

## MULTIMORBIDADE EM TRABALHADORES AÇOUGUEIROS FEIRANTES

## MULTIMORBIDITY IN MARKET BUTCHER WORKERS

## MULTIMORBILIDAD EN TRABAJADORES CARNICEROS COMERCIANTES

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### RESUMO

**Objetivo:** Analisar os fatores associados à presença de multimorbidade em açougueiros informais de um mercado municipal. **Métodos:** Estudo censitário, de corte transversal, baseado em dados das características sociodemográficas, ocupacionais, de estilo de vida e das doenças e agravos dos trabalhadores açougueiros de um Mercado Municipal. Os dados foram analisados, por meio do Epi Info versão 7.0, com cálculos de razão de prevalência e teste do qui-quadrado e exato de Fisher, adotando-se valor de  $p < 0,05$  como estatisticamente significante. **Resultados:** Foram entrevistados 97 açougueiros, com prevalência de 48,5% de multimorbidade. Foi possível verificar que as variáveis que tiveram associação independente com a multimorbidade foram: sexo feminino ( $p=0,018$ ), idade superior a 44 anos ( $p=0,001$ ), escolaridade até ensino fundamental ( $p=0,012$ ); tempo no comércio menor que oito anos ( $p=0,019$ ), baixo índice de capacidade para o trabalho ( $p=0,000$ ), satisfação com a vida ( $p=0,025$ ) e estresse ( $p=0,010$ ). **Conclusão:** Em virtude da magnitude da multimorbidade e da exposição dos açougueiros informais a diversos fatores associados, destaca-se a necessidade de políticas voltadas, para essa classe de trabalhadores, com vista à redução dos impactos negativos na saúde, melhora da qualidade de vida e qualidade do trabalho.

**Descritores:** Trabalhadores; Multimorbidade; Saúde do Trabalhador.

### ABSTRACT

**Objective:** To analyze the factors associated with the presence of multimorbidity in informal butchers from a municipal market. **Methods:** Census-based, cross-sectional study based on sociodemographic, occupational, lifestyle and disease data of butchers from a Municipal Market. Data were analyzed using the Epi Info software (version 7.0) with calculation of prevalence ratio and chi-square and Fisher's exact tests, adopting  $p < 0.05$  as statistically significant. **Results:** 97 butchers were interviewed, with a prevalence of 48.5% of multimorbidity. The variables that had an independent association with multimorbidity were: female ( $p=0.018$ ), age over 44 years ( $p=0.001$ ), primary school degree ( $p=0.012$ ), time as marketer smaller than 8 years ( $p=0.019$ ), low labor capacity ( $p=0.000$ ), life satisfaction ( $p=0.025$ ) and stress ( $p=0.010$ ). **Conclusion:** Due to the magnitude of multimorbidity and the exposure of informal butchers to several associated factors, the need for policies aimed at this class of workers is highlighted, aiming at reducing negative health impacts, improving quality of life and quality of work.

**Descriptors:** Workers; Multimorbidity; Occupational Health.

### RESUMEN

**Objetivo:** Analizar los factores asociados a la presencia de multimorbilidad en carniceros comerciantes de un mercado municipal. **Métodos:** Estudio censal transversal basado en datos sobre características sociodemográficas, ocupacionales, de estilo de vida y enfermedades de carniceros en un mercado municipal. Los datos fueron analizados a través del Epi Info versión 7.0 con cálculos de razón de prevalencia y prueba del chi-cuadrado y exacto de Fisher, adoptando un valor de  $p < 0,05$  como estadísticamente significante. **Resultados:** Fueron entrevistados 97 carniceros, con predominio del 48,5% de multimorbilidad. Se verificó que las variables que tuvieron asociación independiente con la multimorbilidad fueron: sexo femenino ( $p=0,018$ ), edad superior a 44 años ( $p=0,001$ ), escolaridad hasta enseñanza fundamental ( $p=0,012$ ), tiempo en el comercio menor de 8 años ( $p=0,155$ ), bajo índice de capacidad de trabajo ( $p = 0.000$ ), la satisfacción con la vida ( $p=0,025$ ) y el estrés ( $p=0,010$ ). **Conclusión:** En virtud de la magnitud de la multimorbilidad y de la exposición de los carniceros ambulantes a diversos factores asociados, se destaca la necesidad de políticas dirigidas a esta clase de trabajadores, con miras a la reducción de los impactos negativos en la salud, la mejora de la calidad de vida y la calidad del trabajo.

**Descritores:** Trabajadores; Multimorbilidad; Salud Laboral.

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## INTRODUCTION

The work is an activity essential to human life, which allows for acquiring the means of survival for oneself and families, in addition to providing social interaction. However, the health of the individual may be impaired, in view of the work processes and the working conditions involving workers.

Since the beginning, the work has been developed aiming at production of life in the human-nature relationship, creating value of use to make the human existence possible. In addition to being a source of economic income, the work also includes the insertion of the individual in society, because it allows for the interaction with other social subjects<sup>(1-2)</sup>. Therefore, the meaning of work permeates the economic context, also including the interaction with nature and social relations.

Nevertheless, in modern society, the work has caused suffering, illness, physical and mental wear to the worker. In relation to the informal sector, this situation may be more complex, since the informal workers commonly are not recognized by government agencies; in official statistics, they are included incorrectly, besides not being supported by labor laws in force<sup>(1-3)</sup>.

Among the various activities inherent to the informal economy, there is the free fair, in which the work presents a series of difficulties for marketers, such as long days of work, exposure to inadequate working conditions, lack of pre-established timetables and appropriate environment for the meals, in addition to economic problems due to the own-account character of the profession<sup>(4)</sup>.

In the context of free fair, among other professionals, there are the butchers who, in general, sell meat and chickens, whose labor activity consists in chopping and cutting the goods by using tools, which may lead to the occurrence of lesions in the hands and fingers<sup>(5)</sup>. In this sense, it is observed that the worker marketer, especially the butchers, are exposed to precarious working conditions that may be harmful to their health, influence the quality of life, work and lead to the incidence and prevalence of multimorbidity.

Thus, multimorbidity is conceptualized as the presence of two or more chronic health conditions in the same individual. A study conducted with workers in Denmark points out that the multimorbidity is related to several negative health outcomes, such as decreased

quality of life, mobility, functional capacity, in addition to resulting in increased hospitalizations, psychological distress, mortality and use of health services<sup>(6-7)</sup>.

A study using data from the 2013 National Health Survey (NHS) provides that 14.4% of respondents reported having multimorbidity, this being a condition more frequent in disadvantaged groups, thus contributing to inequalities in health<sup>(6-8)</sup>.

In this perspective, the objective of this study is to analyze the factors associated with the presence of multimorbidity in informal butchers from a municipal market.

The results of this study will be relevant for the contribution to the literature, in order to provide better understanding on multimorbidity in butchers, which will contribute to the building of public policies geared to this class of workers, besides helping in the development of educational actions with informal butchers.

## METHODS

This is a census-based, cross-sectional study, based on sociodemographic characteristics, occupational, lifestyle and disease data reported by butchers from the Municipal Market of Guanambi/BA.

The research was carried out in the municipality of Guanambi, located in southwest Bahia, located 796 km from the state capital, Salvador, whose estimated population, according to data from the Brazilian Institute of Geography and Statistics (IBGE), for the year 2018, was 84,014 inhabitants<sup>(9)</sup>. Its main economic activity is the trade, making the city a commercial center.

The location chosen to develop the study was the Municipal Market of Guanambi/BA, which concentrates a large portion of informal marketers of the municipality, who sell a large variety of products. Among the marketers, there are the workers of the meat segment, whether cattle, swine, sheep or fish, allocated in 85, distributed in pavilions two and three.

The population was composed of all the butchers aged greater than or equal to 14 years who developed labor activities, in the market studied, without bond with Social Security, either as an employee of the butcher or as own-account worker or owner.

Exclusion criteria were butchers who developed activities outside the location specified by the administration of the Supply Center; workers from other categories such as

hawkers, fruit sellers, peddlers, fruits & vegetables; butchers with an employment relationship.

Those workers who were not found after three visits, on different days, including a Monday or Thursday, by being busy days at the market, as well as those who refused to sign the Informed Consent Form, were considered losses from the study.

The collection occurred in the period from November 2015 to January 2016, using the QSEST (sociodemographic, lifestyle, work and health questionnaire) form, drawn up in 1996 and updated in 2009 by Monteiro, in addition to variables on work capacity, working and health conditions.

Since this is a census-based study, the researchers initially conducted a survey of all butchers, together with the administration of the municipal market, totaling 117 workers.

Ninety-seven (82.9%) informal butchers were interviewed, of both sexes, with a loss of 20 workers (17.1%) due to refusal to participate in the study, or not being found after three visits, on the busiest days at the market. Subsequently, the database was built by typing the forms on Microsoft Excel 2010.

The sociodemographic variables studied were: sex, age, marital status, educational level (up to elementary education and from the secondary education). Age was dichotomized, after the calculation of the median, in up to 44 years and older than 44 years.

Regarding the occupational aspects, the following variables were studied: having another job, working time as seller, stress level, work ability and occupational accidents.

The time as a seller refers to the period, expressed in years, in which the worker has developed the activities in that sector of the fair. For the categorization into two groups, the median was cut, the first being less than eight years working at the fair and the second, eight years or more working at the fair.

The level of stress perceived by marketers was evaluated by means of questioning about the stress, with options for responses that varied from zero (I am totally stressed out) to 10 points (I am not stressed at all). Then, after the calculation of the median, the data were dichotomized, being classified in the group of stressed workers (0-7) and non-stressed workers (8-10).

For the analysis of the work ability, the Work Ability Index (WAI) was used, an instrument that reveals how capable the worker is to develop his/her job, considering the physical and mental demands of the activity, health condition and the resources used. The WAI comprises 10 questions divided into seven dimensions, in which each item receives a score that, after summed up, results in a value that ranges from 7 to 49 points, being categorized into bad (7-27), moderate (28-36), good (37-43), and very good (44-49)<sup>(10)</sup>. After performing the calculation of the WAI, the data were dichotomized into bad work ability (7-27 points) and not bad work ability (28-49).

The variable occupational accident considered the occurrence of typical occupational accidents, in the last 12 months, not being considered, for this study, the number of accidents, type of lesion and body region affected, nor accidents outside the workplace.

In relation to lifestyle, the practice of physical activities and use of tobacco were analyzed. Regarding the use of tobacco, the smoking habit at the moment of the participant's interview was estimated. It is noteworthy that the mentioned variables were categorized into yes and no.

Furthermore, the variables satisfaction with life and job satisfaction were analyzed. The workers were asked how satisfied they were with the current job and current life. Afterwards, each variable was categorized separately in satisfied (those who claim to be "very satisfied" or "satisfied") and dissatisfied (who reported "little dissatisfied" or "dissatisfied"), and there were also those who were "neither satisfied nor dissatisfied". To check the association with the multimorbidity, the analysis included only workers who were "satisfied" or "dissatisfied".

To describe the presence of multimorbidity, a medical diagnosis was considered, from reports of injuries caused by accidents, musculoskeletal diseases, cardiovascular diseases, respiratory diseases, mental disorders, disease of the senses and/or neurological diseases, digestive diseases, genitourinary diseases, skin diseases, endocrine and/or metabolic disease, hematologic disease and others.

Data were analyzed by means of the Epi Info statistical program™, version 7.0 (Centers for Disease Control and Prevention, Atlanta, USA), being performed a descriptive analysis of the variables with calculation of absolute and relative frequency. To check the factors associated with

the presence of multimorbidity and sociodemographic characteristics, as well as occupation and lifestyle, the chi-square and Fisher's exact tests were used, adopting the value of  $p < 0.05$  as statistically significant. Moreover, the prevalence ratio (PR) was estimated for each variable studied.

The dependent variable was presence of multimorbidity (report of two or more chronic health conditions) and the independent were sociodemographic, occupational and lifestyle variables.

As to the ethical aspects, the Research Ethics Committee of the University of the State of Bahia examined and approved the study, under Certificate of Presentation for Ethical

Consideration - CAAE 44126515.5.0000.0057, with opinion number: 1.253.270.

## RESULT AND DISCUSSION

Ninety-seven informal butchers were interviewed, whose labor activities occurred at the Municipal Market of Guanambi/BA, and 47 presented multimorbidity, equivalent to 48.5% of the population studied. This study regarded injuries and chronic diseases with medical diagnosis.

In the studied population, there was a predominance of males (67.0%), married (73.2%), in the age range of up to 44 years (50.5%), schooling above secondary education (55.7%) and working time of more than eight years (51.5%), as seen in Table 1.

Table 1 - Characteristics of the study population, according to sociodemographic, occupational and lifestyle-related variables. Guanambi, Bahia, Brazil, 2018.

Variables	Total study population		Multimorbidity	
	n	%	n	%
<b>Sex</b>				
Female	32	33.0	21	44.7
Male	65	67.0	26	55.3
<b>Age</b>				
Up to 44 years	49	50.5	16	34
Over 44 years	48	49.5	31	66
<b>Marital status</b>				
Married	71	73.2	34	72.3
Unmarried	26	26.8	13	27.7
<b>Education</b>				
Up to elementary education	43	44.3	27	57.5
From secondary education	54	55.7	20	42.5
<b>Time working at the fair</b>				
Less than 8 years	47	48.5	17	36.2
Over 8 years	50	51.5	30	63.8
<b>Another job</b>				
Yes	13	13.4	7	14.9
No	84	86.6	40	85.1
<b>Work ability</b>				
Bad	13	13.4	12	25.2
Not bad	84	86.6	35	74.5
<b>Stress classification</b>				
Yes	51	52.6	31	66
No	46	47.4	16	34
<b>Job satisfaction</b>				
Satisfied	77	79.4	33	70.2
Dissatisfied	15	15.5	10	21.3
Not satisfied nor dissatisfied	5	5.2	4	8.5
<b>Life satisfaction</b>				
Satisfied	75	77.3	33	70.2
Dissatisfied	16	16.5	12	25.5
Not satisfied nor dissatisfied	6	6.2	2	4.3

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Variables	Total study population		Multimorbidity	
	n	%	n	%
<b>Occupational accident</b>				
Yes	60	61.9	31	66
No	37	38.1	16	34
<b>Physical activity</b>				
Yes	41	42.3	20	42.5
No	56	57.7	27	57.5
<b>Smoking</b>				
Yes	10	10.3	4	8.5
No	87	89.7	43	91.5

Source: Database of the research project Labor and health conditions of butchers, marketers in a mid-sized city, 2016.

Most workers with multimorbidity were men (55.3%), more than 44 years old (66%), married (72.3%), with schooling up to the secondary education (57.5%), working as a seller for more than eight years (63.8%), with no other work (85.1%), work ability classified as not bad (74.5%), stressed (74.5%), satisfied with work (76.7%) and satisfied with life (73.3%). The workers reported having suffered an occupational accident in the last 12 months (66%), not practicing physical activity (57.5%) and not being smokers (91.5%).

In this study, a significant number of butchers, almost half of the population studied, presented multimorbidity. Concerning the impacts of multimorbidity for work and the worker's health, authors highlight that the increased prevalence of non-communicable chronic diseases (NCCD) can result in decreased productivity, absenteeism, presenteeism, invalidity, early retirement and increased health costs<sup>(11)</sup>.

In concordance, a study performed with American workers identified that the number of absences at work, over one year, was proportional to the number of chronic health conditions, therefore, the more chronic conditions, the greater the number of working days lost<sup>(12)</sup>.

Thus, it is observed that the occurrence of multimorbidity entails a series of damage to the worker, in addition to the deterioration of health and impairment of daily activities; yet, there were

financial losses, since there is a decrease in days worked, production and work ability.

In relation to the informal sector, this situation can be aggravated, since, according to the International Labor Organization (ILO), in the informal context, there is a plurality of situations that corroborates to unfavorable conditions to the worker, such as undefined workplaces, unhealthy and dangerous working conditions, low levels of qualification and productivity of labor, low and irregular incomes, long days of work, lack of access to information and technology, among others<sup>(3)</sup>.

Authors suggest that the working conditions at the fair may contribute to the emergence of diseases, emotional changes and deficiency of information on healthy life habits<sup>(4)</sup>. In this sense, the informal workers are more exposed to the risk of illness and/or worsening of health problems, resulting from working conditions in which they are inserted.

The chi-square analysis showed association between multimorbidity and the variables sex ( $p= 0.018$ ), age ( $p= 0.001$ ) and education ( $p= 0.012$ ), as shown in Table 2.

Women had a greater prevalence of multimorbidity (64%) when compared to men. Those workers aged over 44 years (97%) presented a higher prevalence when compared to younger workers and less than eight years of education (primary education) also showed higher prevalence (69%) compared to those with higher education.

Table 2 - Bivariate inferential analysis of sociodemographic factors and p-value in association with multimorbidity in informal butchers. Guanambi, Bahia, Brazil, 2018.

Sociodemographic variables	%	PR	95% CI	p value*
<b>Sex</b>				
Female	65.6	1.64	1.11 - 2.42	0.018
Male	40.0	1.00	-	

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Sociodemographic variables	%	PR	95% CI	p value*
<b>Age</b>				
Up to 44 years	32.6	1.00	-	
Over 44 years	64.5	1.97	1.25 - 3.11	0.001
<b>Marital status</b>				
Married	47.8	0.95	0.60 - 1.50	0.854
Unmarried	50.0	1.00	-	
<b>Education</b>				
Up to elementary education	62.7	1.69	1.11 - 2.57	0.012
From secondary education	37.0	1.00	-	

Source: Database of the research project Labor and health conditions of butchers, marketers in a mid-sized city, 2016. 95% CI: 95% confidence interval; PR: prevalence ratio. \*Obtained by chi-square test.

In relation to sex, the prevalence (64%) was higher in women when compared to men. Nonetheless, this result should be seen carefully, due to reasons related to men's low adherence to the health service, hindering the early diagnosis of multimorbidity. Men usually spend less attention with prevention and care and seek health services when in the most advanced stage of the disease<sup>(13)</sup>.

This low adherence is closely related to the concept of masculinity established by the patriarchal culture, in which illness is synonymous with fragility, rejected by the male figure, added to the feeling of invulnerability and the role of family provider. Another important factor is the deficiency of health services regarding the actions for human health, as well as the lack of professional training to meet this public<sup>(13-14)</sup>. Therefore, this data may be underestimated by the great possibility of lack of diagnosis of multimorbidity in this sex, having in view that the study considered only injuries and chronic diseases with medical diagnosis.

In addition, there is the increasing presence of women in the labor market, particularly in the informal sector, as may be evidenced in this study (n = 32; 33%). Women has been gaining space in the butcher branch, a profession that, culturally, has predominance of male figure.

Workers aged over 44 years were the most affected (PR= 1.97; 95% CI: 1.25 - 3.11) by the multimorbidity when compared to younger individuals. A research points out that, in Brazil, with age advance, the number of non-communicable chronic diseases in individuals<sup>(8)</sup>. Thus, it can be argued that aging is a risk factor for the multimorbidity in individuals, especially in marketers.

Furthermore, there is the permanence of the elderly in the informal labor market, whose permanence can have origin in the sense of exclusion experienced by the elderly, a fact that hinders accepting the retirement, leading them to remaining in the labor market, especially in activities that refer to informality. This situation can also be related to how the free fair organizes and maintains the social relations, in which the marketers create their own rules of coexistence, keep relations of mutual aid, and the representativeness of the fair as a place for development and relaxation by means of relations between marketers and between clients<sup>(15-16)</sup>.

A study carried out with workers of the informal trade, in the municipality of Jequié, points out that the most elderly people (66.2%) reported not having the desire leave informality, probably by owning the shop and by the opportunity to achieve a higher income, compared to other employment<sup>(15)</sup>. Thus, in the informal trade, the worker has the flexibility of schedules and autonomy to develop their labor activities, which would not be possible in the formal sector.

Another sociodemographic aspect that presented an association with multimorbidity was the level of schooling, in which workers who studied up to the primary education presented a higher prevalence (69%) of multimorbidity when compared to those who have secondary education or more. This fact is believed to be related to access to information about the importance of adopting healthy habits for the prevention of injuries of health and NCCD.

Concerning this aspect, authors point to the prevalence of risk factors in individuals with up to eight years of education, in the population of Campinas-SP, including smoking; lower

consumption of fruit and vegetables; lower frequency of physical activity; and greater overweight and intake of meat high in fat. In addition, higher education is related to the demand for health services in case of a symptom<sup>(17-18)</sup>. In this sense, the less schooling is associated with risk behaviors, similarly, people with higher level of education are more likely to adopt healthy habits.

In relation to the occupational and lifestyle aspects, there was an association with multimorbidity in the following variables: time working as a seller in less than eight years ( $p=0.019$ ), work ability ( $p=0.000$ ), life satisfaction ( $p=0.025$ ) and stress ( $p=0.010$ ), as shown in Table 3.

Table 3 - Bivariate inferential analysis of occupational and lifestyle variables and p-value in association with multimorbidity in informal butchers. Guanambi, Bahia, Brazil, 2018.

Occupational and lifestyle variables	%	PR	95% CI	p value*
<b>Time at the fair</b>				
Less than 8 years	36.1	0.60	0.38 - 0.93	0.019
Over 8 years	60.0	1.00	-	
<b>Other job</b>				
Yes	53.8	1.13	0.65 - 1.96	0.677
No	47.6	1.00	-	
<b>Work ability</b>				
Bad	92.3	2.21	1.64 - 2.98	0.000
Not bad	41.6	1.00	-	
<b>Job satisfaction</b>				
Satisfied	42.8	0.64	0.41 - 0.99	0.092
Dissatisfied	66.6	1.00	-	
<b>Life satisfaction</b>				
Satisfied	44.0	0.58	0.40 - 0.85	0.025
Dissatisfied	75.0	1.00	-	
<b>Stress classification</b>				
Yes	60.7	1.74	1.11 - 2.74	0.010
No	34.7	1.00	-	
<b>Occupational accident</b>				
Yes	51.6	1.19	0.76 - 1.86	0.422
No	43.2	1.00	-	
<b>Physical activity</b>				
Yes	48.8	1.01	0.66 - 1.53	0.956
No	48.2	1.00	-	
<b>Smoking</b>				
Yes	40.0	0.80	0.36 - 1.78	0.410
No	49.4	1.00	-	

Source: Database of the research project Labor and health conditions of butchers, marketers in a mid-sized city, 2016.

\* Obtained by the chi-square test. For the variables job satisfaction, life satisfaction and smoking, Fisher's exact test was used.

In relation to labor aspects of butchers, those with less time as sellers showed a lower prevalence of multimorbidity. On the other hand, the greater the working time, the greater will be the exposure, consequently, higher prevalence of illness. When associating this finding with the age variable, there is simultaneity of factors in the marketers, considering that the age advance predisposes the onset of chronic diseases, added to the increased permanence in the informality, as already discussed previously.

In this perspective, authors affirm that the occupational risks interfere in the health-disease process by their interaction in the worker's body,

causing damage and deterioration of health with various clinical manifestations. A study carried out with female marketers identified that the working conditions in which they are inserted make them vulnerable to certain situations, such as illness<sup>(4-19)</sup>.

The variable life satisfaction showed that the prevalence of multimorbidity was lower (42%) in individuals satisfied with life, when compared to those dissatisfied. The judgment of satisfaction understands the process of comparison between the life circumstances of the individual and a pattern chosen by him/her,

with life satisfaction as one of the criteria of high subjective well-being<sup>(20)</sup>.

Thus, workers with multimorbidity can be dissatisfied with life due to the deterioration of the body and decreased quality of life, since chronic health conditions negatively influence the quality of life in the long term, affecting the development of daily activities<sup>(21)</sup>. From this perspective, the early diagnosis becomes important, especially of labor diseases, having in view the promotion of quality of life and improved satisfaction.

Regarding the Work Ability Index (WAI), butchers who presented a bad work ability have two times more risk, when compared to those workers with work ability classified as not bad, showing a strong association ( $p = 0.000$ ). Regarding this aspect, a study conducted in Denmark identified that the number of chronic diseases, present in workers, presented progressive association with long-term absence and impaired good work ability<sup>(7)</sup>.

Work ability is understood as a condition resulting from the combination between human resources, in relation to physical, mental and social demands of labor, management, organizational culture, community and the work environment<sup>(22)</sup>. The worker with multimorbidity may have compromised labor activity, as well as financial losses.

Butchers who were with significant stress level showed a prevalence ratio of 1.74 (95% CI: 1.11 - 2.74), with a statistically significant association with multimorbidity.

Stress is understood as a neuroendocrine physiological response that can be adaptive to stimuli relevant to the life style. Stress can be beneficial, when stimulating the body and improving its performance, however, when the stress reaches a significant level, there emerges the fatigue, which, in the long term, leads to susceptibility to physical and mental illness<sup>(23)</sup>.

About the impact on the worker's health, the stress in the work environment may cause mental disorders, cardiovascular, musculoskeletal and reproductive diseases, behavioral problems, including alcohol and drug abuse, increase in smoking and sleep disorders<sup>(24)</sup>. In this sense, the stress exerts influence on quality of life and health of the individual and may be a contributing factor to the occurrence of multimorbidity in workers.

## FINAL THOUGHTS

It is evident that the informal butchers experience situations of vulnerability by the labor characteristics of their profession and precarious insertion in the informal sector. The present study revealed that multimorbidity is associated with sex, schooling, age, work ability, stress, time working as seller and life satisfaction.

This study has some limitations, in view of its cross-sectional design, a fact that enables only an instant view of associations (demographic, occupational and lifestyle characteristics) with the dependent variable (multimorbidity). In addition, the study was performed only with informal butchers who develop their labor activities at the municipal market of Guanambi, not including those who develop their activities at home or on the streets of the city.

In this perspective, it is necessary to perform longitudinal studies, in order to better clarify the associations found in the present study.

Due to the magnitude of multimorbidity and exposure of informal butchers to several factors, public policies geared to this class of workers are necessary, with a view to reducing the multimorbidity, improving the quality of life and working conditions. Thus, health education activities with this population are also necessary, aiming at raising awareness about the measures for prevention and control of chronic diseases and health problems.

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