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Level of Physical Activity and Health Conditions of Military Policemen in The State of Rondônia, Western Amazon: A Study in Times of The Covid-19 Pandemic

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Abstract

Objective: To analyze the sociodemographic characteristics, levels of physical activity and health conditions of active military police officers in the State of Rondônia, in the Western Amazon, Brazil in times of the Covid-19 pandemic. Methodology: This is a descriptive, cross-sectional field study, with a convenience sample, non-probabilistic and with a quantitative approach, with 358 PMs working in the PMRO. A self-report questionnaire was used to collect sociodemographic data and health conditions. The IPAQ-short version was used to assess the level of physical activity (NAF). Results: 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. According to the NAF, 29.61% were classified as very active, 23.74% active, 14.24% irregularly active A, 8.38% irregularly active B and 24.86% sedentary. Of the CNCDs, musculoskeletal diseases (16.49%), psychosomatic diseases (14.80%), SAH (8.10%), dyslipidemias (5.58%), CVDs (2.51%), cancer (0, 56%) and DM2 (0.28%). Of the total number of infectious diseases, 34.08% contracted Covid-19. Conclusion: The physical activity levels (47.48%) of the military police were in the classification (irregularly active + sedentary) according to the IPAQ-short version, confirming the low PAL of these individuals. Low NAF, NCDs and Covid-19 contributed to momentarily worsening the quality of life of PMs.

Keywords: Physical activity; Health conditions; Covid-19; military police; Rondônia.

1. Introduction

The military police officer is exposed to high risk for infection by Covid-19. This risk is associated with direct contact with the population in 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]. This disease triggered a global epidemic crisis, with different impacts in different countries [2]. In addition to the impacts on social, economic and health areas, Covid-19 led the population to social isolation and home confinement, reducing levels of daily physical activities and leading individuals to adopt sedentary habits, which may have contributed to an escalation of comorbidities, especially those related to cardiovascular and metabolic risk, such as: obesity, SAH, glucose intolerance and psychosocial disorders [3]; [4]; [5];[6] and [7]. Thus, deaths related to Covid-19 are due to the implications for the respiratory system, vascular system and the high degree of lethality of the virus among elderly individuals, people with associated chronic non-communicable diseases (NCDs) and those with psychological problems [3]; [8]. These comorbidities result from working conditions, combined with insufficient physical activity, sedentary lifestyle, consumption of high-calorie foods, abuse of tobacco and alcohol that lead to premature death among military police [9]; [10]; [11] and [12]. The specialized literature emphasizes that the reduction in physical activity attributed to modern life habits has led to a decline in the physical fitness of PMs, leaving a dangerous space for a sedentary lifestyle and the emergence of hypokinetic diseases, including: obesity, cardiovascular diseases (CVDs), systemic arterial hypertension (SAH), type 2 diabetes (DM2), dyslipidemias, musculoskeletal diseases, psychosomatic diseases and some types of cancer that have been manifested in this class of professionals [13]; [14]; [15] and [16]. However, in relation to hypokinetic and infectious diseases such as Covid-19, there is little information available on Brazilian military police. The data are globally comparable and indicate that occupational accidents represent one of the biggest public health problems, with evidence of high rates of overweight and obesity, which is a complicating factor for NCDs and infectious diseases such as Covid-19 [4]; [15] and [16]. At the beginning of this century, deaths from chronic diseases prevailed, largely due to unhealthy habits and physical inactivity. However, the incidence and prevalence of NCDs are still

higher than infectious diseases, however, both have an important role in the epidemiological picture in Brazil, and most deaths in the country were related to these causes [17]. Regarding infectious diseases (Covid-19) they play an important role in the mortality of the population and military police.

During this pandemic period, physical activity is no longer a priority for the general population and also for the military police, since isolation in a closed environment is not always inviting for the practice of physical activity, with behavioral changes in lifestyle and behavior. an invitation to a sedentary lifestyle [18]; [19]. In this sense, the Covid-19 pandemic may have led the military police to sedentary behavior or insufficient physical activity, due to isolation and social distance and circulation restrictions and the difficulty of accessing places where activities are practiced, including inside the barracks. In this way, the sedentary behavior of the police may have contributed to result in a series of chronic health conditions, such as obesity, CVDs, SAH, cancer, including anxiety and depression, which are the biggest risk factors for Covid-19 [4]; [5]. For the authors, the increase in body weight can be harmful to the lungs and favor the traffic of inflammatory cytokines, contributing greatly to the local inflammatory cycle and other secondary injuries. This new highly contagious infectious disease led to the death of a portion of the population and also of military police officers in Rondônia. In addition, the military police officers who were acting on the front line to combat Covid-19 gradually left daily physical activities and started to have sedentary behaviors during the pandemic period. However, the practice of physical activity should be a priority during this period of isolation, as it is a valuable tool to minimize body weight gain and control Covid-19 infections and maintain quality of life [19]; [20]. Corroborating, with Costa et al., [20], the Brazilian Society of Sports Medicine and Exercise [21] recommends the practice of physical exercises to improve the body's immunity, in the face of the coronavirus. In this context, physical activity has the potential to reduce the severity of Covid-19 infections, strengthening the functioning of the immune system and reducing inflammation, although there are still no studies that prove the effects of exercise with Covid-19 carriers, the effects of exercise on immunity, inflammation and viral respiratory infections are well documented in the literature [21]. Therefore, physical activity is health, health is life, and therefore quality of life. However, physically active people are less likely to have several diseases, such as diabetes, hypertension and other cardiovascular diseases, chronic-degenerative pathologies that lead their carriers to be considered at greater risk for infection by the coronavirus [4]; [5]. From another perspective, physical inactivity contributes to increased anxiety and depression, which in turn can lead to a sedentary lifestyle known to result in a number of chronic health conditions [18]. In addition, due to urban confrontations, military police officers should have a good NAF to carry out their constitutional attributions and preserve their physical and mental health. However, studies have shown that these professionals do not meet the minimum requirements for physical activity, which has compromised their health and the development of several comorbidities, which includes this portion of individuals in the risk group for both NCDs and Covid-19 [22].

In Brazil, epidemiological studies on the health of military police are still scarce. However, in relation to health problems, the external causes of mortality and morbidity of this public in countries, such as Brazil, are much higher in relation to the population and any other specific group [23]. For the authors cited, health conditions as a series of biological, social, cultural and environmental conditions, and in the interaction between health

and work, there are two plans, namely: the work process itself, with repercussions on health, as well as subjectivity and professional experience. Currently, musculoskeletal, cardiometabolic and psychosomatic diseases are major concerns for private companies, public institutions, especially among military corporations. According to Gonçalves et al., [24] and Ferreira [17] military police officers have high rates of illness due to CNCD, highlighting: CVD, SAH, DM2, gastrointestinal diseases, pulmonary, musculoskeletal and psychosomatic diseases, all related to the exercise of profession and physical inactivity. Thus, "health, whether physical or mental, is an important factor for the performance of any worker, and this is no different when considering military police officers"[25]. In relation to the military of the States, Pereira [15] investigated police officers and military firefighters from Santa Catarina, it was found that the most prevalent health problems were injuries and some other consequences of external causes (11.44%), musculoskeletal diseases and connective tissue (10.25%), mental and behavioral disorders (6.32%), accounting for approximately one third of absences. For the author, the working conditions of these servers, exposure to risk situations in the exercise of the profession and the adverse consequences of this context for their health, require a fundamental physical and mental condition for the performance of professional and daily activities. Therefore, "the illness of the military is related to the work process and, therefore, it is necessary to understand the characteristics involved in its development and the influencing variables in the exercise of the military police function"[14]. It is worth mentioning that the routine activities of the military police require a differentiated health and physical condition and above the average of the population in general, requiring a metabolic and energetic demand much greater than that of the common citizen to perform their duties well. Military police officers belong to the group of workers who deal daily with violence and risks of death, using their own body as a work tool, and, when exposed to these traumatic events, they can suffer serious consequences for physical and mental health [23]; [26]. These traumatic events have peculiar characteristics, combined with unhealthy workplaces, shifts and different hours of service can impact to a lesser or greater degree on the health of military police, depending on the type of sedentary work or with high levels of attention and stress. Therefore, "the places where people live and work present different social dynamics and, consequently, create different contexts that put pressure, make harmful situations possible and expose them to risk factors for health"[14]. However, another factor that leads the military police to physical and mental exhaustion is the reduction of the effective and the constant leaves, therefore, it increases the working day inside the barracks, as well as, the double day of service to complement the income, culminates with insufficient rest period, which brings an overload in the work activities of these public agents, generating adverse complications for the physical and mental health of these workers. Thus, this small effective has caused an overload in work and routine activities. According to Gonçalves [9] these particularities in the military work environment, overload the biological and musculoskeletal system, in order to negatively influence the health and quality of life of these public safety professionals. However, another current and contemporary problem is the infectious disease called Covid-19, which has differently affected public security servers who are directly on the front line of fighting crime and in population control activities so that it does not occur. the outbreak of contagion and deaths.

Military police officers who work to preserve public order are subject to several diseases related to the exercise of their profession. According to Ferreira [14] excessive loads in police work, insufficient physical activity,

involvement in conflicts are the main health weaknesses and essential components for the collective perception of health risk. Therefore, low levels of physical activity can impact the health of military police, as well as the quality of service and maintenance of public order. In addition, work overload and physical and psychological exhaustion have affected the health and quality of life of PMs, due to day-to-day anxiety, stressors, violence, slow career advancement and long working hours are factors. that also collaborate for NCDs [27]. Surveys carried out by Gonçalves [9] with the human resources sector of the Military Police of the State of Rondônia pointed to a small number of staff, different scales, few rest periods and double shifts, contributing to work overload and resulting in physical and psychological, in order to negatively influence the quality of life of military police officers. This work overload, 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 [24]; [27]. Thus, suffering from stress arising 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 [23] 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 a greater probability of suffer 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 trauma, significantly affecting 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 [23]; [29].

For Batista [28] Brazilian police officers are often absent from work by medical order, causing social damage, inconvenience to the administration and expenses for the State, due to the fact that police work is included among those that most favor the adoption of prolonged postures and vicious, factors that can cause physical and mental illness, harming health, QoL and ability to work. The main consequences of the illness of these servers refer to the violence faced in daily life and the states of physical inactivity, including those related to occupational diseases, as well as diseases related to inadequate life habits, which worsen when associated with the level of stress caused by the specificity of the area [30]. Physical inactivity and a sedentary lifestyle contribute to several deleterious aspects to the health of PMs, as well as a significant number of these professionals still have high rates of body fat in the central region, which has contributed to pressures in the work environment and high proportion of psychological problems that affect quality of life [23]; [26]; [27]. Chronic non-communicable diseases and injuries resulting from police activity can generate emotional overload and high levels of stress in the face of different situations experienced in daily life. Studies carried out by Pereira et al., [31] with active PMs in the city of Caxias (MA), whose objective was to assess lifestyle

and risk factors for CNCD, found levels of sedentary lifestyle of 57.8% , stress of 57.7%, favoring NCDs. Gonçalves et al., [23] investigated the military police officers who work in the second police company of the tenth Battalion (Miguel Pereira and Paty do Alferes), concluding that these professionals have strong tendencies to develop chronic diseases in a short period of time and a strong tendency to acquire psychosomatic illnesses. In a systematic review of the literature with three scientific articles on the health and quality of life of military police officers in the State of Alagoas, Cavalcante Neto et al., [27] observed that the Burnoult Syndrome of the analyzed subjects are issues that generate concerns in the life of the military, requiring punctual interventions in the practice of regular PA, in a systematic and oriented way to improve these pathologies. The mental health and quality of life of civil police officers in the metropolitan region of Porto Alegre-Rio Grande do Sul was evaluated by Wagner et al., [32]. The results showed that police officers with more than ten years in the profession had the greatest losses in quality of life, mental health, higher frequency of NCDs, regular use of medication and fewer leisure activities. The study suggests that police work negatively compromises mental health and quality of life. For Wagner et al., [32] the daily contact with complex and adverse working conditions, especially the confrontation of situations that involve violence, confrontation and death, may be involved in this problem. On the other hand, Covid-19 also generates psychological problems and stressors inside the barracks and among the police. Therefore, it is "essential for the Police to review their physical activity programs, as well as to keep their active duty soldiers in good health, whether in times of normality or in times of a pandemic"[22].

Nevertheless, studies point to the need for a public policy within the barracks that allows the military police to regularly practice physical activities, aiming to increase the levels of daily physical activities, both for good professional technical performance, daily activities, as well as for the fight NCDs and Covid-19. For this, in Brazil, military corporations have in their staff of professionals in the area of health and physical exercise to meet this demand in health. However, in Rondônia, this reality is also no different, because, among the professionals in these specific areas, there are: doctors, dentists, physiotherapists, psychologists and social workers, as well as, they still have military police officers with higher education in the area of Education. Physical. However, these police officers trained in Physical Education perform ordinary policing, as they do not belong to the corporation's health framework and, therefore, are not used to prescribe physical activities or physical exercises to improve the health of the members of the corporation. Thus, physical activity inside the barracks suffers from some impediments and remains in the background. In this way, military corporations should have as their main focus the removal of obstacles and create actions aimed at institutional policies for health care and quality of life, as well as promoting the practice of physical activity to help reduce physical exhaustion, psychological disorders and NCDs [33]. Therefore, managers of military institutions need to identify the needs of this specific population and "develop action plans in relation to coping with chronic diseases and seek ways to enable effective actions"[34]. In view of this, the military police institution must develop strategies for the access of military police officers to the practice of AFEs to improve physical condition, daily activities, as well as promote campaigns and incentives to the practice of PA as a tool to promote preventive and healthy health control of NCDs and infectious diseases and other pathologies associated with physical inactivity, avoiding comorbidities and premature deaths of its employees. Therefore,

"being clear about this relationship allows you to reorganize more favorable contingencies to the work process and modify it in order to maintain the health of these professionals" [14]. In addition, there is a need to look for AFEs that address current basic needs inside or outside the work environment, especially during or after this Covid-19 pandemic period. The physical activity programs inside the barracks should be reviewed, in order to include possible scenarios of sanitary calamity [22]. The literature recommends physical activity and physical exercises to maintain physical and mental health, however, for individuals to have a good quality of life, they should not deviate from healthy attitudes.

Inside the barracks, the professional environment of the military police is risky, because workers deal directly with weapons and lethal ammunition, risk of traffic accidents with vehicles during police pursuit, musculoskeletal injuries arising from police service, military physical training or training of police techniques, as well as constant confrontations with criminals in occurrences with risk of death for both sides and loss of sleep for those who work at night. All these elements of the working day make it difficult to practice physical activity and generate complications for the physical and mental health of these professionals. However, investigations carried out in the human resources sector of the military police, it was found that the corporation does not have a public policy that includes physical activity as a tool for health promotion, disease prevention and improvement in quality of life. of military police. Given the scarcity of scientific studies related to physical activity and health conditions in military police in the face of a Covid-19 pandemic scenario, the general objective was to analyze the sociodemographic characteristics, levels of physical activity and health conditions of military police officers in Rondônia, in the Western Amazon, Brazil in times of the Covid-19 pandemic.

2. Methodology

2.1 Study characteristics

This is a descriptive, cross-sectional field study with a convenience sample, non-probabilistic and with a quantitative approach. Descriptive research studies a particular population or phenomenon, establishing relationships between variables, describing characteristics of a group such as: age, sex, education level, physical and mental health status, among others [35].

2.2 Population and shows

The population of active military police officers belonging to the PMRO is 5,132 individuals. About 410 printed questionnaires were distributed, as there is a considerable loss at the time of return. After analyzing the returned questionnaires, there was a sample loss of 12.5% that were lost, filled out incorrectly or subjects did not enter their signatures in the Free and Informed Consent Form. 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 [36]: N – Population size; and – 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% [36].

2.3 Data collection instruments

The data collection instruments were: Sociodemographic questionnaire and health conditions. The IPAQ-short version was used to assess PAL [37]; [38]; [39].

2.4 Assessment of physical activity level (NAF)

In the analysis of the NAF, the instrument used was the IPAQ short version, as it is more suitable, especially for military police workers who have limited time and specific working conditions and double working hours. Thus, to characterize the AF level of this population, it was necessary to use this instrument [37]; [38]; [39]. From this instrument, it was possible to estimate the weekly time spent in physical activities of moderate and vigorous intensity, in different contexts of daily life and thus classify the level of physical activity of the PMs of Rondônia [40]. Thus, the classification of physical activity levels was defined through the IPAQ short version, estimated according to the parameters presented in table 1.

Table 1: NAF classification using the IPAQ-short version.

very active	Those who fulfilled the recommendations of: VIGOROUS Activity: ≥ 5 days a week and ≥ 30 minutes per session; or VIGOROUS Activity: ≥ 3 days a week and ≥ 20 minutes 666666666.per session + MODERATE Activity and/or WALKING: ≥ 5 days on week and ≥ 30 minutes per session.
Active	The one who complied with the recommendations of: VIGOROUS Activity: ≥ 3 days a week and ≥ 20 minutes per session; or MODERATE Activity or WALKING: ≥ 5 days in week and ≥ 30 minutes per session; or any activity added together: ≥ 5 days a week and ≥ 150 minutes per week (walking + moderate activity + vigorous activity).
gular ve	One who performs physical activity, but is insufficient to be classified as active, as it does not meet the recommendations regarding frequency or duration. To carry out this

	classification sums the frequency and duration of the different types of activities (walking + moderate activity + vigorous activity).
egulary set A	One that meets at least one of the criteria of the recommendation regarding the frequency or regarding the duration of the activity: Frequency: 5 days a week; or Duration: 150 minutes on week.
egular set A	Those who did not meet any of the criteria in the recommendation regarding frequency or regarding duration.
Sedentary	One who did not perform any physical activity for at least 10 continuous minutes during the week.

Source: Adapted from Melo et al.,[40].

2.5 Procedures

For data collection, the TECLE and previously selected and validated questionnaires were provided to the volunteer police. For the selection of the study sample, the police officer should be a volunteer and be on active duty.

2.6 Appreciation by the Research Ethics Committee

The present work was approved by the Rondônia Military Police Command. 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). The 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.

2.7 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.

3. Results

3.1 Description of sociodemographic data and occupational conditions of military police officers in the State of Rondônia.

The average age of military police officers in Rondônia was (39.21 ± 6.41) years old, the length of service in the corporation obtained an average of (15.44 ± 7.64), hours worked per day was a mean of (6.87 ± 2.04) and

an average of (29.10 ± 80.79) of days away from the service due to NCD or infectious disease (Covid-19). It can be seen that 219 (61.17%) of the PMs were aged < 40 years and about 139 (38.83%) were ≥ 40 years of age. However, 280 (78.21%) of the individuals had < 20 years of experience in the PMRO and about 78 (21.79%) had ≥ 20 years of police service. Regarding the education of Rondônia police officers, about 89 (24.86%) had secondary education, 80 (22.35%) had incomplete higher education, 133 (37.15%) PMs had higher education, while 51 (14.24%) have a lato sensu postgraduate degree (Specialization), 5 (1.40%) of the investigated PMs have a Stricto sensu postgraduate degree (Master's) and no military police officer has a doctorate. Most of the investigated subjects, 248 (69.27%) were married, 21 (5.87%) reported that they had a stable union, 78 (21.79%) were single, 11 (3.07) were divorced and no military police officer studied was a widower. Regarding the ranks and degrees of military police officers in Rondônia, it was found that 152 (42.46%) are corporals or soldiers, 170 (47.49%) are warrant officers and sergeants, 24 (6.70%) declared that they are junior or intermediate officers and 12 (3.35%) senior officers. With regard to income, corporals and soldiers earn up to 4 minimum wages, warrant officers and sergeants receive between 5 and 7 minimum wages, junior officers and intermediates had as income between 8 and 10 minimum wages, while senior officers had income above 11 minimum wages. Of the analyzed police officers, 177 (49.44%) work 6 hours a day, 66 (18.43%) work 8 hours a day, 40 (11.18%) work 12 hours a day and the remaining police officers 75 (20.95%) work in 12x24/48 and 12x24/12x72 shifts. Of the police officers investigated, 154 (43.02%) were removed from the police service due to CNCD and 204 (56.98) reported that they were not removed from the service due to CNCD, while 122 (34.08%) of the PMs were removed by Covid -19 and 236 (65.92) reported that they were not removed from the service, due to not having contracted Covid-19.

3.2 Description of physical activity levels of military police officers in Rondônia obtained by the IPAQ-short version

For the description of the NAF and the sedentary behavior of the PMs of Rondônia, the IPAQ-short version was used. The instrument assesses AF in the last week, including household chores at home, in the yard or in the garden or any activity that increases breathing or heart rate. PMs walked (100.1± 125.1) min/week, for moderate intensity PA it was (99.36 ± 127.1) min/week and vigorous intensity AF was (97.67 ± 128.4) min/week, totaling (295.01 ± 252.6) min/week of weekly physical activity. Regarding sedentary behavior, PMs spent an average of (355.69 ± 155.83) minutes sitting during the week and (408.31 ± 197.55) minutes sitting during the weekend. (Table 2).

Table 2 - Mean score and standard deviation of NAF (walking, moderate AF and vigorous AF) and sedentary behavior of military police officers in Rondônia - 2021

NAF score and behavior sedentary ((IPAQ-short version)	Average	Standard deviation	Min.	Max.
Walk AF (min)	100.10	± 125.1	00	940
Moderate AF (min)	99.36	± 127.1	00	900

Vigorous AF (min)	97.67	± 128.4	00	630
Total AF	295.01	± 252.6	00	1120
Sitting during the week (min)	355.69	± 155.8	00	840
Sitting on the weekend (min)	408.31	± 197.5	00	960

Source: Study data, 2021.

Of those investigated, 106 (29.61%) were classified as very active, 85 (23.74%) were active, 51 (14.24%) were irregularly active A, 30 (8.38%) were irregularly active B and 89 (24.86%) were sedentary. (Table 3).

Table 3 - Distribution of frequency and percentage of NAF (very active, active, irregularly active A and B and sedentary) of military police officers in Rondônia - 2021.

NAF OF MILITARY POLICEMEN (IPAQ-short version)	**n(%)**
Very active	106 (29.61)
Active	85 (23.74)
Irregularly Active A	51 (14.24)
Irregularly Active B	30 (8.38)
Sedentary	89 (24.86)

Source: Study data, 2021.

3.3 Description of the health conditions of military police officers in Rondônia

The descriptive data of the main NCDs, Covid-19 and the current health conditions of the PMs of Rondônia are represented below. In the responses of the PMs, it was identified that 9 (2.51%) had some type of CVD. For dyslipidemias, 20 (5.58%) reported high triglycerides and cholesterol or mixed hyperlipidemia, 29 (8.10%) SAH, 1 (0.28%) DM2, 2 (0.56%) of the individuals reported cancer, 59 (16.58%) said they had some type of musculoskeletal disorders, 53 (14.80%) had psychosomatic diseases, while 185 (51.68%) of those investigated did not report NCDs and 122 (34.08%) reported who contracted Covid-19. Regarding health, it was noted in the instrument that 59 (16.48%) of the PMs are in excellent health, 116 (32.40%) in very good health, 133 (31.15%) are in good health, 44 (21.29%) reported having regular health and 6 (1.68%) of the police responded that they were in poor health. (Table 4).

Table 4 - Distribution of frequency and percentage of NCDs, Covid-19 and current health of military police officers in Rondônia - 2021

HEALTH CONDITIONS OF MILITARY POLICEMEN (DCNT)	**n(%)**
DCVs	9 (2.51)
Dyslipidemias	20 (5.58)
HAS	29 (8.10)

DM 2	1 (0.28)
Cancer	2 (0.56)
Musculoskeletal diseases	59 (16.49)
psychosomatic illnesses	53 (14.80)
do not have DCNT	185 (51.68)
Infectious diseases Covid-19	122 (34.08)
CURRENT HEALTH SITUATION	**n(%)**
Great	59 (16.48)
very good	116 (32.40)
Good	133 (31.15)
Regular	44 (21.29)
Bad	6 (1.68)

Source: Study data, 2021.

It was found in the return that 22 (0.43) PMs were on preventive leave, 1102 (21.47) confirmed cases, 1090 (21.24) cured cases and 12 (0.23) had died from Covid-19 until December 2021. (Table 5).

Table 5 - Distribution of the quantitative of preventive leave, confirmed cases, cured cases and deaths by COVID-19 of the military police of Rondônia, 2021.

MILITARY POLICEMEN WHO CONTRACTED COVID-19	**n(%)**
Preventive leave	22 (0.43)
Confirmed cases	1102 (21.47)
cured cases	1090 (21.24)
Deayhs	12 (0.23)

Source: Study data, 2021.

4. Discussion

4.1 Sociodemographic data and occupational conditions of military police officers in Rondônia

Regarding sociodemographic characteristics, occupational and health conditions, 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 (24), from the region of Araçatuba/SP who obtained (36.8 ± 7.1) years of age [41] and lower than the findings from the City of Floriano/PI, which was (46.39 ± 4.25) years old. 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.,[42] 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 less than 40 years old 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 over 40 years of age and over 20 years of police service. In addition, it was characterized in the study that the police officers of Rondônia are in middle age and also in the middle of their professional careers.

Regarding the education of the PMs in Rondônia, (52.79%) have higher education courses, including Specialization and Master's degrees. Regarding this variable, the study in Rondônia differs from the findings by Silva et al.,[43] 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 [44]. Regarding education, most of the subjects studied had a higher education and a minority had a high school education, inferring that the police officers in Rondônia are highly qualified. However, these data found demonstrate that the military police in Rondônia are one of the most qualified public security workers in the country.

Concerning the marital status of military police officers in Rondônia, (69.27%) are married, similar to the findings of Gonçalves et al.,[24] 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 [44] and found in Santa Catarina that it was (57.9%) of married military police officers, with marital status associated with better quality of life [43].

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 studies with PMs from São Paulo that found (10.9%) of warrant officers and sergeants and (70.1%) corporals and soldiers (26-28) and salary income differs from PMs from Alagoas where (90.9 %) receives between 2 and 5 minimum wages and only (8.1%) earns more than 5 minimum wages [44]. 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 perspective, 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 during the night period [45]; [46]; [47]. 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 are superior to the studies by Oliveira [22] who identified that (21.02%) of the analyzed police officers were away 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 [48].

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.,[49] where they observed that (28%) of the police officers studied had some type of chronic disease, including arterial hypertension, disc herniation and diabetes. It was noted in the research instrument that (34.08%) of the investigated policemen contracted Covid-19 between 2020 and 2021.

4.2 Physical activity levels (NAF) of military police officers in Rondônia

Regarding the NAF of military police officers from Rondônia indicated in the IPAQ - short version, it was found that the time of physical activity accumulated in the walk was (100.10 ± 125.1) min/week, the physical activity of moderate intensity was in (99.36 ± 127.1) min/wk., for physical activity of vigorous intensity it was (97.67 ± 128.4) min/week and the time of physical activity accumulated during the week (walking + moderate PA + vigorous AF) was (295.01 ± 252.59) minutes. These data are superior to those of Azevedo et al.,[50] in a study with military police officers in Mato Grosso that found a weekly accumulation of (226.33 ± 142.64) min/week of physical activity. In view of this, it was found that during the Covid-19 Pandemic the military police officers of Rondônia practiced physical activities in everyday life, classifying themselves as (very active and active) being within the recommended by the literature.

In general, the NAF of most PMs in Rondônia, that is, (52.52%) were considered sufficiently active according to the IPAQ-short summer, being (29.61%) very active and (23.74%) physically active during the Covid-19 pandemic, these data being lower than the sample in PMs from Feira de Santana/Bahia found (37.7%) very active individuals and (25.3%) active individuals. When comparing with other studies with a group of military police officers, such as the study carried out by Batista [28] in Goiânia, which obtained a percentage of (15.5%) of very active MPs and (24.2%) active appearing to be lower than the study in Rondônia. In addition, in a study carried out with Military Firefighters in the municipality of Ludgero-Santa Catarina during the coronavirus pandemic, it was identified that most individuals had the NAF classification as very active (50%) and (42.86%) active respectively. However, (39.30%) of these indicated in their responses that the Covid-19 Pandemic considerably interfered with physical training [3].

On the other hand, the data from our study are superior to the findings of Liz et al.,[51] in Santa Catarina who identified (39.30%) of active police officers and studies from the City of Floriano/Piauí that found (50%) that the PMs of that municipality were in the active classification [42], lower than the study by Tocantins [30], with about (65.70%) of the PMs with more than two years of service classified as active and the findings of

Calamita et al.,[52] in Marília-São Paulo with a percentage of (84%) of police officers practicing physical activity, in addition to the rate of (90%) among PMs from Feira de Santana/BA who practice physical activity [53] everyday. The results of the Rondônia study indicate a lower percentage of active police officers than Tocantins, São Paulo and Bahia, however, higher than the findings of Santa Catarina, Piauí and Goiânia.

The study also revealed that (22.62%) of the PMs are irregularly active "A" and "B" and (24.86%) are sedentary according to the IPAQ of the analyzed subjects. Regarding this variable, (34.3%) police officers from Acre were inactive and (25%) were insufficiently active [12], while the Goiânia study identified (27.20%) irregularly active and (33.10%) sedentary police officers, being superior to the study of Rondônia. Adding to the classification irregularly active and sedentary, it was characterized that (47.48%) of the investigated have low NAF, however, superior to the study by Tocantins that identified (34.30%) of PMs insufficiently active according to the IPAQ, after two years and seven months of police work [30] and lower than the studies carried out by Liz et al., [51] who identified (60.70%) of insufficiently active police officers, as well as the findings of Mata São João/Bahia that identified (50.98) of the PMs in that municipality with low NAF [54]. Thus, low levels of physical activity can compromise physical and mental health, professional practice and the quality of life of these police officers. On the other hand, for a good professional performance in favor of public safety, public policies are required from police institutions to promote physical activity practices, which can favor performance in ostensible policing activities, in the prevention of CNCD, in the reduction of physical and psychological exhaustion and consequently improving the health and quality of life of military police [53]. Therefore, the findings of our study show that half of those investigated have low PAL and reinforce the need for these police officers in Rondônia to have a more physically active life. In this sense, some scholars on the subject have identified a high prevalence of military police officers who do not meet the minimum requirements for physical activity [48]; [54].

On the other hand, due to the need for social isolation and the attempt to contain the virus during the pandemic, the PMs on their breaks from work stopped practicing physical activities and started looking at life through windows, sitting on sofas and in front of screens. TVs, computers and smartphones, that is, typically sedentary behaviors. Sedentary behavior was verified during the analysis of the IPAQ-short version and identified that military police officers in Rondônia, during the coronavirus pandemic, spent an average of (355.69 ± 155.83) minutes sitting on a weekday and (408 .31 ± 197.55) min. sitting for a day on the weekend. Sedentary behavior and low levels of daily physical activity are a risk factor and mortality from several causes. In this sense, PMs with a longer sitting time and low levels of daily physical activity have a high risk of mortality from chronic non-communicable and infectious diseases such as Covid-19. Therefore, military police officers need to reduce sedentary behavior and increase NAF, that is, they need moderate to vigorous efforts and high duration and frequency to have a compensatory effect on the losses of sitting time [30]. This reinforces the importance of maintaining physical activity levels beyond those of our daily lives regarding the usual tasks of most people (going to work, school, taking children to and from their activities) [22]. In this line of understanding, military police officers who were not practicing physical activity were susceptible to health worsening and the development of a series of NCDs, including in this specific group a greater vulnerability and risk of contracting Covid-19, negatively impacting the quality of life. life of these public security agents. Thus, it is recommended

that police officers have a physically active life as an important non-drug tool in the fight against CNCD, Covid-19 and in improving the quality of life. The health/quality of life binomial is directly related to the level of daily physical activity and the health conditions of military police officers in Rondônia. Therefore, PMs need to have a high NAF to mitigate these diseases that are associated with the exercise of the profession.

In this regard, an important measure to minimize the rates of physically inactive and sedentary PMs in the corporation would be to hold a Public Tender for the hiring of police officers with training in Physical Education to integrate the PMRO's Health Framework, as well as implement actions in the area physical and sports activity in a guided and systematic way so that the military police can improve their physical condition within the police units and serve as a preventive factor, restoration and maintenance of physical and mental health. Furthermore, the literature has stated that the benefits of physical activity for greater immune resistance to the most varied pathogens, including NCDs and infectious diseases such as Covid-19 [4] are indisputable; [5]; [55].

However, during the Covid-19 pandemic, several controversies arose about the best way to practice physical activities, that is, in open or closed environments, since contact with people and equipment increased the prevalence of contamination by the virus [22]. Currently, the literature recommends that the individual should practice physical activity, either indoors or outdoors, with due care to avoid contagion and as long as they are not infected by Covid-19, since regular physical activity is associated with a higher prevalence low number of hospitalizations for NCDs and infectious diseases, that is, the practice of physical activity of at least 150 minutes per week of moderate intensity or 75 minutes per week of vigorous intensity reduces this prevalence by (34.3%) [4]; [5]; [54].

4.3 Health conditions of military police officers in Rondônia

Concerning the health conditions of military police officers from Rondônia, it was found that CNCD and Covid-19 affected these servers. Regarding the NCDs indicated in the self-report questionnaire, approximately (51.68%) of the investigated PMs did not report comorbidities. However, the findings showed CVDs (2.51%), dyslipidemias (5.58%), SAH (8.10%), diabetes (0.28%), cancer (0.56%) , musculoskeletal disorders (16.59%) and psychosomatic disorders (14.80%), totaling (48.32%) of the analyzed subjects. Of this total, about half of the PMs reported more than one comorbidity. Therefore, two or more comorbidities or risk factors, combined with physical inactivity, triggers the Metabolic Syndrome and compromises the professional practice, physical and mental health of military police [11]; [12]; [13].

The self-reported morbidities were CVDs (vasculitis, cardiac arrhythmias, infarctions, aneurysms, heart failure, ablation and cerebrovascular accidents), SAH, triglycerides, high cholesterol or mixed hyperlipidemia, data lower than the studies carried out by Gonçalves [57] which found a proportion of (13.9%) in São Paulo military police and firefighters with SAH and (34.1%) in PMs with high cholesterol and triglycerides. However, if we make a projection with the population of existing police officers in the PMRO's QO, it can be predicted that approximately 416 Rondonian police officers have SAH and 286 police officers with dyslipidemia. These findings are very worrying, given that the majority of police officers investigated are

under 40 years of age and under 20 years of police service. In this sense, for the military police to maintain adequate health conditions, it would be very important to control SAH and dyslipidemia through a balanced diet, control overweight and obesity, reduce smoking, reduce alcohol intake and maintain levels regular physical activity for a better quality of life.

However, despite the chronic and infectious diseases mentioned by those investigated, (77.03%) of the police officers said they are in good health (excellent + very good + good), that is, within normal standards, corroborating the studies of Santa Catarina, which identified (76.8%) of the PMs with a perception of good and very good health [43]. These NCDs and the reported Covid-19 were responsible for approximately 29 days of absences from the police service and health care leave of the PMs, causing damage to the institution and increasing public health expenses.

Regarding the musculoskeletal diseases found in the study, they were (low back and spine pain, herniated discs, shoulder dislocations, fractures, knee and ankle injuries, spine surgeries, cruciate ligament and meniscus surgeries, bursitis and tendinitis) and the psychosomatic diseases found were: (depression and anxiety), in addition to Covid-19. Therefore, the highest prevalence in the Rondônia study is related to Covid-19 infection with a percentage of (34.8%) of Rondônia police officers infected, followed by musculoskeletal (16.58%) and psychosomatic (14.80%) diseases. The prevalence of diseases of the bone and muscular system among police officers in Rondônia is superior to studies by Pereira [15] in Santa Catarina, which identified diseases of the musculoskeletal system and connective tissue (10.25%) and mental and behavioral disorders (6.32%), however, lower than that found in police officers and firefighters in the State of São Paulo who diagnosed (36.2%) with chronic low back pain [57].

Analyzing the answers of the subjects, it was verified that the musculoskeletal disorders affected the soldiers in greater quantity, while the psychosomatic diseases were the ones that most affected the officers. Therefore, depression and anxiety affected more officers (15.01%) compared to soldiers (14.59%). In this sense, the study carried out in Amazonas with soldiers of the Brazilian Army, corroborates our studies that diagnosed mental disorders among the officers of that institution in a greater proportion and in a lesser proportion musculoskeletal disorders and among the soldiers, diseases of the musculoskeletal system and the connective tissue were the main causes of sick leave [58].

This difference in relation to the mental health of officers and soldiers may be related to the type of work activity performed by officers in the corporation. While the ordinary operational services of radio patrol, foot policing and specialized policing are mostly performed exclusively by lower-ranking police officers, causing a higher prevalence of injuries to the bone system and skeletal muscles. It is worth mentioning that the lumbar, spine and disc hernia problems reported in the study instrument are due to professional activities, in which police officers need to carry weights such as (ballistic vest, garrison belt, handcuffs, carrying weapons for individual use). and long weapons) that cause physical wear and tear. In addition, when the police officer is on patrol, the posture is totally inert and vicious and when they need to act to arrest a criminal, they often have to run, jump walls and use physical force to exhaustion, without any prior preparation or muscle heating. This condition and routine of police work, increase the levels of muscle injuries, fractures, knee injuries, dislocations and sprains, among others.

Low back pain, spinal injuries and herniated discs in military police arise from incorrect postures in administrative and operational services. Another relevant factor that leads PMs to musculoskeletal injuries stems from the practice of physical and sports activities during military physical training, as many individuals are sedentary, overweight and have weakened muscles, which generate serious injuries to the bone system and of skeletal musculature. However, in relation to ergonomics in the corporation in Rondônia, there are no guidelines on the benefits of physical activity and physical exercises for preventive treatment and strengthening of the bone and muscular system. Therefore, the military police officer must be valued and have their physical and mental health in perfect condition to perform their duties [50]. In addition, the practice of regular physical activities will provide military police with the prevention of musculoskeletal diseases, thus avoiding injuries in everyday life and in the work environment, improving the health as a whole and quality of life of these servers.

Concerning the psychological demands, the police work performed by the officers demands greater responsibilities of command, strategic planning and execution of the public security activity, receiving greater pressure from the upper echelons for results, governmental pressures and the society in general that possibly contribute to the triggering of the depression and anxiety that worsened during the period of circulation of the virus. According to the WHO [59], in the first year of Covid-19, the worldwide prevalence of anxiety and depression was (25%). In this sense, the study carried out in Rondônia during the Covid-19 pandemic detected depression and anxiety in PMRO officers and soldiers, however, with a prevalence below the general population. This condition of increase in cases of depression and anxiety among PMs is directly related to stressors, such as: restrictions on the ability to work and support inside the barracks, loneliness due to distance, suffering and fear of becoming infected and also of contaminate your loved ones, death of your subordinates, peers and superiors and mourning your family and friends. Nevertheless, the military police officer must have his physical and mental health in perfect conditions to perform his work functions [48].

With regard to Covid-19, there was a high number of removals from the police service. The protocols provided for 14 days away from the workplace for suspected or confirmed cases of the disease. This measure aimed to prevent and avoid transmission to other servers. In a study with PMs, the percentage of sick leave (312%) and work days lost due to acute respiratory diseases grew (580%) in 2020, and in contrast, work days lost due to other diagnoses decreased (16 %). A total of (34.08%) of police officers who had contracted Covid-19 were observed. In this sense, military police officers are one of the most vulnerable populations and constant risks of contamination by the coronavirus, due to the work routine and unhealthy work environments. The high prevalence of contagion by the coronavirus in the PMs is due to the collective use of vehicles, weapons and office materials that are shared, as well as those who are on the streets in direct contact with the population. Thus, another unhealthy place for police work and an imminent risk to health and contracting Covid-19 is undoubtedly an armament reserve and the role of gunsmith. This police function is performed directly in the weapons reserve, where the corporation's individual and collective equipment is stored, such as: ballistic vests, firearms, powder cartridges, all kinds of explosives, grenades, tear gas bombs. and pepper spray, which are shared by officers during their shift. These materials are harmful to the health of military police officers who work at this location. In addition, this environment has a high risk of contamination by the coronavirus, given

the constant withdrawals and returns of materials for collective use that are shared by the members of the garrisons.

In relation to NCDs and Covid-19, a request was sent to the PMRO Health Coordination (CS) to collect the statistical data of military police officers who were removed from the police service for these causes between the years 2020-2021. In this sense, CS reported that there was a high number of PMs infected, cured and killed by Covid-19. In this sense, it was found that (0.43) of the PMs were preventively removed from the service, there were (21.47) of the PMs were diagnosed with Covid-19. Of these (21.24) cases had already been cured and (0.23) of the PMs had died from Covid-19 by December 2021. Corroborating the data collected at the CS and a superficial analysis of the questionnaires applied, it was noticed that the MPs who worked in radio patrols, in arms reserves, in military prisons, in confined places or in public service were totally exposed to infectious diseases and a large part had already been positive for Covid-19.

However, despite the reported NCDs and Covid-19, the majority of PMs, that is, (77%) said they are in excellent, very good or good current health and do not require medical intervention or treatments. In addition, it was characterized that the PMs of Rondônia in their main activity are in constant health risks due to the fight against crime, daily violence and more recently they are affected by the diseases of modernity and Covid-19. In this aspect, there is a need for the institution to prepare studies and implement public policies aimed at the practices of AFEs within the barracks. Therefore, regular AFEs with moderate or vigorous intensity will provide the military police with an increase in PAL and consequently protect the cardiometabolic and immune system against NCDs and Covid-19, in addition to improving mental health and quality of life of these individuals.

With regard to CNCDs, it was informed that the sector did not have statistical data, due to the lack of a computerized system, as well as, it would not be able to carry out this survey manually in less than 1 year, given the need to analyze the individualized folder of each military police. Therefore, it was not possible to establish a comparison between the data collected in the instrument itself and the existing data in the health coordination, as it does not have statistical data on NCDs. Thus, it is evident that the CS does not have control over the police who are affected by some comorbidity or CNCD and are away from the administrative and operational service. However, there are no studies for the prevention, monitoring and evolution of chronic diseases. In view of this, the total disregard of the corporation with the physical and mental health of its employees is perceived. On the other hand, the lack of scientific studies, of statistical data in the area of preventive health of the military police, hinders the access to public policies to face the chronic and infectious diseases that are directly associated with the exercise of the profession. Therefore, to improve this current scenario, it is extremely important that the institution implements public policies aimed at increasing daily physical activities to improve the physical condition of the military police and technical/professional performance, mitigating CNCDs and Covid-19, reflected in the quality of life of these individuals.

5. Conclusion

With regard to sociodemographic characteristics and occupational conditions, it was found that most individuals are under 40 years of age and have less than 20 years of police service in the corporation and

predominantly have a higher education level, are married, have a degree in warrant officers 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. Concerning the levels of physical activity, (47.48%) of the military police were classified (irregularly active + sedentary) according to the IPAQ-short version, confirming the low NAF of these individuals. Such findings show a low prevalence of physical activity by military police during the Covid-19 pandemic. In this way, the physical inactivity and Covid-19 pandemic compromises the physical condition, technical/professional performance and physical and mental health of these individuals. On the other hand, the low prevalence of physical activity leaves police officers susceptible to NCDs and Covid-19, compromising the health and quality of life of these police officers.

Regarding the health conditions indicated in the self-report instrument, the highest prevalence of diseases that affected Rondonian military police 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 NAF, NCDs and Covid-19 reported here contributed to momentarily worsening the quality of life of PMs. However, it is still too early to be able 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.

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