



## HEALTH AND QUALITY OF LIFE OF MILITARY POLICE OFFICERS

### *Saúde e qualidade de vida de policiais militares*

### *Salud y calidad de vida del personal militar*

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#### ABSTRACT

**Objective:** To evaluate the quality of life of military police officers and compare it to with sex, length of time working in the profession, shift and workload. **Methods:** Cross-sectional study with 506 police officers, conducted at the Inland Police Command - 5th Region of the State of São Paulo, between June and November 2015, with an instrument for collecting sociodemographic data and the WHOQOL-Bref by the World Health Organization. The mean of WHOQOL-bref scores was calculated according to the statistical model provided by the WHOQOL Group. **Results:** Male gender (449;88.7%), median age 36 years, married (338;66.8%), sergeants (195;38.8%) and aspirants (161;31.8%), more than 10 years of police activity (283;55.9%), good or very good quality of life (414;81.8%), satisfied or very satisfied with health (383;75.7%). Highest quality of life score for Social Relations (75.1) and lowest for Environment (62.2). The domains Financial resources (49.8) and Recreation and leisure (48.8) were compromised. **Conclusion:** The military police officers assessed consider regard their quality of life as good or very good and are satisfied with their health. There is, however, a compromise in the quality of life of these professionals, in aspects related to the domain Environment.

**Descriptors:** Quality of Life; Health Promotion; Military Personnel; Occupational Health.

#### RESUMO

**Objetivo:** Avaliar a qualidade de vida de policiais militares e comparar com as variáveis sexo, tempo de atuação profissional, turno e carga horária de trabalho. **Métodos:** Estudo transversal com 506 policiais, realizado no Comando de Policiamento do Interior - 5ª Região do Estado de São Paulo, entre junho e novembro de 2015, com um instrumento para coleta de dados sociodemográficos e o WHOQOL-Bref, da Organização Mundial de Saúde. Calculou-se a média dos escores do WHOQOL-Bref conforme modelo estatístico disponibilizado pelo Grupo WHOQOL. **Resultados:** Sexo masculino (449; 88,7%), idade mediana de 36 anos, casados (338;66,8%), soldados (195; 38,5%) e cabos (161; 31,8%), mais de 10 anos de atuação policial (283; 55,9%), qualidade de vida boa ou muito boa (414; 81,8%), satisfeitos ou muito satisfeitos com a saúde (383; 75,7%). Maior escore de qualidade de vida para o domínio Relações Sociais (75,1) e menor para Meio Ambiente (62,2). Comprometimento das facetas Recursos financeiros (49,8) e Recreação e lazer (48,8). **Conclusão:** Os policiais militares avaliados consideram a qualidade de vida boa ou muito boa e encontram-se satisfeitos com a saúde. Há, no entanto, comprometimento da qualidade de vida dos profissionais nos fatores relacionados ao domínio Meio Ambiente.

**Descritores:** Qualidade de Vida; Promoção da Saúde; Militares; Saúde do Trabalhador.

#### RESUMEN

**Objetivo:** Evaluar la calidad de vida del personal militar y compararla con las variables sexo, tiempo de actuación profesional, turno y carga horaria de trabajo. **Métodos:** Estudio transversal con 506 policías realizado en el Comando de Vigilancia Policial del Interior - 5ª Región del Estado de São Paulo entre junio y noviembre de 2015 con un instrumento para la recogida de



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datos sociodemográficos y el WHOQOL-Bref de la Organización Mundial de la Salud. Se calculó la media de puntuaciones del WHOQOL-Bref según el modelo estadístico disponible en el Grupo WHOQOL. **Resultados:** Sexo masculino (449; 88,7%), edad mediana de 36 años, casados (338;66,8%), soldados (195; 38,5%) y cabos (161; 31,8%), más de 10 años de actuación en la policía (283; 55,9%), calidad de vida buena o muy buena (414; 81,8%), satisfechos o muy satisfechos con la salud (383; 75,7%). Mayor puntuación de la calidad de vida para el dominio Relaciones Sociales (75,1) y menor para el Medio Ambiente (62,2). Comprometimiento de las facetas Recursos financieros (49,8) y Recreación y ocio (48,8). **Conclusión:** Los policías militares evaluados consideran la calidad de vida buena o muy buena y están satisfechos con su salud. Hay, sin embargo, el comprometimiento de la calidad de vida de los profesionales para los factores relacionados con el dominio Medio Ambiente.

**Descriptor:** Calidad de Vida; Promoción de la Salud; Personal Militar; Salud Laboral.

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## INTRODUCTION

The high-demand environment of military institutions associated with the increased violence and lack of preparation or professional conditions and personal assistance necessary for good professional performance make the work of police officers one of the most exhausting. The stress resulting from work activity represents a potential danger to the health of police officers as the health conditions of these professionals involve pleasure and suffering which lead to accomplishment and exhaustion, lived and perceived risks inherent to the profession, and physical injuries resulting from living and working conditions associated with biological conditions<sup>(1-3)</sup>.

Physical fatigue and lack of emotional balance can lead professionals to adopt irrational attitudes during crises and chaotic situations, which can lead to ineffectiveness in the performance of professional practice and expose police officers and the population to the risk of injury and death<sup>(4)</sup>. Therefore, it is necessary to deepen the understanding of the environmental, psychological, social and physical aspects of the quality of life of military police officers and to implement health promotion actions to improve the living, health and working conditions of these professionals<sup>(5)</sup>.

There is evidence that male professionals have a better quality of life than their female peers, who tend to relate daily work to stress, perceive its greater influence on their health and identify negative consequences in family relationships<sup>(3,6)</sup>. It is also common that these professionals present physical and emotional exhaustion<sup>(5)</sup>, high stress levels<sup>(3)</sup>, a large number of work accidents, chronic diseases, overweight, and a higher risk of developing cardiovascular diseases<sup>(7)</sup>.

The main stressor for police officers is the excessive workload, which, coupled with the shift rotation regime and schedule inflexibility, triggers digestive, muscular and nervous system health problems that cause symptoms such as neck and back pain, headache, difficulty concentrating, vision problems and insomnia<sup>(3,8)</sup>.

In order to improve living conditions and reduce vulnerabilities and health risks related to the environment and the work process of police officers, as determined by the National Health Promotion Policy, it is necessary to identify the factors associated with the poor quality of life of these professionals, which may support decisions and interventions to promote health and quality of life<sup>(9)</sup>.

Given that, the present study aimed to evaluate the quality of life of military police officers and compare it with sex, length of time working in the profession, shift and workload.

## METHODS

This is a cross-sectional study with a convenience sample of military police officers from the Countryside Police Command - 5<sup>th</sup> Region (*Comando de Policiamento do Interior - 5<sup>a</sup> Região - CPI-5*) of the state of São Paulo, which covers an area of 96 municipalities and 1.4 million inhabitants.

The CPI-5 consists of the following Police Units<sup>(10)</sup>: the 16<sup>th</sup> Countryside Military Police Battalion, headquartered in Fernandópolis (Government Regions of Fernandópolis, Jales and Votuporanga); the 17<sup>th</sup> Countryside Military Police Battalion, headquartered in São José do Rio Preto (Government Region of São José do Rio Preto); the 52<sup>nd</sup> Countryside Military Police Battalion, headquartered in Mirassol (Government Region of Mirassol); and the 30<sup>th</sup> Countryside Military Police Battalion, headquartered in Catanduva (Government Region of Catanduva).

The Military Police of the State of São Paulo features the following hierarchical levels: officers (colonel, lieutenant colonel, major, captain, 1<sup>st</sup> lieutenant and 2<sup>nd</sup> lieutenant), special enlisted personnel (aspiring officer and official student) and enlisted personnel (sub-lieutenant, 1<sup>st</sup> sergeant, 2<sup>nd</sup> sergeant, 3<sup>rd</sup> sergeant, student sergeant, corporal

and soldier)<sup>(11)</sup>. These professionals work in vehicles or motorcycles patrolling the streets and schools and also respond to occurrences and perform administrative and managerial (leadership) activities.

The study population consisted of all 2,024 military police officers belonging to the Countryside Police Command who voluntarily consented to participate in the study. All officers present on the active staff were included in the study. Professionals who were on vacation or away from professional activities for any other reasons during the data collection period were excluded.

Data were collected from June to November 2015 and two instruments were used: an instrument developed by the authors to collect information on the sociodemographic profile of police officers and the short version of the World Health Organization Quality of Life Assessment Instrument (WHOQOL-Bref)<sup>(12)</sup>.

The WHOQOL-Bref is composed of 26 questions. Only two questions are general: one is about life and the other is about health. The remaining 24 questions relate to four domains of quality of life and their respective facets. Each domain aims to analyze the physical capacity, psychological well-being, social relations and the environment in which the individual is inserted, each consisting of questions whose answer scores range from 1 to 5. Quality of life scores are a positive scale, i.e., higher scores indicate better quality of life<sup>(13,14)</sup>.

Data were collected after authorization from the colonel responsible for the CPI-5. The researchers contacted the commanders of the Military Police battalions of the cities of São José do Rio Preto, Catanduva, Mirassol and Fernandópolis, explained the research objectives and delivered the data collection instruments according to the number of police officers in each battalion. The commanders were responsible for distributing the instruments to the police officers, who could take them home to answer them in private. After answering them, the police officers returned the signed questionnaires and informed consent forms in separate and sealed envelopes to prevent identification. After receiving the answered instruments, the commanders contacted the researchers to deliver all the envelopes.

The WHOQOL-Bref score calculations were performed according to the statistical model provided by the WHOQOL Group, which calculates the scores and determines the transformed scores from 4 to 20 for each facet and each domain of the questionnaire. For comparison with other studies, the scores obtained on the scale from 4 to 20 were converted to a scale from 0 to 100 using the formula  $[(\text{Mean}-4) \times 100/16]$ , where the mean corresponds to the scores from 0 to 20 previously calculated for each domain<sup>(12-14)</sup>.

The following procedures were used to analyze quality of life: a) frequencies and descriptive statistical measures were used for general questions concerning the "life" and "health" of police officers (How would you rate your quality of life? How satisfied are you with your health?); and b) mean scores for each domain.

The mean scores obtained in the WHOQOL-Bref domains were compared with the variables sex, length of time working in the profession, shift and workload using the F-test in the analysis of variance (ANOVA) and considering a significance threshold of 5% ( $p < 0.05$ ).

The Kolmogorov-Smirnov test of normality was used to check the distribution of data using the Statistical Package for Social Sciences Software version 20.0.

The study was approved by the Research Ethics Committee of the São José do Rio Preto Medical School (Approval No. 1.183.409).

## RESULTS

Participants were 506 military police officers from the Military Police battalions, corresponding to 25% of the corporation (2,024 police officers), belonging to the Countryside Police Command - 5<sup>th</sup> Region: 105 police officers (2.7%) from the 16<sup>th</sup> Military Police Battalion headquartered in Fernandópolis; 79 police officers (15.6%) from the 17<sup>th</sup> Battalion headquartered in São José do Rio Preto; 50 police officers (9.9%) from the 52<sup>nd</sup> Battalion headquartered in Mirassol; 133 police officers (26.3%) from the 30<sup>th</sup> Battalion headquartered in Catanduva; and 139 police officers (27.5%) working in the headquarters of the Countryside Police Command in São José do Rio Preto. In all, 410 (81.0%) participants were enlisted personnel: 5 (1.0%) sub-lieutenants; 18 (3.6%) sergeants; 26 (5.1%) student sergeants; 160 (31.6%) corporals and 195 (38.5%) soldiers. There were also 87 (17.2%) police officers who did not mention their insignia.

Men (449; 88.7%) prevailed among the police officers who participated in the study. The participants' age ranged from 19 to 54 years. The median age was 36 years and the most prevalent age range was 36-45 years (202; 39.9%). With regard to marital status, 338 (66.8%) police officers were married and 132 (26.1%) were single. As for the length of time working in the MP, 283 (55.9%) police officers had been working in the Military Police for over 10 years. Regarding education, 234 (46.3%) police officers had completed secondary education and 203 (40.1%)

had completed higher education. There were 195 (38.5%) soldiers, 161 (31.8%) corporals and 46 (9.1%) sergeants among the professionals studied. With regard to the work shift, 346 (68.4%) police officers worked full-time, and 270 (53.4%) worked 12x24 or 24x48 hours.

The results of the overall quality of life assessment are presented by the distribution of frequency of responses, mean score, and standard deviation for the two general questions about quality of life (Table I).

A total of 414 (81.8%) police officers rated their quality of life (question 1) as good or very good while 22 (4.3%) police officers rated it as poor or very poor. When asked about their satisfaction with their health (question 2), 383 (75.7%) police officers reported being satisfied or very satisfied. However, although only 42 police officers (8.3%) reported being dissatisfied or very dissatisfied with their health, 81 (16.0%) professionals reported being neither satisfied nor dissatisfied with their health.

Table I - Distribution of frequency of military police officers' responses and mean scores in the general questions about quality of life. São Paulo, 2018.

Question	Answer Options	n (%)
<b>How would you rate your quality of life?</b>	1- <i>Very poor</i>	3 (0.6)
	2- <i>Poor</i>	19 (3.7)
	3- <i>Neither poor nor good</i>	70 (13.8)
	4- <i>Good</i>	343 (67.8)
	5- <i>Very good</i>	71 (14.0)
	Mean score	3.9
	Standard deviation	0.7
<b>How satisfied are you with your health?</b>	1- <i>Very dissatisfied</i>	3 (0.6)
	2- <i>Dissatisfied</i>	39 (7.7)
	3- <i>Neither satisfied nor dissatisfied</i>	81 (16.0)
	4- <i>Satisfied</i>	270 (53.4)
	5- <i>Very satisfied</i>	113 (22.3)
	Mean score	3.9
	Standard deviation	0.9

Figure 1 shows the distribution of the mean scores in the WHOQOL-Bref domains and facets. The lowest score was in the Environment domain (62.2), which is composed of the following facets: Physical safety and security; Home environment; Financial resources; Health and social care: availability and quality; Opportunities for acquiring new information and skills; Participation in and opportunities for recreation/leisure activity; Physical environment (pollution, noise, traffic and climate); Transport. The highest score was in the Social Relationships domain (75.1), which is composed of the following facets: Personal Relationships; Social support; Sexual activity.

The police officers presented impairment in the Financial Resources (49.8) and Recreation and leisure activity (48.8) facets, which exhibited lower mean scores. The Physical Environment (59.7) and Sleep and Rest (57.7) facets exhibited lower scores, thereby showing that there is some impairment in these aspects of the quality of life of the police officers analyzed. The Self-esteem facet exhibited the highest score among the police officers.

Table II shows there was no significant difference in quality of life between male and female police officers. However, female officers presented lower mean scores in the Physical, Psychological and Social Relationship domains. Quality of life scores were higher in the Physical domain and lower in the Social relationships domain among professionals with longer professional experience and lower in the Physical domain depending on workload.

## DISCUSSION

The military police officers' overall quality of life and satisfaction with health found in this study corroborate the literature, which shows that most professionals positively rate their quality of life and also show a positive satisfaction with their health<sup>(4,15)</sup>. The positive evaluation may be related to police officers' difficulty in perceiving the impact of negative factors such as stress and physical fatigue on their health and quality of life<sup>(16)</sup>.

Despite the positive evaluation, police work is fraught with stressful factors that cause stress and psychological distress which shows that the quality of life of these professionals is strongly linked to social and psychological factors<sup>(4)</sup>.

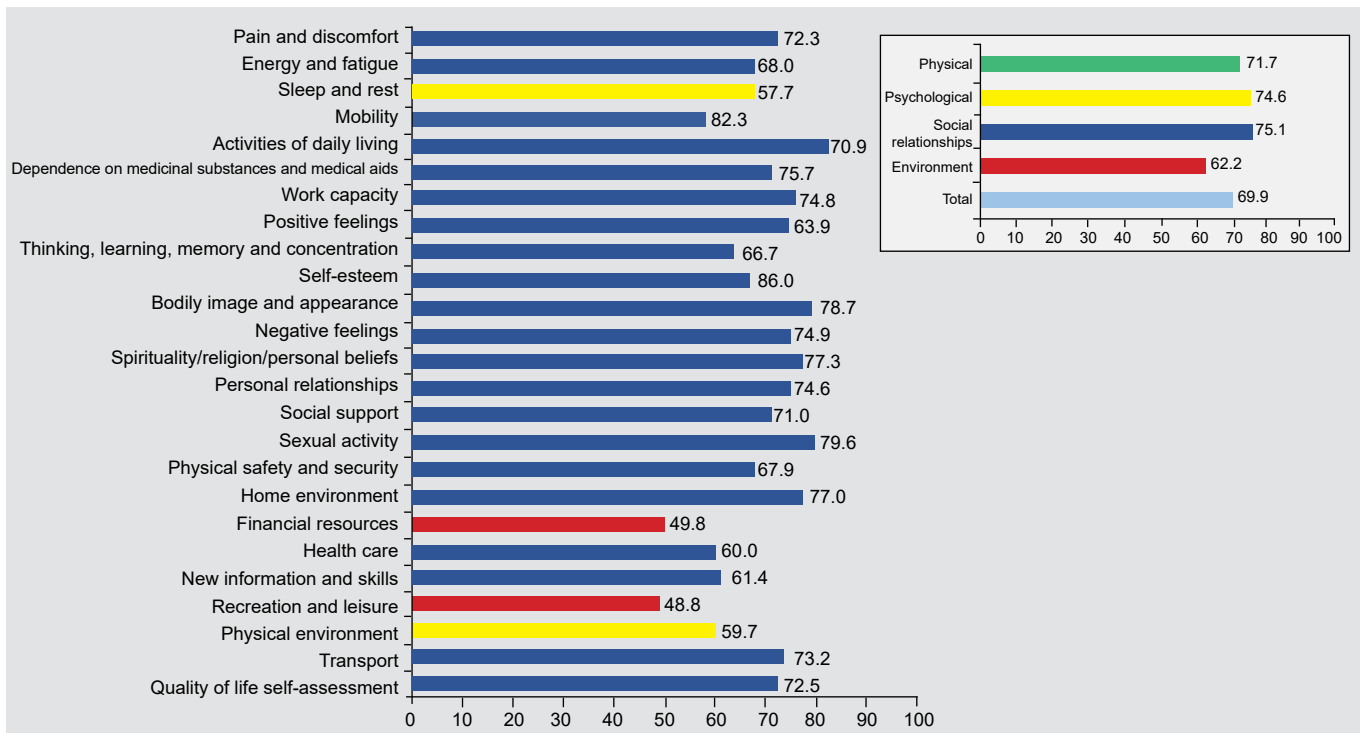


Figure 1 - Distribution of mean scores in the domains and facets of the Whoqol-Bref. São Paulo, 2018.

Table II - Mean scores and standard deviations in the domains of the quality of life of military police officers according to sex, length of time working in the profession, workload and work shift. São Paulo, 2018.

Quality of life	Physical Domain	Psychological domain	Social Domain	Environment Domain
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
<b>Sex</b>				
Men	58.4 (10.0)	66.2 (11.1)	75.7 (15.7)	62.3 (13.6)
Women	58.2 (9.0)	65.4 (10.2)	72.8 (17.7)	64.2 (12.4)
p-value (Anova)	0.995	0.876	0.322	0.908
<b>Length of time</b>				
0-10 years	57.5 (9.7)	67.1 (10.0)	77.7 (16.1)	63.2 (14.4)
11-20 years	58.4 (10.1)	65.5 (11.7)	76.1 (16.9)	61.3 (13.3)
21-30 years	59.7 (9.7)	65.5 (11.3)	63.2 (13.5)	63.4 (12.1)
p-value (Anova)	<b>0.034*</b>	0.565	0.292	0.301
<b>Workload</b>				
6 hours	73.0 (12.7)	73.0 (2.8)	87.5 (17.7)	70.5 (24.7)
8 hours	60.4 (8.1)	67.6 (10.7)	76.7 (16.4)	66.23(11.5)
12 x 36 hours	57.9 (11.9)	65.1 (12.1)	72.2 (16.2)	63.5 (13.8)
12x24 or 12x48	57.0 (10.0)	65.5 (10.8)	75.2 (15.6)	59.8 (13.9)
p-value (Anova)	<b>0.002*</b>	0.140	0.579	<b>0.047*</b>
<b>Work shift</b>				
Morning	63.0 (12.2)	65.4 (12.8)	76.5 (17.4)	64.1 (15.8)
Afternoon	57.2 (9.6)	70.0 (2.0)	81.2 (8.1)	54.5 (3.8)
Night	56.8 (12.5)	68.7 (12.7)	70.8 (17.0)	62.4 (18.1)
Full-time	56.2 (10.7)	64.4 (10.0)	64.1 (15.8)	61.2 (15.1)
Morning/Night or Afternoon/night	58.4 (9.6)	66.1 (11.0)	75.5 (16.2)	62.7 (13.2)
p-value (Anova)	0.427	0.143	0.996	0.413

\*p<0.005; SD: standard deviation

Some authors emphasize that dissatisfaction with work is a risk factor for psychological distress among military police officers<sup>(8,12,15)</sup>. Thus, precarious working conditions characterized by excessive workloads, low pay and lack of



training and physical structure can lead to the development of health problems that become chronic and compromise their quality of life<sup>(3,8,17)</sup>.

With regard to the WHOQOL-Bref domains, the results of the present study show that there were no significant differences between the domains, i.e., all the domains had an equally potential influence on the quality of life of military police officers.

The highest score among the police officers in the present study was in the Social Relationships domain. This finding is in agreement with the results of studies of police officers from different regions of Brazil which also found higher mean scores in this domain<sup>(4,16,18)</sup>. These results indicate strong personal relationships, social support and sexual activity among the professionals.

In the present study, the highest score obtained by the police officers in the Self-esteem facet emphasizes the social relevance of work for the professional's life, which is related to the pride of being part of the Military Police<sup>(19)</sup>. However, events intrinsic to police activity make the work process unpredictable. In such cases, if police officers do not have strategies to help them cope with stressful events resulting from work activity, they will be subject to exhaustion and, consequently, to illness<sup>(20,21)</sup>.

The low score in the Physical Environment facet obtained by the officers analyzed in the present study shows that attention should be paid to the structural conditions of the work environment. This finding reinforces the tendency of police officers' dissatisfaction with well-being in the workplace<sup>(19)</sup>. For professionals, poor material working conditions, inadequate physical space, insufficient infrastructure, lack of human resources and consequent work overload compromise the social and occupational environment and their health, thus causing physical distress, mental suffering and illness<sup>(16)</sup>.

Physical fatigue and lack of emotional balance can lead professionals to adopt irrational attitudes during crises and chaotic situations, which can lead to ineffectiveness in the performance of professional practice and expose police officers and the population to potential risks<sup>(6)</sup>. In this context, the physical health of military police officers is included in the priority themes listed by the National Health Promotion Policy, which advocates for the encouragement to body practices and physical activities that favor the health conditions of this population group<sup>(9)</sup>.

Physical and mental fitness are essential for police officers to understand the social demands that drive public safety needs<sup>(5)</sup> and constitute a major challenge to police work.

In addition, dissatisfaction with salary, demonstrated by the low score in the Financial Resources facet, makes professionals perform, whenever possible, other informal activities, usually on weekends or on days and times alternating with the work in the corporation, thereby compromising the performance of recreation and leisure activities and increasing physical and mental exhaustion<sup>(3,8)</sup>.

The lack of financial resources observed in the present study is not unprecedented, and, although little admitted, it has been found in other occasions and is pointed out as an important obstacle to police work<sup>(22)</sup>. According to the literature, police officers usually perform other paid activities, such as night watchmen or security guards, which require physical effort and pose more risks and damage to police activity<sup>(3,8,18)</sup>.

The low score in the Sleep and Rest facet observed in the present study is corroborated by studies of night radio patrol police officers in Palmas, Tocantins<sup>(23)</sup>, and police officers in the city of Porto Alegre, Rio Grande do Sul<sup>(21)</sup>. One of the causes is the work shift. Night work and extra working hours disrupt sleep routine and therefore lead to indisposition, fatigue, loss of appetite, and increased tobacco consumption, which compromise the health of police officers<sup>(18)</sup>. In addition, the increased workload as a result of other work activities leads to a reduction in daily sleep hours, thus causing fatigue and tiredness and making professionals stressed and ill<sup>(2)</sup>.

Another aspect that deserves attention is the Recreation and Leisure facet, which presented a low score among the police officers analyzed. Leisure activities contribute to the improvement of quality of life and should be encouraged. Even minor changes in leisure activities are associated with improved quality of life of these professionals<sup>(22-24)</sup>.

The tendency towards low mean scores obtained in the Physical, Psychological and Social Relationship domains by female police officers in the present study corroborates the best mean scores among male police officers reported in the literature<sup>(7,15)</sup>.

Generally, female police officers relate their daily work to stress and their health tends to be more influenced by it<sup>(3,6)</sup>. In addition, they report problems with hierarchy, highly demanding work and gender bias as factors of negative stress<sup>(7)</sup>.

The increase in quality of life in the Physical domain in function of the increase in the length of professional practice is related to the resilience capacity and the better preparation for work activities as the professional progresses

in the career<sup>(16,20)</sup>. On the other hand, the responsibility taken in higher positions, associated with the doctrine and impositions provided for in the Military Police regulations, may compromise the quality of life in the Social Relationships domain<sup>(6)</sup>, as observed in the present study.

Finally, increased workload may decrease quality of life in the Physical domain and hence compromise police officers' work performance and favor illness<sup>(18)</sup>. Given that, co-workers' social support and professional autonomy are factors that contribute to the positive perception of health and the improvement of police officers' quality of life<sup>(16)</sup>.

The results of this study provide a true and accurate diagnosis of the impairment of the Financial Resources, Recreation and Leisure, Physical Environment, and Sleep and Rest facets and contribute to the discussion and implementation of health promotion actions and improvement of the working conditions of these professionals so as to favor the safety of the society.

In addition, they allow reflection on the quality of life and work of military police officers and contribute to health care services and professionals in directing health promotion actions and preventing physical fatigue and emotional disorders among police officers. Therefore, they corroborate the discussion of public policies to improve the working conditions of these workers and promote health and quality of life based on the autonomy and uniqueness of the subjects and the particularities of the work environment as determined by the National Health Promotion Policy<sup>(9)</sup>.

The cross-sectional design and the convenience sample represent limitations of this study as they do not allow the generalization of the results. Thus, it is important to develop longitudinal studies to identify precisely and temporally the factors that hinder the quality of life of police officers throughout their career.

## CONCLUSION

This study showed that the military police officers analyzed consider their quality of life good or very good and are satisfied with their health. However, factors related to the Environment domain of the quality of life of the professionals are impaired.

There was no significant difference in quality of life between the sexes. However, female police officers presented lower scores in the Physical, Psychological and Social Relationship domains of quality of life. Longer professional experience was related to higher scores in the Physical domain and lower scores in the Social Relationships domain of quality of life. The workload was related to lower score in the Physical domain of quality of life.

## CONFLICTS OF INTEREST

The authors declare there is no conflict of interest.

## CONTRIBUTIONS

**Thiago Roberto Arroyo** and **Luciano Garcia Lourenção** contributed to the study conception and design; acquisition, analysis and interpretation of data; and writing and/or revising the manuscript; **Marcio Andrade Borges** contributed to the analysis and interpretation of data and writing and/or revising the manuscript.

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