.3	0	0.0		0	0.0	4	19.0	0	0.0	
Pará	3	9.1	8	24.2	0	0.0		2	5.3	7	18.4	4	10.5		1	4.8	6	28.6	0	0.0	
Macapá	1	3.0	1	3.0	0	0.0		0	0.0	0	0.0	2	5.3		0	0.0	0	0.0	0	0.0	
Itaituba	0	0.0	1	3.0	0	0.0		0	0.0	1	2.6	0	0.0		0	0.0	1	4.8	0	0.0	
Amapá	1	3.0	2	6.1	0	0.0		0	0.0	2	5.3	2	5.3		0	0.0	1	4.8	0	0.0	
Santa Luzia	0	0.0	1	3.0	0	0.0		0	0.0	1	2.6	0	0.0		0	0.0	1	4.8	0	0.0	
Teresina	0	0.0	1	3.0	0	0.0		0	0.0	1	2.6	0	0.0		0	0.0	1	4.8	0	0.0	
Monte Santo -Ba	0	0.0	1	3.0	0	0.0		0	0.0	1	2.6	0	0.0		0	0.0	1	4.8	0	0.0	
Education							0.06							0.773							1

Elementary school	8	25.0	10	31.3	0	0.0		4	10.8	12	32.4	5	13.5	2	9.1		9	40.9	1	4.5	
Highschool	1	3.1	6	18.8	1	3.1		1	2.7	5	13.5	4	10.8	0	0.0		5	22.7	0	0.0	
Higher education	0	0.0	6	18.8	0	0.0		2	5.4	3	8.1	1	2.7	0	0.0		5	22.7	0	0.0	
Marital status							0.022									0.013					0.409
Single	4	11.8	18	52.9	0	0.0		2	5.1	15	38.5	7	17.9	1	4.5		12	54.5	0	0.0	
Married	2	5.9	3	8.8	0	0.0		3	7.7	3	7.7	0	0.0	0	0.0		3	13.6	1	4.5	
Divorced	2	5.9	0	0.0	0	0.0		2	5.1	1	2.6	0	0.0	0	0.0		1	4.5	0	0.0	
Others	2	5.9	2	5.9	1	2.9		0	0.0	2	5.1	4	10.3	1	4.5		3	13.6	0	0.0	
Place of residence							0.682									0.175					1
Oiapoque	8	23.5	20	58.8	1	2.9		6	15.4	20	51.3	8	20.5	2	9.1		17	77.3	1	4.5	
Macapá	2	5.9	3	8.8	0	0.0		1	2.6	1	2.6	3	7.7	0	0.0		2	9.1	0	0.0	
Number of people who reside in your home							0.531									0.154					0.852
One person	1	3.0	1	3.0	0	0.0		0	0.0	1	2.6	1	2.6	0	0.0		0	0.0	0	0.0	
Two people	1	3.0	1	3.0	0	0.0		1	2.6	1	2.6	0	0.0	0	0.0		1	4.8	0	0.0	
Three people	2	6.1	11	33.3	0	0.0		2	5.3	9	23.7	4	10.5	0	0.0		7	33.3	1	4.8	
Four people	3	9.1	5	15.2	1	3.0		4	10.5	2	5.3	4	10.5	1	4.8		5	23.8	0	0.0	
Five or more	2	6.1	5	15.2	0	0.0		0	0.0	7	18.4	2	5.3	1	4.8		5	23.8	0	0.0	
Nationality							-									-					-
Brazilian	10	29.4	23	67.6	1	2.9		7	17.9	21	53.8	11	28.2	2	9.1		19	86.4	1	4.5	
Others	0	0.0	0	0.0	0	0.0		0	0.0	0	0.0	0	0.0	0	0.0		0	0.0	0	0.0	

DISCUSSION

Marital status and age stand out when it comes to the characteristics that gave statistical association. It was pointed out, in relation to the conjugal situation, by a study that took care of testing if the occupational conditions of professional truck drivers were associated to the use of amphetamines after the control of the effect of demographic characteristics, mental health and drug use, that the participants presented an average age of 36.7 (SD = 7.8) years, since it is similar to this study and most (82.1%) were married or separated at the time of the interview, contrary to the data of this research in which the majority declared to be single.[13]

It was observed in a survey that sought to estimate the pattern of alcohol use and multiple use of alcohol and other drugs in a convenience sample of 684 truck drivers in the State of São Paulo, Brazil, that the participants have an average age of 37.8 ± 7.78 years and, in their majority (74.7%), declared themselves married or in marital status.[14]

It was verified, in an investigation in which 161 truck drivers were approached in the proximities of the city of Anapolis-Goiás, on BR-153, relating the consumption of these substances to the aspects of quality of life and socio-demographic of truck drivers, mean age of 42.6 years, with standard deviation of 10.7 years, mean above that found in this investigation; regarding the consumption of psychoactive substances, 47.2% reported having already made use of tobacco derivatives, having cigarettes as their main representative; concomitantly, 73.9% reported having made use of alcoholic beverages, 9.9% used marijuana, 5% used cocaine and/or crack and, regarding the consumption of amphetamines (rivet), 32.9% declared having used such substance in the last three months.[15]

Another investigation, complementing such data, indicated that 66% of truck drivers used amphetamines during their travels, mainly at gas stations (54%) on the side of the highways, with 91% of them using alcohol, of which 43% consumed the beverage at gas stations.[16]

It was pointed out, still in this aspect, by a study that investigated the prevalence of psychotropic substances by urban bus drivers, that none of the studies referred to the consumption of illicit substances and the international studies evaluated the rates of alcoholism (4.2% to 68%), smoking (4% to 18.9%) and benzodiazepine consumption (4.6% to 8.3%) depending on the test used for detection.[17]

At the same time, the consumption of alcohol was investigated in this work and the result was that everyone made use of it. It was evidenced, by researches, that the majority of its researched consumed alcoholic beverages (91% and 73.9%, respectively),[15-8] resembling, thus, the findings of this study.

An attempt was also made to identify the consumption of inhalants, hypnotics and sedatives by "pirates", but none of those researched made or made use of these products.

In this context, the frequent and abusive consumption of alcohol and other drugs can compromise the individual's ability to drive, thus favoring the occurrence of traffic accidents, and it is necessary to monitor the drivers' BAC as a strategic intervention measure.[19]

It was shown, in a survey that analyzed the mortality by traffic accidents, besides the death rates, the importance of the Brazilian Traffic Code and the Dry Law for the prevention of deaths by traffic accidents, also highlighting that the death in traffic is premature and avoidable and affects the population in economically active age, which is the source of their families, with loss to society and multi-sectoral damage to the country.[20]

In this way, it is necessary to implement educational programs, with advertising control that associates speed to vitality and health, as well as the ingestion of alcoholic beverages to freedom and pleasure.[21] It is understood that the work to which drivers are exposed can lead to various health hazards, and that discussions of disease prevention and health promotion policies specific to these workers are fundamental.[22]

It is therefore trusted that educational and awareness actions are essential to improve drivers' lifestyles and provide safer driving in order to solve or eradicate this important public health problem.[23]

CONCLUSION

It is found, based on the results, that among the variables investigated, only age and marital status are associated with harmful drug use among alternative transportation drivers, known as "pirates".

The results allowed, despite the fact that the sample was reduced, the data could not be generalized to other contexts, this being the limitation of the study, to know the local reality, emphasizing that the studies obtained in the literature refer to bus and truck drivers, being these data pioneers with the type of driver investigated, bringing, therefore, greater potential to this study.

Thus, the need for prevention and health promotion measures among drivers is highlighted, since these professionals are performing daily work activities, highlighting the need for local public policies and health education activities. It is also essential to continue studies in order to know other factors that may interfere in the harmful use of psychoactive substances.

REFERENCES

1. World Health Organization. Global Report on Alcohol and health 2018 [Internet]. Geneva: WHO; 2018 [cited 2019 Sept 17]. Available from: https://apps.who.int/iris/rest/bitstreams/1151838/retrieve

2. World Health Organization. World Drug Report [Internet]. Geneva: WHO; 2019 [cited 2020 Mar 31]. Available from: https://wdr.unodc.org/wdr2019/

3. United Nations Office on Drugs and Crime. World Drug Report [Internet]. Viena: UNODC; 2017 [cited 2019 Aug 10]. Available from: https://www.unodc.org/wdr2017/field/Booklet_1_EXSUM.pdf

4. Bastos FIPM, Vasconcellos MTL, Boni RB, Reis NB, Coutinho CFS. III Levantamento Nacional sobre o uso de drogas pela população brasileira [Internet]. Rio de Janeiro: FIOCRUZ/ICICT; 2017 [cited 2019 Aug 10]. Available from: https://www.arca.fiocruz.br/handle/icict/34614

5. Pascali JP, Vaiano F, Palumbo D, Ronchi FU, Mari F, Bertol E. Psychotropic substance abuse and fitness to hold a driving license in Italy. Traffic Inj Prev. 2019 Jan 20(3):244-8. DOI: 10.1080/15389588.2019.1579320

6. Shults RA, Jones JM, Komatsu KK, Sauber-Schatz EK. Alcohol and marijuana use among young injured drivers in Arizona, 2008-2014. Prev. 2019 Jan; 20(1):09-14. DOI: 10.1080/15389588.2018.1527032

7. Jones AW, Morland JG, Liu RH. Driving under the influence of psychoactive substances: a historical review. Forensic Sci Rev [Internet]. 2019 July [cited 2019 Aug 10]; 31(2):103-40. Available from: https://pesquisa.bvsalud.org/portal/resource/pt/mdl-31270058

8. Tiscione NB, Alford IK, Miller R, Shan X, Yeatman DT.Driving Under the Influence of Drugs: when the Law Misses the Mark.*Toxicol*. 2019 Mar; 43(2):138-43. DOI: 10.1093/jat/bky070

9. Ministério do Planejamento, Orçamento e Gestão (BR), Instituto Brasileiro de Geografia e Estatística. Oiapoque [Internet]. Rio de Janeiro: IBGE; 2017 [cited 2018 May 17]. Available from: https://cidades.ibge.gov.br/brasil/ap/oiapoque/panorama

10. Almeida CS, Rauber AL. Oiapoque, the city where it begins Brazil: the frontier in construction and Regional Development's challenges. Redes. 2017 Jan/Apr; 22(1):474-93. DOI: 10.17058/redes.v22i1.8532

11. Henrique IFS, Micheli D, Lacerda RB, Lacerda LA, Formigoni MLOS. Validation of the Brazilian version of Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). Rer Assoc Med Bras. 2004 Apr/Jan; 50(2):199-206. DOI: 10.1590/S0104-42302004000200039

12. Ministerio da Saúde (BR), Conselho Nacional de Saúde. Resolução n˚466, de 12 de dezembro de 2012: diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos [Internet].

Brasília: Ministério da Saúde; 2012 [cited 2019 Aug 10]. Available from: https://conselho.saude.gov.br/resolucoes/2012/Reso466.pdf

13. Oliveira LG, Souza LMA, Barroso LP, Gouvêa MJC, Almeida CVD, Muñoz DR, et al. Occupational conditions and the risk of the use of amphetamines by truck drivers. Rev Saúde Pública. 2015 Sept; 49:61. DOI: 10.1590/S0034-8910.2015049005944

14. Leopoldo K, Leyton V, Oliveira LG. Alcohol use alone and in combination with other drugs among truck drivers on highways in São Paulo State, Brazil: a cross-sectional study. Cad Saúde Publica. 2015 Sept; 31(9):1916-28. DOI: 10.1590/0102-311X00047214

15. Santos AMS, Rodrigues BB, Venancio JC, Silva GB, Ferreira GCO, Fernandes TM. Use of drugs by truck drivers traveling on highways. Rev Med Minas Gerais. 2017; 27:e-1857. DOI: 10.5935/2238-3182.20170052

16. Nascimento EC, Nascimento E, Silva JP. Alcohol and amphetamines use among long-distance truck drivers. Rev Saúde Pública. 2007 Apr; 41(2):290-3. DOI: 10.1590/S0034-89102007000200017

17. Barbosa LAS, Andrade ALM, Oliveira LG, Micheli D. Prevalence of psychotropic substance use by urban bus drivers: a systematic review. SMAD Rev Eletrônica Saúde Mental Álcool Drog. 2018 Oct/Dec; 14(4):234-44. DOI: 10.11606/issn.1806-6976.smad.2018.000400

18. Ribeiro AB, Branco FMFC, Branco Neto TC. Health and work of alternative transportation drivers. REAS/EJCH. 2019 July; 11(13):e1189. DOI: 10.25248/reas.e1189.2019

19. Damacena GN, Malta DC, Boccolini CS, Souza Júnior PRB, Almeida WS, Ribeiro LS, et al. Alcohol abuse and involvement in traffic acidentes in the Brazilian population, 2013. Ciên Saúde Coletiva. 2016 Dec; 21(12):3777-86. DOI: 10.1590/1413-812320152112.25692015

20. Abreu DROM, Souza EM, Mathias TAF. Impact of the Brazilian Traffic Code and the Law Against Drinking and Driving on mortality from motor vehicle accidents. Cad Saúde Pública. 2018 Aug; 34(8):e00122117. DOI: 10.1590/0102-311x00122117

21. Marín L, Queiroz MS. Car accidents in the age of speed: an overview. Cad Saúde Pública. 2000 Jan/Mar; 16(1):07-21. DOI: 10.1590/S0102-311X2000000100002

22. Ramos BH, Almeida MFC, Ribeiro JA, Silveira CA. Life, work and health conditions of cargo transportation drivers. J Nurs UFPE on line. 2018 Jan; 12(1):150-9. DOI: 10.5205/1981-8963-v12i01a22922p150-159-2018

23. Narciso FV, Mello MT. Safety and health of professional drivers who drive on Brazilian highways. Rev Saúde Pública. 2017 Mar; 51:26. DOI:10.1590/s1518-8787.2017051006761

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