Factors associated with self-perceived health in taxi drivers

**Fatores associados à autopercepção de saúde em taxistas**

**Los factores asociados con la autopercepción de salud en chóferes**

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**ABSTRACT |** This study aimed at analyzing the association of sociodemographic, occupational, risk and health-related factors with taxi drivers' self-perceived health. This is a cross-sectional study carried out with 100 taxi drivers from the city of Jequié (Bahia). A questionnaire consisting of sociodemographic, occupational, behavioral and health variables was used. To verify the association of independent variables with health perception, the Pearson’s chi-squared test was used, adopting a confidence interval of 95%. The frequency of positive self-perceived health was 73.0%, with statistically significant associations between negative self-perceived health and individuals with eight years or less of education (p=0.033), length of service >10 years (p=0.003), poor sleep quality (p=0.006), physical and mental fatigue at the end of a workday (p=0.002 and p=0.006, respectively) and work ability index classified as moderate and good (p=0.016, p=0.000, respectively). Negative self-perceived health in taxi drivers had association with individuals who had eight years or less of education, high length of service, poor sleep quality, physical and mental fatigue, and moderate and good work ability; which suggests the need for investments in health education actions directed to these professionals in order to promote interest in the care of their own health.

**Descriptors |** Occupational Health; Occupational Risks; Epidemiology; Automobile Driving; Statistics & Numerical Data.

**RESUMO |** Objetivou-se neste estudo analisar a associação dos fatores sociodemográficos, ocupacionais, comportamentos de risco e relacionados à saúde com a autopercepção da saúde de taxistas. Trata-se de um estudo transversal realizado com 100 taxistas da cidade de Jequié (BA). Foi utilizado um questionário composto por variáveis sociodemográficas, ocupacionais, comportamentais e de saúde. Para a verificação da associação das variáveis independentes com a percepção de saúde, foi utilizado o teste qui-quadrado de Pearson, adotando-se o intervalo de confiança de 95%. A frequência da percepção positiva de saúde foi de 73,0%, sendo encontradas associações estatisticamente significativas entre percepção negativa de saúde e indivíduos com oito anos ou menos de estudo (p=0,033), tempo de serviço >10 anos (p=0,003), qualidade do sono ruim (p=0,006), sensação de cansaço físico e mental ao final de um dia de trabalho (p=0,002 e p=0,006, respectivamente) e índice de capacidade para o trabalho classificado como moderado e bom (p=0,016 e p=0,000, respectivamente). A autopercepção negativa de saúde em taxistas apresentou associação com indivíduos que possuíam oito anos ou menos de estudo, elevado tempo de serviço, qualidade de sono ruim, sensação de cansaço físico e mental, e capacidade para o trabalho moderada e boa; o que sugere a necessidade de investimentos em ações de educação em saúde voltadas para esses profissionais com o intuito de fomentar o interesse pelo cuidado da própria saúde.

**Descritores |** Saúde do Trabalhador; Riscos Ocupacionais; Epidemiologia; Condução de Veículo; Estatística & Dados Numéricos.

**RESUMEN |** En este estudio se propone analizar la asociación de factores sociodemográficos, ocupacionales, comportamientos de riesgo y relacionados con la autoevaluación de la salud de choferes. Se trata de un estudio transversal realizado con 100 choferes de la ciudad de Jequié (BA). Se utilizó un cuestionario compuesto por variables sociodemográficas, ocupacionales, comportamentales y de salud. Para verificar la asociación de las variables independientes con la percepción de salud, se utilizó el test qui-cuadrado de Pearson, adoptando un intervalo de confianza del 95%. La frecuencia de percepción positiva de salud fue de 73,0%, siendo encontradas asociaciones estadísticamente significativas entre percepción negativa de salud y individuos con ocho años o menos de estudio (p=0,033), tiempo de servicio >10 años (p=0,003), calidad del sueño ruim (p=0,006), sensación de cansancio físico y mental al final de un día de trabajo (p=0,002 y p=0,006, respectivamente) y índice de capacidad para el trabajo clasificado como moderado y bueno (p=0,016 y p=0,000, respectivamente). La percepción negativa de salud en los choferes tuvo asociación con individuos que tenían ocho años o menos de estudio, tiempo de servicio elevado, calidad del sueño ruim, sensación de cansancio físico y mental, y capacidad para el trabajo moderada y buena; lo que sugiere la necesidad de invertir en acciones de educación en salud para estos profesionales con el objetivo de fomentar el interés en el cuidado de su propia salud.

**Descriptors |** Salud del Trabajador; Riesgos Ocupacionales; Epidemiología; Conducción de Vehículo; Estadística & Datos Numéricos.
de conductas de riesgo y relacionadas a la salud con la autopercepción de salud en chóferes. Se trata de un estudio transversal llevado a cabo con 100 chóferes de la ciudad de Jequié (Bahia, Brasil). Se utilizó un cuestionario que consta de variables sociodemográficas, ocupacionales, conductuales y de salud. Para analizar la asociación de variables independientes con la percepción de la salud, se utilizó la prueba chi-cuadrado de Pearson, con el intervalo de confianza del 95 %. La frecuencia de la percepción positiva de la salud fue de un 73,0 %, y se encontraron asociaciones estadísticamente significativas entre la percepción negativa de la salud e individuos con ocho años o menos de escolaridad (p=0,033); tiempo de servicio > 10 años (p=0,003); mala calidad de sueño (p=0,006); sensación de cansancio físico y mental al final de un día de trabajo (p=0,002 y p=0,006, respectivamente) e índice de capacidad para trabajar clasificado como moderado y bueno (p=0,016 y p=0,000, respectivamente). La autopercepción negativa de la salud en chóferes ocurrió en individuos que tenían ocho años o menos de escolaridad, con alto tiempo de servicio, con mala calidad de sueño, con la sensación de cansancio físico y mental, y con la capacidad moderada y buena para trabajar; lo cual revela la necesidad de inversiones en actividades educativas en salud a estos profesionales con el fin de promover el cuidado con la propia salud.

Palabras clave | Salud del Trabajador; Riesgos Laborales; Epidemiología; Conducción de Automóvil; Estadísticas y Datos Numéricos.

INTRODUCTION

Work is an activity developed since the origin of human existence and represents an important personal achievement. Over the years, work has been suffering several transformations in the technological, economic and psychosocial areas, which can represent negative repercussions for the worker, not only on his/her integrity and health/disease process, but also on the various areas of his/her life⁴².

One of the working classes exposed to the negative repercussions resulting from the transformations in the work environment are taxi drivers. They are subjected to long working hours, repetitive manual activities, vibrations from soil and car, heat, intense noise, pollution and risk of accidents. These factors, associated with little time for rest, little care for their own health and concern with monthly income, are potential risks to the decline in the quality of life and to the emergence of health problems⁴⁻⁴.

Given this, the need for better research on these professionals’ health emerges. In the scientific milieu, one of the most reliable methods of research, which also is an important indicator of population health, is the self-perceived health⁵. Such method is based on subjective, objective and individual criteria that include biological, psychological and social aspects, influenced by socioeconomic condition, gender, age, presence of chronic diseases, occupation or no occupation, among other factors⁶⁻⁸.

In this perspective, this study aimed at evaluating taxi drivers’ self-perceived health and analyzing the factors associated with it. The results can be used to support and assist action strategies on public health, with a focus on this working class.

METHODOLOGY

This is a descriptive and analytical study of cross-sectional character, approved by the Research Ethics Committee of the Universidade Estadual do Sudoeste da Bahia (CAAE: 49995215.3.0000.0055). All taxi drivers were informed individually of the objectives, benefits, possible damage and data collection procedures. Those who voluntarily accepted to participate in research signed an informed consent form (ICF).

The population of this study consisted of men working as taxi drivers for at least six months in the city of Jequié (Bahia). Those who were in leave of absence of their professional activities in the collection period, those who were not found in their workstations after three attempts, on alternate schedules and days, and those who refused to participate were excluded.

According to the Taxi Drivers’ Union in Jequié (Bahia), this municipality has 236 taxi drivers, distributed in 34 points. Of this total, 99 employees were not found and 37 refused to participate in the study. Thus, the sample was composed of 100 taxi drivers, who were interviewed from February to April 2016.

The data collection instrument used was a questionnaire with four information blocks. The first block consisted of socio-demographic variables (age, marital status, education level and monthly income); the second block,
of occupational variables: length of service as taxi driver, daily and weekly workload, whether he exercises other remunerated activities, breaks at work, satisfaction with work, relationships within the work environment, physical and mental sensation at the end of a workday, and work ability index (WAI).

The WAI is an instrument that was translated, validated and adapted to the Brazilian Portuguese. It consists of nine questions that enable the self-reported evaluation of the health state and work ability. Scores from 7 to 27 indicate low work ability; from 28 to 36, moderate work ability; from 37 to 43, good work ability; and from 44 to 49, excellent work ability.

The third block consisted of variables related to risk behaviors, as practice of physical activity, smoking and alcohol consumption. Individuals were considered active when performing aerobic exercises with moderate intensity for at least 2.5 hours per week. Individuals who smoked were considered smokers regardless of the number of cigarettes; nonsmokers were those who had never smoked or that had no habit of smoking. Participants who reported consuming alcohol, regardless of the quantity, type or frequency of use, were considered consumers of alcoholic beverage.

The fourth block was composed of health-related variables: body mass index (BMI), sleep quality, cardiovascular risk, and self-perceived health. BMI was calculated through the formula body weight(kg)/body height²(m²). It was classified in accordance with the World Health Organization, in three categories: normal weight, pre-obesity and obesity. The quality of sleep was evaluated through the Pittsburgh Sleep Quality Index, instrument translated, validated and adapted to the Brazilian culture. The maximum score is 21, in which scores higher than 5 indicate poor sleep quality.

To assess the cardiovascular risk, the Physical Activity Readiness Questionnaire (PAR-Q) was used. Through seven questions, the tool aims at detecting the cardiovascular risk before the beginning of the exercise; each “yes” answered corresponds to a risk factor. To investigate self-perceived health, a single question was posed ("how do you classify your current health state?”), with four response options (excellent, good, regular, bad). The self-perceived health was considered negative when the participant evaluated his health as "regular" or "bad" and positive when the participant evaluated his health as "good" or "excellent".

Data were analyzed with the Statistical Package for the Social Sciences (SPSS) – version 21.0. First, a univariate analysis was conducted for sociodemographic, occupational, behavioral and health-related variables. For categorical variables, absolute and relative frequencies were used; for quantitative variables, mean and standard deviation.

In bivariate analysis, the association among sociodemographic, occupational, behavioral, and health-related variables with self-perceived health was verified through the Pearson’s Chi-square Test, considering significant levels of p≤0.05 and confidence interval (CI) of 95%.

RESULTS

One can observe that 50.0% of taxi drivers were 50.5 or younger, 58.0% had eight years or more of education, and 40.0% were receiving more than R$ 2,000.00 per month. Considering the occupational activities, 54.0% had 10 years or less of occupation; 82.0% worked 12 hours or less per day; 97.0% stated having good relationship within the work environment; 75.0% reported mental well-being at the end of a workday; and 57.0% were classified with a great work ability (Table 1).

Table 1. Sociodemographic and occupational variables of taxi drivers. Jequié (BA), Brazil

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>%</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;50.5 years</td>
<td>50</td>
<td>50.0</td>
<td>48.92 (±14.08)</td>
</tr>
<tr>
<td>≤50.5 years</td>
<td>50</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without a partner</td>
<td>20</td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td>With a partner</td>
<td>80</td>
<td>80.0</td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤8 years of study</td>
<td>42</td>
<td>42.0</td>
<td></td>
</tr>
<tr>
<td>&gt;8 years of study</td>
<td>58</td>
<td>58.0</td>
<td></td>
</tr>
<tr>
<td>Monthly income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤R$ 2,000.00</td>
<td>60</td>
<td>60.0</td>
<td></td>
</tr>
<tr>
<td>&gt;R$ 2,000.00</td>
<td>40</td>
<td>40.0</td>
<td>R$ 2,231.00 (±R$ 1,062.36)</td>
</tr>
<tr>
<td>Length of service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;10 years</td>
<td>46</td>
<td>46.0</td>
<td></td>
</tr>
<tr>
<td>≤10 years</td>
<td>54</td>
<td>54.0</td>
<td>14.14 (±11.98)</td>
</tr>
</tbody>
</table>

(continues)
Table 2 presents data of behavioral and health variables. Most individuals practiced no physical activity (51.0%), 54.0% presented overweight, 75.0% were classified with good sleep quality and, considering self-perceived health, 73.0% presented a positive self-perception regarding their health.

Table 3 shows data of the bivariate analysis. The numbers indicated statistically significant associations between negative health perception and individuals with eight years or less of education (p=0.333), length of service >10 years (p=0.003), poor sleep quality (p=0.006), physical and mental sensation at the end of a workday (p=0.002 and p=0.006, respectively) and WAI classified as moderate and good (p=0.016, p=0.000, respectively).
### DISCUSSION

The self-perceived health has been increasingly investigated in scientific research due to its ability of portraying the health state of a given population, whether it is positive or negative\textsuperscript{17-19}. This study has shown that most drivers presented a positive self-perceived health, which can be due to the fact that adults in working age have a better self-perceived health when they are working compared to those who are away from work\textsuperscript{8}. However, from those who considered having a self-perceived health classified as negative, association with sociodemographic, occupational and health variables could be verified.

Regarding the education level, the majority of taxi drivers who reported a negative self-perceived health had eight years or less of study. This may be explained by the fact that the taxi driver profession constitutes a job opportunity that sometimes was not chosen, but rather imposed by the need to work. Still in this context, the low education level may lead the individual to have a negative perception of his/her health due to a lack of proper instruction on self-care. Analogous to this, with the increase in education level, the individuals’ health expectancy also increases\textsuperscript{1-2,20-21}.

With regard to length of work, the taxi drivers with negative self-perceived health were those with more than 10 years of profession. This can be attributed to the presence of osteomuscular symptoms\textsuperscript{17} generated by inadequate seats of automobiles. These seats cause postural disorders radiologically proved\textsuperscript{22} and increase the probability of appearance of musculoskeletal injuries in upper extremities and in upper and lower torso\textsuperscript{23}. Systemic hypertension (SHT) can also be developed\textsuperscript{23-24}, which would make these people to associate such chronic disease with a negative self-perceived health\textsuperscript{25}. These disorders affect negatively these professionals’ physical well-being and quality of life\textsuperscript{17}. However, the presence of these disorders was not investigated in this study.

With regard to the quality of sleep, one can verify that there was association between bad sleep and negative self-perceived health. The deficiency in the quality of sleep can impair the ability of the brain in regulating and restoring physical and mental functions\textsuperscript{26}. The inadequate restoration of these domains can explain the fact that the taxi drivers of this study present a negative self-perceived health, as this is a variable of subjective order. This argument can explain the report of physical and mental fatigue at the end of a workday,
which also had association with taxi drivers’ negative self-perceived health.

Despite taxi drivers with negative self-perceived health having reported physical and mental fatigue at the end of a workday, they presented good and moderate classification for the profession through WAI. Being the WAI a measure that depends on the individual's subjectivity before a qualitative self-assessment about his/her physical and mental performance, it is possible that taxi drivers have overestimated themselves, because, as the work represents an important personal achievement, to have good mental and physical conditions for its achievement is crucial.

CONCLUSION

The negative self-perceived health in taxi drivers presented statistically significant association with individuals who had eight years or less of study, length of service over 10 years, bad sleep quality, physical and mental fatigue at the end of a workday and work ability classified as moderate and good.

The identification of these variables, which interfere directly in the self-perceived health, suggests the need for investments in health education actions directed to these professionals in order to make them aware of the occupational hazards of their profession and, thereby, to promote the interest in measures aimed at reducing the need for future expenses with curative/rehabilitator treatments in Primary Care.

REFERENCES


