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Quality of Life of Military Policemen in a Western Amazon State in Times of the Covid-19 Pandemic

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***Abstract*—** *Objective: To analyze the quality of life of active military police in a state in the Western Amazon during the Covid-19 pandemic. Methodology. This is a descriptive, cross-sectional field study, with a convenience sample, non-probabilistic and with a quantitative focus, with 358 active PMs in the PMRO. A self-report questionnaire was used to collect sociodemographic data and health conditions. To assess QOL, the WHOQOL-Bref questionnaire was used, consisting of 26 questions related to the physical, psychological, social relationships and environment domains and their facets. Results: Analyzing the sociodemographic characteristics, the age variable obtained (39.21 ± 6.41) years and (61.17%) of the PMs were less than 40 years old. The variable length of service was (15.44 ± 7.64) and (78.21%) of the police officers had less than 20 years of experience in the police service. The working hours obtained (6.87 ± 2.04) and (29.10 ± 80.79) days away from work due to NCDs or Covid-19. In terms of education, (52.79%) have a college degree, (69.27%) are married, (47.49%) are warrant officers and sergeants with an income between 5 and 7 minimum wages, (49.44%) work 6 daily hours, (43.02%) were removed from the service due to CNCD and (34.08%) due to Covid-19. The general quality of life obtained an average of (15.21 ± 2.00). Among the WHOQOL-Bref domains, the highest score was for the psychological domain (16.01± 2.11) and the lowest for the environment (14.20 ± 2.28) and the self-assessment of QOL was (14, 97 ± 2.69). Conclusion: The quality of life has satisfactory levels, despite chronic health conditions and the*

multidimensional character of quality of life, with (76.8%) of the PMs evaluating their QOL as very good and good and (65.8%) being very satisfied or satisfied with their health, with the highest scores in the social relationships domain and the lowest in the environment domain. For the facets, the highest scores were for mobility, self-esteem, sexual activity and the lowest scores were for negative feelings, dependence on medication or treatment, and finally, pain and discomfort, data that are corroborated by the self-report of NCDs and Covid-19.

I. INTRODUCTION

Currently, the occupational and working conditions of military police officers (PMs) have been identified as high risk for health, due to the specificity of police work and more recently because they are responsible for social control and restriction of the movement of people. Action aimed at addressing the impacts caused by Covid-19. The PMs work daily in ostensive/preventive policing, in the preservation of public order and with the arrival of the coronavirus pandemic, these public agents are directly involved in the fight and control of the Covid-19 pandemic. Nevertheless, this recent pandemic phenomenon has caused health aggravation, generated concerns in the work environment, absences from the service, mortality and reducing the quality of life of this class of workers.

For the military police, the high risk for infection by Covid-19 is associated with direct contact with the population, confined and crowded environments. In this sense, the new work dynamics during the pandemic period may have been a risk factor for physical and mental health, physical inactivity and the contagion by Covid-19. Furthermore, professionals working in public security are individuals prone to developing cardiometabolic and psychological pathologies whose main causes are physical inactivity and stress [1].

According to Arroyo [2] in a study with police officers from São Paulo, he found that the military police may have their health compromised, due to the fact that the night shift and extra shifts lead to loss of sleep and an increase in tobacco consumption. For the author, the work activity of the MPs is one of the most exhausting and stressful, because within the barracks there is a high professional demand, combined with the increase in daily violence, working conditions, professional technical preparation and insufficient personal help, representing an imminent danger to the emotional and mental health of these individuals [3]. These public security activities demand a degree of physical and mental exhaustion of these servers, contributing to the decline of physical and mental health, and in contrast, these subjects seek a better quality of life. In this regard, social changes have influenced the individual and collective health of individuals and physical activity has become an important modulating tool for health and quality of life [4].

Nowadays, the search for quality of life (QOL) is increasingly in vogue, due to the Covid-19 pandemic that affected the entire world population. However, during this period of pandemic, a significant portion of the population was infected by the coronavirus and another portion lost their loved ones, affecting mental health and consequently the quality of life. In addition, even during this pandemic period, all people seek to seek a harmonious balance between physical and mental. Therefore, QOL "involves a complex interaction of biological, economic, social, cultural and lifestyle factors" [5]. This set of individual and collective parameters that provide health and well-being is fundamental for people's quality of life. Furthermore, in the field of public health, especially related to the impacts involving work issues within the barracks, the specific scientific literature on the military police theme encompasses specific work situations in the performance of their functions [6]; [7]; [8]; [9]; [10] and [11].

According to Nahas [12] the quality of life is the human condition resulting from a set of individual and socio-environmental parameters, modifiable or not, that characterize the conditions in which the human being lives. On the other hand, according to Barbanti [13] quality of life is a "general positive feeling and enthusiasm for life, without fatigue from routine activities. It is closely linked to the standard of living". For Rodrigues [5], the term quality of life is being implemented in the work environment, where workers dedicate much of their time, however these individuals seek a more satisfactory quality of life in the place where they work.

For Zimmermann [14] "its estimate can guide the planning, evaluation and implementation of health technologies and policies". This preventive behavior or balance can also be called a healthy lifestyle, which must be present in everyday life with family, friends, at work and in leisure time, however the pressures and demands of everyday life create stressful environments. Studies have "expanded the relevance of aspects, living conditions and lifestyles, especially when the concern is with aspects of promotion, health protection and risk prevention" [15].

However, for the improvement of the lifestyle, there must be behavioral changes in the habits of life and care of professionals and specialists in the areas of health.

Currently, the Covid-19 pandemic has contributed to the deterioration of the quality of life of individuals. In this light, Alvarenga et al., [16] aimed to evaluate the perception of quality of life of 35 teachers of both sexes from public and private schools during the Covid-19 pandemic. The WHOQOL-Bref was used as a research instrument, applied virtually through the Google Forms platform. The results found show the physical domain with 70.7 points, the psychological domain with 68.2 points, the social domain with 64.5 points and the environment domain with 64.9. The study concluded that the majority of the investigated teachers have suffered with the aspect of quality of life, with the social domain being the most affected.

Regarding the quality of life of military police officers, research is still scarce, however, there is evidence of high rates of illness, due to physical inactivity, sedentary lifestyle and irregular habits, which have contributed to the emergence of Non-Communicable Chronic Diseases (CNCD) and worsening of quality of life. life in this specific population [15]; [6]. However, the quality of life construct in military personnel is a contemporary approach, which takes into account several dimensions that are closely intertwined with health, professional, work and daily activities in the military environment. In this context, the "quality of life of military police officers is more related to social and psychological factors"[17].

However, the "work dynamics of police officers face some aspects that are essential for the promotion of quality of life", as they are constantly away from the service due to various diseases derived from their professional activity [11]. In modern societies, work occupies a large part of human life, establishing in these workplaces a daily coexistence, dedication of strength, efforts and energy, but the work overload associated with inadequate conditions can compromise the health of these workers [15]. For Minayo et al., [10] the quality of life "can be influenced as a result of working conditions, such as long working hours, few hours of sleep and pressure on activity, which is common within the military police ". In this step, "the search for QOL is much sought after, as it is not only associated with the professional's well-being in the work environment, but with physical, mental and social health" [18]. In the professional environment, QOL is not just to provide the health and safety of the worker, it must contain occupational health or risk prevention actions focused on increasing the effectiveness and productivity of professionals, both in civil corporations and in military institutions. , being a combination of actions by state entities, community, individuals and the health system [18]; [19]. In this sense, the measurement of quality of life within the military institution seems to be adequate, given that this diagnosis can result in improvements in institutional policies for the acquisition of new proposals for intervention in the health/disease process, as well as, in prevention actions, treatment and rehabilitation of these public safety professionals [20].

The main causes that make it difficult to improve the quality of life derive from the very specificity of the profession, with sleep deprivation during the work shift, rigid hierarchy, ergonomic factors, stress, daily living with violence and risk of death [11]. The lifestyle adopted by the military police, precarious working conditions and factors that generate stress, due to the constant risk of life, cause damage to health, as well as the dynamics of work itself, confronts some aspects that are essential. for the promotion of quality of life [6]; [7]; [8]; [9]; [10] and [11]. In this way, the quality of life "can be influenced as a result of working conditions, such as long working hours, few hours of sleep and pressure on activity, which is common within the military police" [10]. For the authors, the main causes that make it difficult to improve quality of life derive from the very specificity of the profession, with sleep deprivation during the work shift, rigid hierarchy, ergonomic factors, stress, daily living with violence and risk of death.

This stressful characteristic of being always in constant attention and alert during the service and in everyday life can be a risk factor to the health of military police, so that QOL, health conditions and lifestyle can be negatively affected [21]. These public security workers are different from the majority of the population, as they are subjected to highly stressful situations, especially living with violence and the risk of death, the workload and working conditions, and stress [20]. For the authors, the causes of diseases derive from work activities that caused harmful effects and produced intrinsic and extrinsic changes in relation to QOL, such as: social, political, economic and behavioral changes. On the other hand, programs to improve the health and quality of life of military companies or corporations "would benefit from a healthier workforce, lower absenteeism/turnover, fewer accidents, lower healthcare costs, higher productivity, better image and, finally, an improvement in the environment" [19].

Notably, inside the barracks, the military police have a reduced quality of life, due to their attributions and specificity of the profession. In this context, Oliveira and Quemelo [20] evaluated the quality of life of 262 military

police officers, using the SF-36 questionnaire, which is a multidimensional instrument consisting of 36 items, encompassed in eight domains. The results showed that (82.4%) of the police officers were male and (17.5%) were female, with a mean age of 37 ± 7 years. In the study, the general average of 70.7 ± 20.2 points for quality of life, while the general health status was 60.8 ± 17.0, which points to the need for interventions regarding this aspect to improve and promote the health of these workers.

Arroyo [3] investigated the quality of life of 506 military police officers belonging to the Interior Police Command 5th region (CRP-5) of the State of São Paulo. It was a population-based cross-sectional study of military police officers. The instrument called WHOQOL-Bref was used for the study. The results showed that (81.82%) of the military police rated their quality of life as good or very good and (8.30%) were very dissatisfied or dissatisfied with their health. The study concluded that the lowest quality of life score was for the Environment domain with 62.21 points and compromised financial resources, recreation and leisure, physical environment, sleep and rest facets.

Another important study was carried out by Souza Filho et al., [17] which aimed to investigate the perception of quality of life of military police officers in the metropolitan region of Belo Horizonte. For the study, 316 male police officers from the operational area with a mean age of (36.68 ±7.07) years were selected. The subjects answered the WHOQOL-Bref questionnaire. The Spearman's-Rho correlation test was performed with a significance level of $p \leq 0.05$ and adequate internal consistency for the WHOQOL-Bref ($\alpha = 0.833$). The results for the social and psychological domains obtained the highest scores when compared to the physical and environment domains. The study concludes that the perception of QOL of PMs in Belo Horizonte is more associated with factors involving psychosocial domains.

In this sense, studies carried out with 533 employees of the police force and the army corps emergency response service in a German-speaking urban area, northwest Switzerland (71.1% men), who completed a battery of self-report questionnaires, assessing stress, exercise, perceived fitness and health. The results showed that increased stress was associated with poor health and increased fitness was associated with reduced stress. Thus, it was evidenced in the final considerations that exercise and physical conditioning can contribute significantly to a healthy life, thriving workforce that takes less sick leave and feels better prepared to deal with chronic stress [22].

Silva et al., [23] conducted studies to investigate the relationship between quality of life, health, physical activity, occupation, body composition and sociodemographic characteristics of military police officers in Santa Catarina-Brazil. A total of 302 PMs from the metropolitan region participated in the study, randomly selected through a simple draw and who met the eligibility criteria. Data were collected using the WHOQOL-Bref-short version and the IPAQ – long version, in addition to a spreadsheet on sociodemographic, anthropometric, occupational and health variables. It was found that the majority of PMs are married, educated and with an average of 36.6 years of age and 15.1 years of police work and have a good perception of quality of life. They have above-recommended levels of physical activity, are in the recommended weight range and are in good health. It is concluded that there are associations of quality of life with physical leisure activities, height and marital status.

Another study conducted by Araújo et al., [24] aimed to evaluate the relationship between the level of physical activity and the anthropometric profile, perception of quality of life and mental health in military police officers in the State of Sergipe (PM/SE). Cross-sectional study that included 30 male military police officers, aged between 28 and 40 years. The pedometer was used as a research instrument for four days and later questionnaires were answered (demographic, anthropometric, occupational data, IPAQ short version, WHOQOL, anxiety, depression and stress scale). The study revealed a prevalence of (70%) active police officers and no symptoms for problems that affect mental health, while (66.67%) reported good perception and quality of life and (70%) were satisfied with their health. There was a correlation of PAL with stress on the day of work and on the first day off with quality of life indicators and a correlation of the activity level of the first day off with the Physical domains ($R=0.411$; $p<0.05$) and of the Environment ($R=0.511$; $p<0.05$). In the final considerations, good levels of mental health were evidenced. As for the PAL, a positive relationship between the day of work and the stress variable was observed. There were positive relationships between the activity level of the first day off and the Physical and Environment domains regarding quality of life.

Brasil and Lourenção [25] evaluated the quality of life through a cross-sectional study with 289 military police officers belonging to the 16th Battalion in the interior of the State of São Paulo. The instrument used was the WHOQOL-Bref. Of those investigated, (93.43%) were male and the prevalent age group was between 30 and 45 years of age. Most police officers, that is, (80%) rated their quality of life as good or very good, (10%) were very dissatisfied, (1.4%) were dissatisfied (8%) with their health. The quality of life scores ranged between 60.88 and

72.52, the lowest for the environment. Therefore, the study concluded that the military police officers analyzed showed commitment to factors related to the Environment domain, requiring improvements in the environmental conditions of the place where they are inserted, financial resources and transport, in addition to the environment at home.

Arroyo, Borges and Lourenção [3] carried out a cross-sectional study with military police officers of both sexes, from the CRP-5 of the State of São Paulo. For this, the objective was to evaluate the quality of life of military police officers and compare with the variables gender, time of professional activity, shift and workload. The instrument for collecting sociodemographic data and the WHOQOL-Bref and statistical analysis, according to the model provided by the WHOQOL Group. The results showed that most police officers were male (88.7%), median age of 36 years and more than 10 years of police work. Therefore, it was concluded that the investigated military police have a good or very good quality of life and are satisfied with their health.

Therefore, the specific literature points out unfavorable health and working conditions for military police officers, given the long and strenuous working hours [10], small police force [27]; [15], constant psychosocial problems [9] and [10], unsanitary police unit infrastructure [15], insufficient physical activity level [8]; [26], high incidence of sick leave [27], double working hours [2]; [3]; [25], societal and institutional pressures for results [2]; [3]; [25], in addition to outdated technologies, equipment and work materials compared to criminals. Although there is still no consensus, due to the various instruments used to assess physical activity levels, health conditions and quality of life of military police officers in different regions of Brazil.

Surveys carried out by Gonçalves [27] with the human resources sector of the Military Police of the State of Rondônia showed a small number of staff, different scales, few rest periods and double working hours, contributing to the overload at work and resulting in the physical and psychological exhaustion, in order to negatively influence the quality of life of military police officers. This workload, insufficient physical activity, sleep deprivation during work, rigid hierarchy, ergonomic factors, stress, daily living with violence and risk of death, have particular characteristics and are closely related to work [9] and [11]. Thus, suffering from the stress resulting from extensive work activities that overload police work can negatively influence health and quality of life. Thus, due to the peculiarities of the police function, physical activity should be adopted as a tool to alleviate these tensions in the work environment. However, due to these particularities, it is certain that the investigated military police do not practice any regular program of physical activity inside the barracks. In this vein, Benedet [9] states that the Military Police are the most numerous in terms of human resources compared to other public security institutions and their agents are exposed to various deleterious effects on health, such as: physical and mental trauma and more likely to be at risk of death. According to Batista [28] a significant number of military police officers still have high rates of body fat in the central region, which has contributed to pressures in the work environment, a high proportion of psychological problems, risks of death, physical traumas, affecting significantly the health and quality of life of these individuals. Other factors such as hierarchy and rigid discipline, psychic pressures suffered inside the barracks, also cause harmful effects on health, due to illness through psychic disorders and mental suffering, which are related to professional practice, because, when exposed to these traumatic events and everyday violence, these professionals suffer serious consequences to their health and quality of life [9] and [12].

The general objective of the study was to analyze the quality of life of active military police in a State of the Western Amazon in times of a Covid-19 pandemic, using the questionnaire The World Health Organization Quality of Life (WHOQOL - Bref).

II. METHODOLOGICAL PROCEDURES

2.1 Characteristics of the study

This is a descriptive, cross-sectional field study with a convenience sample, non-probabilistic and with a quantitative approach.

2.2 Population and sampling

About 410 printed questionnaires were distributed, as there is a considerable loss at the time of return. However, to minimize these losses, this researcher personally monitored and guided the individuals participating in the study, regarding the best way to fill out the instruments. After analyzing the returned questionnaires, there was a sample loss of 12.5% that were misplaced, were filled out incorrectly or subjects did not record their signatures in the TCLE. Female PMs and all those who did not consent to participate in the study were excluded from the sample, in addition to individuals who were on vacation, on leave for health treatment or on various missions outside their units. At the end, the sample consisted of 358 male PMs belonging to the active force of the PMRO, having between 1 and 32 years of police service, who voluntarily participated in the study. Sample was calculated according to the following statistical

formula [29]:

N –Population size;e –margin of error (percentage expressed in decimals);

z – z-score z (95% = 1.96). The z score is the number of standard deviations that a given proportion deviates from the mean. The sample size was based on the population size with a confidence level of 95% and a margin of error of 5%.[29].

$$\text{Tamanho da amostra} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

2.3 Data collection instruments

To assess QOL, an instrument called WHOQOL-Bref [30] was used; [31]; [32]. The WHOQOL-Bref was chosen for the following reasons: they are reliable and free, they are internationally accepted and used, they allow quantitative assessment of variables, they have sufficient psychometric consistency, are widely used by health professionals, have good reliability and are validated for the Brazilian population [30]; [31]; [32].

2.3.1 Sociodemographic variables and health conditions.

Military police officers answered a questionnaire to assess sociodemographic and occupational variables (age, marital status, income, graduation or post, education, length of service and hours worked per day) and health conditions and NCDs or Covid-19. Military police officers who perform administrative service work between 6 and 8 hours a day. In order to calculate the hours worked by those police officers who work on a regular duty schedule of 12x24/12x72, the average number of services during the month was computed, multiplied by the number of hours worked per day of service, divided by the 30 days of the month. It was added up according to the following formula: Average of 13 monthly services x 12 hours worked/30 days of the month, that is, 156 h/month/30 days/month = 5.2 hours of average per day. For computing the hours worked, the hours prior to the service were not taken into account, where the police officer arrives in advance to prepare the vehicle, check equipment and weapons used during the service, as well as the hours that exceed the passage of service, due to those who are in the act or registering the act. In addition, the hours in which the military police are available to justice and appear before the court as a witness, victim or as a conductor of occurrence to ratify the arrest of criminals were not computed.

2.3.2 Quality of life assessment

Quality of life was assessed using a simplified instrument called WHOQOL – Bref. This instrument consists of 26 questions, two general questions about the general quality of life and a subdivision of the other facets/domains: physical, psychological, social relationships and environment, preserving the last 24 facets of the original domain (WHOQOL-100) [31]; [32]; [33]. The answers follow a Likert scale from 1 to 5, the higher the score, the better the quality of life, allowing to measure attitudes and know the degree of conformity of the interviewee with any proposed statement [30]; [31]; [32]. This instrument is generic and self-administered, it was developed in a cross-cultural perspective to collect data on QOL, being available in more than 40 countries", including validated for the Brazilian population [31]; [32]; [33]. According to Ferentz [31]; the choice of indicators to measure quality of life will depend on which study area will be linked. For the author, the quality of life assessment instrument was standardized by the WHO as a way of enabling the comparison of results between different situations, sectors or regions. Therefore, there are five official methods to measure the population's quality of life, namely: the WHOQOL-100, WHOQOL-Bref (abbreviated), WHOQOL-HIV, WHOQOL-SRPB and WHOQOL-OLD (for the elderly) [31]; [32]; [33].

The WHOQOL-Bref questionnaire has been validated in over 20 countries. In Brazil, the version was developed by the Federal University of Rio Grande do Sul (UFRGS) located in Rio Grande do Sul. The Portuguese version of this instrument allows comparing studies carried out in different regions [31]. Multidisciplinary studies can be an important tool for state entities to analyze the impact of public policies on the population's health conditions, cultural, socioeconomic and psychological aspects [32]. For the study with PMs from Rondônia, we will use the simplified version of the WHOQOL-Bref [32]. The instrument is the most suitable to be applied to PMs, due to the specificity of routine and work activities inside the barracks.

Table 1 Demonstration of domains and facets: physical, psychological, social relationships and environment and general quality of life of the WHOQOL – Bref.

Domains	WHOQOL
Physicist	Pain and discomfort; energy and f activities of everyday life; depend
Psychological	positive feeling; think, learn, conc appearance; negative feelings;

	spirituality – religion/personal beliefs
Social relationships	Personal relationships; sexual activity; social support
Environment	Physical security and protection; environment at home; financial resources; health and social care: availability and quality; opportunities to acquire new information and skills; participation in recreation/leisure opportunities; physical environment: pollution/noise/climate; transport
General	Perception of quality of life; health satisfaction

Source: Adapted from Ferentz [31]; Fleck [34].

The WHOQOL – Bref results are indicated in percentage (%), being from 0 to 100 points, the higher the percentage, that is, closer to 100, the better the quality of life of individuals [33]. The data were analyzed by a tool, developed from the Microsoft Excel software, directed to the calculation of scores and descriptive statistics of the WHOQOL-Bref instrument - following the syntax proposed by the WHOQOL Group, allowing to perform WHOQOL-Bref applications without needing to use from the SPSS software [33]. In this sense, this study used this tool that allows tabulating the data, calculating the descriptive statistics of the sample (average, standard deviation, minimum and maximum of the physical, psychological, social relations, environment and general domains), leaving the researcher only tabulate the collected data and the calculations of scores and statistics all in an automated way [31].

2.4. Procedures

For data collection, the 2-way informed consent and previously selected and validated questionnaires were provided to the volunteer police officer.

2.5. Ethical aspects

All subjects were previously informed about the objectives and type of research, who participated voluntarily and formalized the free and informed consent term (ICF) in writing to the technical manager. The protocol and all consent forms were previously approved by the Research Ethics Committee (CEP). All research followed the procedures of Operational Norm nº 001/2013, Resolution 466/2012 Resolution 510/2016 both from the National Health Council (CNS) for research carried out with animals and humans.

2.6. Statistical Treatment

For the tabulation of sociodemographic data and the level of physical activity, the EXCEL spreadsheet was used. For the statistical treatment, the BioEstat 5.0 software was used, where the Mean, Standard Deviation, Frequency and Percentage (%) were calculated through descriptive statistics. For the data on quality of life, the tool built and proposed by Pedroso et al., [33] was used, which was simulated in the SPSS software, performing the calculation of scores and descriptive statistics in an automated way.

III. RESULTS AND DISCUSSION

A total of 410 instruments were distributed and of this total, only 358 met the eligibility criteria. Data collection was carried out between September and December 2021.

3.1 Sociodemographic data and occupational conditions of military police officers in Rondônia.

Regarding sociodemographic characteristics, these were collected using a specific instrument, with emphasis on male military police officers and active members of the PMRO, with a total of (n=358/100%) of the investigated sample. Of the police officers investigated, the age variable had the mean (39.21 ± 6.41) years of age. This finding is superior to data from military police officers from Tocantins who obtained (25.5 ± 3.60) years of age [26], from the region of Araçatuba/SP who obtained (36.8 ± 7.1) years of age [17] and lower than the findings from the City of Floriano/PI, which was (46.39 ± 4.25) years old [35]. Regarding the variable length of service in the corporation, the average was (15.44 ± 7.64) years of age for the sample. Therefore, the Rondônia study is inferior to the findings of Neta et al., [35] who were in (26.74 ± 2.33) and Batista [28] who found for the operational and administrative group (18 .06 ± 5.54 and 17.25 ± 6.83) years of police service, respectively. In the study in Rondônia, most of the military police officers analyzed, that is, (61.17%) were under 40 years of age and (78.21%) of the police officers had less than 20 years of experience in the police service. However, the minority of police officers were in the age group above 40 years and above 20 years of police service. In addition, it was characterized in the study that the military police of Rondônia are in the middle age and also in the middle of their professional careers.

Regarding the training of PMs in Rondônia, (52.79%) have higher education courses, including Specialization and Masters. Regarding this variable, the study in Rondonia differs from the findings by Silva et al., [23] in Santa Catarina, which was (28.5%) of police officers with higher education and the study in Alagoas, which found a percentage of (5.4%) of PMs with higher education [36]. Regarding education, most of the subjects studied had a higher education and a minority had a high school education, inferring that Rondonian police officers are highly qualified. However, these data show that Rondônia's military police are one of the most qualified

public security workers in the country. Concerning the marital status of the military police in Rondônia, (69.27%) are married, similar to the findings of Gonçalves et al., [27] in the 10th Battalion of Miguel Pereira and Paty do Alferes and higher than that found in Alagoas, which identified about (67.6%) of married police officers [36] and found in Santa Catarina that was (57.9%) of married military police officers, with marital status associated with better quality of life [23].

Regarding the ranks and degrees of military police, most (47.49%) are from the ranks of warrant officers and sergeants and earn between 5 and 7 minimum wages, (42.46%) are from the ranks of corporals and soldiers and have as an average salary of approximately up to 4 minimum wages, (6.70%) are in the ranks of junior or intermediate officers and earn between 8 and 10 minimum wages, while (3.35%) of the officers are of the upper echelon and earn above 11 minimum wages. The higher rate in the ranks of warrant officers and sergeants is due to the constant promotions for these cadres, which also raises the salary range of these servers. On the other hand, the lower the rank or rank of the military police officer, there is an impact on their income. These data differ from the studies with PMs from São Paulo that found (10.9%) of warrant officers and sergeants and (70.1%) of corporals and soldiers [3]; [25] and salary income differs from PMs in Alagoas where (90.9%) receives between 2 and 5 minimum wages and only (8.1%) earns more than 5 minimum wages [36]. However, when comparing the salary range of Rondonian PMs with other state military corporations, this income range is one of the lowest in the country, behind 23 other military police corporations. This low salary range imposes on Rondonian police officers the search for a second income (beak), increasing the incidence of hours worked, leaving little time for physical activity, which has contributed to low physical condition, increased body weight, high level of stress and further worsening the quality of life.

The working hours of the military police officers investigated was (6.87 ± 2.04) hours per day and (29.10 ± 80.79) days away from work due to various NCDs and Covid-19. From this point of view, the vast majority of the subjects analyzed, that is, (49.44%) work an average of 6 hours a day in the corporation. On the other hand, just over (20%) of the individuals work in 12x24/72 shifts. Thus, police work in shifts has as its main harmful factor to health, the constant periods of alert and changes in sleep during the duty shift. This type of work can compromise the health and quality of life of military police officers, as there is an increase in tobacco consumption and loss of sleep at night [3]; [25]. The causes of absence from service due to physical and mental health problems among the military police were around 29 days of absence. These data found are superior to the studies by Oliveira [37] who identified that (21.02%) of the analyzed police officers were away for at least 1 day from work in the last year, that is, much lower than the studies in Rondônia. These questions point out how important social, demographic and labor factors are in maintaining health and quality of life [38]. In the study, a prevalence of (48.32%) of CNCD was observed in the investigated police officers. Therefore, the data from our studies are superior to those found by Paiva et al., [39], where they observed that (28%) of the police officers studied had some type of chronic disease, including arterial hypertension, herniated disc and diabetes. It was noted in the research instrument that (34.08%) of the investigated policemen contracted COVID-19 between 2020 and 2021.

3.2 Quality of life of military police officers in Rondônia.

Quality of life was assessed using the WHOQOL-Bref instrument validated for the Brazilian adult population in five domains: physical, psychological, social relationships, environment and general quality of life. The classification of the military police officers surveyed for the physical domain was 71.37, the psychological domain 75.03, for social relationships it was 74.76, the environment domain was 63.67, while the general quality of life was 70.04, with the highest scores for the psychological domain, social relationships and the lowest scores for the environment and physical domains. Therefore, the study with military police officers from Rondônia differs from the studies carried out during the coronavirus pandemic by Alvarenga et al., [16] with teachers who identified the highest scores for the physical and psychological domain and the lowest for the social and environment domain.

Table 2 – WHOQOL-Bref domains (physical, psychological, social relationships, environment and total quality of life) of military police officers in Rondônia. Study data - 2021

DOMAINS	QOL
Physicis	**71.37**
Psychological	**75.03**
Social relationships	**74.76**
Environment	**63.77**
TOTAL	**70.04**

Table 3: Facets of the WHOQOL-Bref of the PMs of Rondônia. Study data - 2021

FACETS WHOQOL	QOL
pain and discomfort	30.52
energy and fatigue	69.83
sleep and rest	62.78
Mobility	83.03
everyday life activities	68.72
Dependence on medication or treatments	27.30
work capacity	73.04
positive feelings	68.05
Thinking, learning, memory and concentration	65.01
Self esteem	83.78
Body image and appearance	81.22
negative feelings	24.86
Spirituality/religion/personal beliefs	77.04
Personal relationships	75.14
Personal support and support	69.41
sexual activity	79.75
Physical security and protection	69.59
home environment	73.25
Financial resources	49.37
Health care	57.82
New information and skills	66.06
recreation and leisure	60.15
physical environment	59.78
Transport	74.30
Self-Assessment of Quality of Life	68.53

In the present study, the highest scores were for self-esteem with 83.78; for mobility it was 83.03 and body image and appearance 81.22. On the other hand, the lowest scores were for pain and discomfort with 30.52, dependence on medication or treatment with 27.30 and for negative feelings with 24.86 points.

Regarding quality of life, the police were asked if they were satisfied with their health, and (65.8%) responded that they were very satisfied or satisfied with their health and (12.1%) were very dissatisfied or dissatisfied. The findings differ from the São Paulo study that found (75.7%) of military police officers very satisfied or satisfied and (8.3%) dissatisfied or dissatisfied with their health [3] and from the studies of the metropolitan region of Belo Horizonte that (82, 6%) of PMs are very satisfied or satisfied with their health and (6.1%) are very dissatisfied or dissatisfied with their health [17]. The military police officers from Rondônia also revealed, when asked how they evaluate their quality of life, the study confirmed that (76.8%) evaluate their QOL as very good and good and (3.36%) understand QOL as very bad and bad. The findings from Rondônia differ to a lesser extent than the data found in São Paulo, where (81.8%) of police officers in São Paulo rate their QOL as very good and good and (4.3%) as very bad and bad [3], as well as the findings with police officers in Belo Horizonte [17], where (80.7%) said they rate their QOL as very good and good and (3.5%) rate their QOL as very bad and bad. The findings of our study show us the impacts caused by the current pandemic crisis of COVID-19 that devastated the military police of Rondônia, corroborating the decrease in the perception of health and quality of life of these individuals.

When performing the analysis of the domains, the physical domain of the WHOQOL-Bref of the Military Police of Rondônia presented a score of 71.37 points and for the pain and discomfort facets the percentage was 30.52 points and for the treatment dependence facet or medication, the score was 27.30 points. In this aspect, when comparing the data from the questionnaire prepared by the authors of the study, with the data from the WHOQOL-Bref, it was characterized that the physical domain was significantly affected, which can be observed in the percentage of individuals who indicated various diseases of the bone system and musculoskeletal injuries. The results presented in this study corroborate the findings of other studies with the population of military and military police who found low back, spine and neck pain, spinal injuries, knee and ankle injuries, joint dislocations, arm and leg fractures, tendinitis and bursitis, mild pain, of moderate and severe intensity [10]; [40]; [41]. Although the findings show that individuals depend on medication or medical treatment, this does not prevent them from carrying out their daily activities. In this aspect, there is an indication of good physical health and, consequently, a good quality of life in relation to the physical domain and investigated facets. In addition, most military police officers are satisfied with their physical health, despite feeling pain, discomfort or discomfort manifested in the instrument itself and also in the WHOQOL-Bref. Data that are corroborated by studies by Alvarenga et al [16] with teachers during the Covid-19 pandemic who reported that they are satisfied with their physical health, despite some pain or discomfort, this does not prevent them from performing activities daily, showing little need for medical treatment, being an indication of a good quality of life.

For the psychological domain related to the mental health of the PMs from Rondônia surveyed, the

data found were quite positive, despite the problems faced by the police during the Covid-19 pandemic. This domain evaluated the psychological capacity of military police officers to face the challenges inherent to their profession, as well as the ability to deal with stressors, caused by the coronavirus pandemic and which led these professionals to a very high level of stress. However, when asked how often you have negative feelings, such as: bad mood, despair, anxiety and depression, (13.64%) of military police officers reported that they often, very often and always have negative feelings. From this perspective, affected mental health is one of the possible side effects of Social Distancing caused by the Covid-19 pandemic [42].

When performing the analysis of the psychological domain, it was around 75.03 percentage points and for negative feelings, the WHOQOL-Bref facets of the present study identified 24.86 points, although the investigated military police had a self-esteem of 83.78 and positive feelings with a percentage of 68 points. However, such findings during the coronavirus pandemic confront higher levels of negative feelings, although there is good satisfaction with the health and general quality of life of military police officers. These studies corroborate the specific literature, as most of the individuals analyzed were happy with their physical and mental health and also reported a good perception of quality of life [2]; [3]; [25]. Although these professionals have reported a good perception of health and quality of life, it seems reasonable to believe that the perception of these individuals in relation to highly exhausting working conditions and high levels of stress generate negative impacts and cause several physical health problems. and mental that are imbricated in the very essence of the police profession.

For the social relationships of military police officers from Rondônia, the results of the WHOQOL-Bref were 74.76 points for this specific domain composed of the facets personal relationships, sexual activity and support and social support. The Rondônia study is corroborated by other studies also with military police, such as the State of São Paulo, which found the percentage of 75.05, 75.1 points respectively [2]; [3]; [25] and the study of the State of Santa Catarina that obtained 75.0 points for personal relationships [23]. These Findings show that the score is the second highest in the investigated domains. Therefore, it can be inferred that the restriction of circulation, social isolation and work carried out at home-office caused by the Covid-19 pandemic influenced the longer contact time with family members, strengthening social and support relationships at work and at home. In addition, for this analyzed domain, the most prominent point was the self-esteem facet of the military police officers in Rondônia, which obtained a higher percentage in relation to the other facets.

In the environment domain, a score of 63.67 points was found. The findings of our study are superior to studies carried out with police officers in São Paulo, which found scores of 62.20; 60.88 and 62.21 points respectively [2]; [3]; [25], to the findings in Tocantins, which was 55.50 points for police officers with more than two years of career [26] and in Santa Catarina, which found scores of 53.1 for the environment domain [23]. In view of this, it can be inferred that the differences found in relation to studies with São Paulo military police [2]; [3]; [25], from Tocantins [26] and from Santa Catarina [23] were due to the characteristics that make up the State of Rondônia, where there is still an environment with a favorable climate, little pollution , low noise levels and lower rates of violence compared to other Brazilian capitals. These peculiar aspects, combined with the low industrialization of the State and the production of renewable energy with the construction of the Santo Antônio and Jirau hydroelectric plants, reflected in a better quality of life for the military police of Rondônia. These aspects contributed to a better general quality of life with a total index of 70.04 points for these individuals. Therefore, the general assessment of the quality of life of military police officers from Rondônia is similar to the study carried out in Araçatuba-SP, where individuals obtained an overall average of 70.7 points, although the instrument used differs from that used in our study [20].

These data found refer to the conditions of military police officers inside the barracks, in relation to their perception of housing conditions, places where they live, security and violence, quality of urban and private transport, access to leisure options and opportunity for tourist trips. Such findings for the environment domain represent the reality of most military police officers investigated during the Covid-19 pandemic period. The arrival of Covid-19 impacted health conditions, as well as access to leisure options and opportunities for local and tourist trips that were suspended due to the social isolation imposed by the authorities as a way of mitigating the disease. For the facet that analyzes transport, the score was 74.30 points. This score can be explained by the fact that public transport in the Capital of the State of Rondônia is of poor quality and in some municipal locations it does not even exist. This forces the military police to have their own vehicle, which leads them to have greater satisfaction with the means of transport. On the other hand, in relation to financial resources, the score was 49.37 points. This facet can be easily explained, given that the income range of Rondonian police officers is one of the worst in Brazil, however, in relation to housing and home environment, it is still possible for individuals to have access to housing in

more centralized locations, due to the lower price of rents and real estate compared to the great centers of the country.

Regarding the recreation and leisure facet, the score was 60.15 points. This facet can be explained, due to the lower risk faced by the military police during their breaks from service, they still have better access to recreation and leisure in squares, parks, sightseeing in the region, fishing, among others. All this corroborates for a better perception of the quality of life in this facet. With regard to access to information, nowadays with the boom of the technological era and digital media, military police officers have greater access to various digital information tools, which influences the aspects of data collection, information and fact checking. Therefore, the findings of this study highlight the impacts of the pandemic on the group of military police officers, due to the isolation and social distancing measures implemented by the government of Rondonia, as well as the specificity of police work in this period in an attempt to mitigate the contagion by Covid-19.

IV. CONCLUSION

With regard to sociodemographic characteristics and occupational conditions, it was found that most individuals are less than 40 years old and have less than 20 years of police service in the corporation and, predominantly, have a higher education level, are married, have warrants and sergeants and earn between 5 and 7 minimum wages. The vast majority of police officers work 6 hours a day and have already been removed from the service, due to being carriers of CNCD and were also infected by Covid-19.

Regarding the health conditions indicated in the self-report instrument, the highest prevalence of diseases that affected Rondonian military police officers between the years 2020-2021 are related to the infection by Covid-19 with (34.8%) of the infected police officers, followed by musculoskeletal diseases (16.58%) and psychosomatic diseases (14.80%). From this point of view, the investigated military police are getting sick in the best productive age group, bringing a huge amount of damage to these individuals, their families, to the military corporation and increasing public health expenses for the State of Rondônia. Therefore, the low PAL, NCDs and Covid-19 reported here contributed to momentarily worsening the quality of life of PMs. However, it is still too early to present conclusive results on the influence of Covid-19 on the levels of physical activity, on health and on the worsening of the quality of life of military police officers.

Therefore, the quality of life of military police officers in Rondônia has satisfactory levels, despite chronic health conditions, demonstrating through self-report and the multidimensional character of quality of life, with the highest scores in the social relationships domain and the lowest in the environment domain. In this sense, (76.8%) of the military police officers evaluate their quality of life as very good and good and (65.8%) answered that they are very satisfied or satisfied with their health. On the other hand, the highest scores were for the facets mobility, self-esteem, sexual activity and the lowest scores were for the facets of negative feelings, dependence on medication or treatment, and finally, pain and discomfort, data that are corroborated by the self-report of CNCD and Covid-19 highlighted in the research instruments.

Therefore, there is a need for more aggressive public policies on the part of the military institution to promote physical activity inside the barracks and contribute to improving the health and quality of life of its employees, including police officers who are diagnosed with NCDs and those who were positive and are cured of Covid-19. On the other hand, epidemiological studies with the population of military police, sciences applied to sport and physical exercise prove the benefits of daily physical activity to minimize sedentary behavior, reducing the incidence of NCDs and infectious diseases, such as Covid-19. In addition, high levels of physical activity is an important non-pharmacological tool for the prevention, restoration and maintenance of health and the quality of life of military police officers.

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