Common mental disorders in prison workers
Transtornos mentais comuns em servidores de um presídio
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ABSTRACT | Introduction: The conditions of Brazilian penitentiaries are known to be affected by overcrowding and precarious cells. Violence inside the prison impacts the mental and general health of individuals in this environment, whether prisoners whether workers. Thus, an increase in cases of common mental disorders is expected among workers, which contributes for their absenteeism. Objective: To assess the prevalence of common mental disorders among prison workers in the state of São Paulo, Brazil. Methods: A prison unit was selected for the administration of the Self-Reporting Questionnaire-20 and a questionnaire to assess the sociodemographic profile of employees. The questionnaires were filled out in electronic format and made available on computers in the selected unit. Two visits were made to the unit to assess the work environment and to listen workers’ reports. Results: Fifty-three questionnaires were selected, of which 50 were included in the research. According to the Self-Reporting Questionnaire-20, 34% of participants had positive results for CMD. The use of psychotropic drugs and less family support were statistically correlated with common mental disorders. The apparently small number of employees in the unit was considered a more harmful factor to work than personal contact with prisoners. Conclusions: Although high, the prevalence of common mental disorders was lower than that described in the literature. The implementation of mental care programs for state civil servants would be essential to reduce the prevalence and absenteeism due to common mental disorders.

Keywords | occupational health; mental disorders; mental health.

RESUMO | Introdução: As condições das penitenciárias brasileiras são sabidamente prejudicadas pela superlotação e precariedade das celas. A violência na prisão afeta a saúde mental e geral dos indivíduos inseridos nesse ambiente, tanto de presos quanto de trabalhadores. Dessa forma, é possível esperar um aumento de transtornos mentais comuns entre os trabalhadores, o que contribui para o seu absentismo. Objetivo: Avaliar a prevalência de transtornos mentais comuns nos trabalhadores de um presídio no estado de São Paulo. Métodos: Foi selecionada uma unidade prisional para aplicação do Self-Reporting Questionnaire-20 e aplicação de um questionário para avaliar o perfil sociodemográfico dos funcionários. Os questionários foram preenchidos em formato eletrônico e disponibilizados por meio de computadores da unidade selecionada. Foram realizadas duas visitas à unidade para avaliar o ambiente de trabalho e escutar os relatos dos trabalhadores. Resultados: Foram preenchidos 53 questionários, sendo que 50 foram incluídos na pesquisa. Para o Self-Reporting Questionnaire-20, 34% dos participantes apresentaram resultado positivo. O uso de psicofármacos e menor apoio familiar foram estatisticamente correlacionados com os transtornos mentais comuns. O número aparentemente reduzido de funcionários na unidade foi considerado fator mais prejudicial ao trabalho do que o contato pessoal com as presas. Conclusões: Embora elevada, a prevalência de transtornos mentais comuns foi inferior à descrita na literatura. A implementação de programas de atenção à saúde mental dos servidores públicos estaduais seria fundamental para reduzir a prevalência e afastamentos por transtornos mentais comuns.

Palavras-chave | saúde do trabalhador; transtornos mentais; saúde mental.

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INTRODUCTION

Sanitary conditions of Brazilian prisons are known to be affected by overcrowding and precarious prison cells. This unhealthy environment favors the development of illnesses in people who are incarcerated or work in prisons. Valença et al. address the weaknesses of the prison environment, which impacts all individuals in this environment, whether workers, whether prisoners, and have an influence on the quality of mental and overall health of the involved individuals.

Improvements in work conditions have promoted short- and long-term benefits for workers. A safe environment that considers employees’ wellbeing has a positive impact on productivity and reduces absenteeism, also leading to a decrease in occupational accidents and in cases of work-related diseases and to an improvement of chronic health conditions.

Job insecurity among prison employees is not only related to work environment, but also results from problems that they face when being involved in more than one activity, overburdening their routine, such as informal jobs and outsourcing. Therefore, an increase in the occurrence of mental diseases has been observed among these workers, initially translated into symptoms such as insomnia, difficulty concentrating, reduced memory, among others.

Mental disorders have a major role as a cause of absenteeism among state civil servants in the state of São Paulo, Brazil, accounting for the leading cause of absence from work in this population, with rates ranging from 29.9 to 32.6% between 2003 and 2006. The aim of this study was to assess the prevalence of symptoms of common mental disorders (MCDs) and associated factors in civil servants at a state public secretariat in São Paulo.

METHODS

A unit from a state public secretariat was selected to answer two self-administered questionnaires, developed online on the FormSUS platform. Employees’ email addresses were not made available for the sending of the questionnaires, due to the need of ensuring anonymity of their identification data, since they are engaged in a high-risk activity. It was decided to make computers available at the unit for the filling of questionnaires, and participation in the study was voluntary. Visits to the study site occurred on July 26 and August 7, 2018. Posters were displayed in several places of the selected unit and stubs were distributed with the link to access the questionnaires and to informed consent form (ICF). The online research was available from July 27 to August 10, 2018.

The first questionnaire administered was the Self-Reporting Questionnaire-20 (SRQ-20), which consists of 20 yes-no questions on thoughts, emotions, somatic diseases, and stress. This questionnaire was designed to indicate the presence of CMDs. The second questionnaire administered was specifically developed for this study and asked for the following information: sex, age, position, educational attainment, time working as a state civil servant, presence of another job and working hours, weight and height for calculation of body mass index (BMI), life habits (smoking, alcohol consumption, and physical activity), whether they had already seen a psychiatrist, use of controlled medication prescribed by a physician, participation in a religious activity over the last 12 months, family’s support, and interest among family members. Drug dosage was excluded from results because workers may have difficulty in providing accurate information on the matter and, thus, may supply incorrect data. The study included respondents who answered the two questionnaires completely. The questionnaires did not have an identification field and were analyzed anonymously.

During visits to the unit, there was the assessment of physical space, human resources, work conditions, health facilities, medical services etc. This analysis employed a preliminary chart of risks in the workplace, developed for this research, which was completed according to the characteristics of the areas to which access was allowed. As a qualitative approach, an experienced worker appointed by the manager of each sector reported, in a nondirective interview, his/her view, criticisms, and difficulties about his/her position and routine. Results show the perceptions that repeated themselves in different departments and the reports that were related to psychological stress.

The sample included 528 active workers. Fifty-three questionnaires were completed, of which two were excluded due to the lack of completion of the ICF, and
one due to incomplete filling, resulting in a final sample of 50 questionnaires. Results from the questionnaires underwent chi-square associated test with Yates correction using the Epi Info software, version 6.4, with statistical significance set at \( p < 0.05 \).

**RESULTS**

Two visits to the unit were necessary, due to the size of the plant, the number of departments, and the availability of the team to receive the primary investigator. The unit under study is classified into the Brazilian National Code of Economic Activity (Código Nacional de Atividade Econômica, CNAE)\(^8\) 8423-0/00 – Prison Administration and is classified as a degree of risk 1.

There were 1,876 employees linked to the personnel department of the unit. Of these, 1,275 were excluded because they did not have contact with inmates during their workday. The target population of this study was 601 employees who worked within the prison unit, of which 204 were men (33.9%) and 397, women (66%). The total number of employees on leave of absence during the research period was 73 individuals, of which 60 were men (82.1%) and 13 were women (17.8%).

There was an only administrative shift, from 8 a.m. to 5 p.m., with weekly working hours of 40 hours, and a team of on duty employees, who work from 7 a.m. to 7 p.m., in two shifts, completing 48 weekly hours. The two groups work overtime, and the administrative team works a 12-hour shift once a month on a weekend day.

As an occupational safety program, the Internal Committee for Accident Prevention (Comissão Interna de Prevenção de Acidentes, CIPA) promotes campaigns of annual influenza and hepatitis B vaccination targeted at employees, as well as campaigns of overweight and obesity control. CIPA also organizes the tuberculosis week to provide guidance to workers. The last documented case of this disease occurred in 2015, when a pavilion security guard contracted tuberculosis in the work. There is a rapid intervention group (RIG), which is called when it is necessary to contain situations that security guards are not able to control, which occurs nearly every 6 months. These situations were mostly reported as punctual cases, such as fights among prisoners. The last riot occurred more than a decade ago. The multidisciplinary health team allocated in the penitentiary provides occasional health care to prison employees, but they are hired to treat the inmates.

There are workrooms for several fields of activity, which are rooms rented by approximately 30 companies that operate in the prison. Inmates work for 8 hours a day and receive a wage based on their productivity. Every 3 worked days reduce 1 day from inmate’s sentence. Companies are responsible for providing health and security at work, as well as for periodical tests and for the supply of personal protection equipment. In the activities controlled by the State, there is no periodical medical examination. It was reported that there are not enough job vacancies for all inmates. There is a school with its own library and teachers from the state education system, in addition to several educational and vocational programs directed to imprisoned people.

Table 1 presents centers, division of departments, positions, risks, control measures, and tests that employees should undergo.

The pavilion safety guards divide themselves into three pavilions with capacity for approximately 900 inmates each, with five floors, two aisles per floor, and 45 cells per aisle. They make rotations between the different control access gates, release the passage of prisoners with service orders to work, consultations etc., perform the inspection in the beginning and in the end of each shift: cell by cell of each inmate, with facial recognition by comparative identification with a photo, oral contact, and correct cell. All the functions of security guards are performed in 12-hour shifts.

The reception safety guards work with people’s registration, gathering of documents, frisk, X-ray, metal detector, main gate, and vehicle assess gate. They open and close the gate manually every time a person enters or exits, and they do the same when a vehicle enters or exits through the larger vehicle gate.

The wall guards are distributed into 12 observation posts, according to the time of the day and inmates’ movements. They make rotations between the posts every 30 and 40 minutes. In the resting sector, there are the monitors of the security cameras, whose visualization is not the responsibility of a specific person. Only employees working in this position are allowed to use guns.
Common mental disorders in prison workers

Most participants were women (78%), and their age ranged from 30 to 63 years, with predominance of the age group from 40 to 49 years (40%). The majority of respondents (70%) were white, 64% were married, and only 4% lived alone. Most prison workers lived above 10 km from work (57.5%). There was a predominance of

| Center/Department                                      | Position     | Hazard   | Control      | Pre-employment examination |
|--------------------------------------------------------|--------------|----------|--------------|-----------------------------|
| Financial/administrative                               |              |          |              |                             |
| Administrative                                         | PSO          |          |              |                             |
| Administrative PSO                                     | Specialized  | -        | -            | State regulation†           |
| Personnel department                                   | PSO          |          |              |                             |
| Legal                                                  | PSO          |          |              | State regulation†           |
| Legal PSO                                              | Specialized  | -        | -            | State regulation†           |
| Integrated center of prison transactions and information|              |          |              |                             |
| Warehouse                                              | PSO          |          |              | State regulation†           |
| Budget                                                 | PSO          |          |              | State regulation†           |
| Internal outcomes                                      | PSO          |          |              | State regulation†           |
| Security and discipline                                | Pavillon     | PSO      | Ergonomic*   | State regulation†           |
| Pavilion                                               | Specialized  | Biological|              |                             |
| Reintegration and health care                          | Ward         | PSO      | Biological   | State regulation†           |
| Ward PSO                                               | Specialized  | Biological| PPE          |                             |
| Outpatient clinic                                      | PSO          |          |              | State regulation†           |
| Pharmacy                                               | PSO          |          |              | State regulation†           |
| Pharmacy PSO                                           | Specialized  | -        | -            | State regulation†           |
| Sports square                                          | PSO          |          |              | State regulation†           |
| Work and education                                     |              |          |              |                             |
| Workrooms                                              | Inmates      |          | -            | -                           |
| Garden                                                 | Inmates      |          | -            | -                           |
| School                                                 | EST          |          | -            | State regulation†           |
| Maintenance                                            | Inmates      |          | PPE          | -                           |
| Kitchen                                                | Inmates      |          | PPE          | HIV, syphilis, hepatitis A and B, stool test |
| Kitchen Specialized                                    | (third parties)|          | PPE          |                             |
| Cleaning                                               | Inmates      | Biological| PPE          | -                           |
| Cafeteria                                              | PSO          |          |              | State regulation†           |
| Escorting and surveillance                             | Wall         | PSO      |              | State regulation†           |
| Escorting and surveillance                             | Reception    | PSO      | Ergonomic*   | State regulation†           |
| Escorting and surveillance                             | Transportation| PSO     |              | State regulation†           |

EST = elementary school teacher; HIV = human immunodeficiency virus; PPE = personal protective equipment; PSO = prison security officer.

* Monotonous work and upper limbs overload.
† The state of São Paulo has a regulation on the tests to be conducted in the pre-employment examination, which vary according to the function to be performed and are assessed by the State Department of Medical Examination (Departamento de Perícias Médicas do Estado, DPME). According to call notice of the 2018 contest for the selected secretariat, the following tests were requested: complete blood count, fasting glucose, aspartate transaminase, alanine transaminase, gamma-glutamyl transferase, urea, creatinine, prostate-specific antigen (for men older than 40 years), electrocardiography (for candidates older than 50 years), chest X-ray, Pap smear, mammography (for women older than 40 years).
respondents with complete higher education (66%) and working as a prison safety officer (PSO) (60%). With regard to service, 42% had been working in the position for more than 15 years, and only 14% held more than one position. Thirty per cent reported perform some type of physical activity at least once a week. In relation to BMI, the predominant status was overweight (38%), followed by obesity (10%).

As for consumption of alcohol, 42% of prison employees reported not drinking alcoholic beverages. Among those who reported alcohol use, mostly consumed it once a month (32%), and 20% consumed it at least once a week. When asked whether they smoked, 14% of respondents answered positively, and 6% reported to be former smokers.

With regard to participation in religious activities over the last 12 months, 36% of participants informed that they participated once or did not participate, 30% that they participated twice or three times a month or sometimes during the year, and 34% answered that they participated in religious activities once a week or more. In relation to social interaction, 92% of respondents said their family and friends make them feel better, and 90% considered that their family and friends demonstrate affection with one another.

The questionnaire showed that 20% of participants had already seen a psychiatrist, and 28% of participants made use of some controlled medication. Only one individual reported using more than one medication. The use of antidepressants was reported by 53.3% of participants, followed by use of anticonvulsants (20%), and the other participants reported use of benzodiazepines or sleep inducers.

With regard to SRQ-20, questionnaires with seven affirmative answers or more were considered positive. Among participants, 34% were found to be positive, with predominance of the female sex (88.2%). Table 2 presents the questions asked in the survey and the percentage of positive answers for each question among positive CMD cases and among the total sample.

Table 3 describes the distribution of positive cases by risk factors for CMDs according to the literature.9-11

| Self-Reporting Questionnaire-20 (SRQ-20) questions | Positive (%) | Total (n) |
|---------------------------------------------------|-------------|----------|
| Are you easily tired?                             | 941         | 46       |
| Do you feel nervous, tense, or worried?           | 88.2        | 60       |
| Do you sleep badly?                               | 82.4        | 43       |
| Do you feel unhappy?                              | 82.4        | 34       |
| Have you lost interest in things?                 | 82.4        | 32       |
| Do you have uncomfortable feelings in your stomach?| 70.6        | 36       |
| Do you feel tired all the time?                    | 70.6        | 34       |
| Do you find it difficult to make decisions?        | 64.7        | 32       |
| Is your digestion poor?                           | 64.7        | 30       |
| Do you often have headaches?                      | 64.7        | 26       |
| Do you have trouble thinking clearly?             | 52.9        | 26       |
| Do you find it difficult to enjoy your daily activities? | 52.9    | 24       |
| Are you easily frightened?                        | 52.9        | 22       |
| Is your daily work suffering?                      | 471         | 20       |
| Do you feel that you are a worthless person?       | 471         | 18       |
| Do you cry more than usual?                       | 41.2        | 20       |
| Are you unable to play a useful part in life?      | 41.2        | 16       |
| Do your hands shake?                              | 41.2        | 16       |
| Has the thought of ending your life been on your mind? | 41.2    | 14       |
| Is your appetite poor?                            | 29.4        | 12       |
results showed statistical significance for lack of family support and use of controlled medication prescribed by a physician (p < 0.05).

**WORKERS’ STATEMENTS DURING VISITS**

The nondirective interviews revealed that many workers live in municipalities distant from the prison unit or in dormitories close to it, with other prison employees who are in the same condition. They usually converge their working periods to remain for a shorter time in the capital city and thus being able to return to their homes in state’s hinterland.

The selection process for the hiring of new employees was unified throughout the state of São Paulo. The contest included a number of bureaucratic procedures, and after the conclusion of the process, the selected candidates were allocated to the unit and may be transferred from units in the capital city to other units in state’s hinterland after completing a probation period of three years or in case of opening vacancies for transfer.

In the interviews with prison employees, the main complains involved a perceived high demand and the accumulation of functions, due to the apparent scarcity of workers in the departments. The high demand of people needing follow-up at the outpatient medical clinic leads to difficulties in scheduling consultations. The activities performed in the different work routines are considered monotonous by prison employees. The separation from family and friends due the distance from worker’s city of origin was another frequent complaint. On visitation days, when inmates’ families are allowed to enter into the prison premises, was mentioned with great concern. On these days, 600 to 700 more people circulating in the unit than the usual, and this number is twice higher on festive dates.

Other punctual complaints considered relevant by the authors were observed, such as the report of a security guard who had to assist, more than once, different prisoners during cell inspection after suicidal attempts. Respondents also reported that they often work overtime, and some predicted pauses are reduced due to accumulated work demand.

The safety guards reported to have a relationship of good coexistence and respect with inmates and denied any threat or coercion attempts. They attribute this fact to the dependence of prisoners on employees to perform their bureaucratic and general activities within the institution, such as medical consultations, work in the different workrooms, school activities etc.

**Table 3. Distribution of positive CMD cases according to risk factor for CMDs**

| Factors*                                      | Positive SRQ-20 (%) | p-value†  |
|-----------------------------------------------|---------------------|-----------|
| Female sex                                    | 88.2                | 0.371     |
| Age above 40 years                            | 64.7                | 0.622     |
| Working as a PSO                              | 52.9                | 0.464     |
| Educational attainment up to complete or incomplete higher education | 82.3 | 0.862 |
| Divorced/separated/single                      | 52.9                | 0.073     |
| Duration of employment higher than 10 years   | 47.0                | 0.36      |
| Distance from home to work above 10 km        | 52.9                | 0.479     |
| Previous consultation with a psychiatrist     | 35.2                | 0.117     |
| Use of controlled medication                  | 52.9                | 0.012     |
| BMI above 30                                  | 176                 | 0.071     |
| Alcoholism                                    | 58.8                | 0.932     |
| Smoker                                        | 11.7                | 0.917     |
| Religious activity once or none over the last 12 months | 41.1 | 0.584 |
| Not having family support                     | 23.5                | 0.018     |
| No interest among family members              | 176                 | 0.425     |

CMD = common mental disorder; PSO = prison security officer; SRQ-20 = Self-Reporting Questionnaire-20.

* According to the literature, the described factors, when present, are related to the occurrence of CMD. Questionnaires with seven affirmative answers or more were considered positive for this disorder. Factors with a p-value below 0.05 are highlighted in bold.

† Chi-square test


**DISCUSSION**

Visits to the study site revealed that the prison unit had a better conservation status compared to the units assessed in other studies conducted in Florianópolis, state of Santa Catarina, Brazil, and in Bauru and Campinas, state of São Paulo, Brazil. This finding may result from the fact that the unit under study houses an exclusively female inmate population. The main remark with regard to the conservation status of the building relies on the fact that it has been placed under government trust, because it was built in the early 20th century, which generates bureaucracy that hampers maintenance and renovations in general.

Although a CIPA was implemented, the scarcity of employees in prison departments makes it difficult for them to participate in programs and lectures during working days, since workers are not able to leave their positions. As a positive aspect, only 18.5% of institutions in the state of São Paulo that hired workers under a statutory regime, like the secretariat selected in the present study, have a CIPA.

It is worth highlighting the importance of health care programs, especially the tuberculosis control program, since literature reveals a higher prevalence of this disease in imprisoned people compared to the general population. There are reports of cases of tuberculosis in PSOs in Brazilian studies conducted in the cities of Rio de Janeiro, Salvador, and São Paulo, and in international studies conducted in Thailand, Congo, Japan, and Iran.

The Brazilian legislation does not establish the presence of occupational health professionals in state public service units. However, there is a determination for private services and for companies governed by the Consolidation of Labor Law legal system. The Regulatory Norm-4 (Norma Regulamentadora-4, NR-4), in its chart II, addresses the sizing of the Specialized Work Safety and Medicine Service (Serviço Especializado em Engenharia de Segurança e Medicina do Trabalho, SESMT). This NR determines that companies with a number of employees from 501 to 1,000 and considered with degree of risk 1 by the CNAE, such as the unit under study, are required to have an occupation safety technician working full-time.

It would be interesting to undertake an ergonomic assessment of the activities performed by safety guards at the reception, in order to implement breaks and rotations. With regard to prison employees responsible for inspecting the cells before the beginning of the shift and prior to handoffs, it would be important for them to have regular psychological follow-up, in addition to the assessment performed in pre-employment examination, with the purpose of ensuring preventive support to the emotional health of these guards in view of possible stressful situations.

Reduced personnel, associated with possible absences of employees, generates the unplanned allocation of employees at pavilions and reception, resulting in overload. There is a rotation in the workplace; however, it is conducted on a daily basis and not during the same shift. Changing activities in the same shift, in order to avoid monotony, would probably suffice to reduce the overload reported. Reduced staff has been described as an important factor in work organization, corroborating what was found in this study during the visits to the prison. Studies conducted in Avaré, state of São Paulo, Brazil, and Florianópolis, state of Santa Catarina, Brazil, reported violence and threat to family members experienced by jailers, which was not reported, in the present study, as a major issue.

Our results showed that 46% of participants lived at a distance above 10 km from the prison unit, which did not influence the prevalence of CMDs, but a frequently reported complaint. Decentralizing the contest, with a test for each region, in order to avoid the transfer to another unit after a short period of work or a long commuting time from home to work, would be an important alternative, since lower staff turnover is considered to have an impact on work organization.

Although alcoholism and smoking have been widely related to CMDs in another studies, no statistical significance was found for these factors, corroborating the result of this study. The lack of family support and use of medications were correlated with positive results in the SRQ-20. The relationship with use of medication is apparently more clear, since an individual under treatment with psychotropic drugs are diagnosed with some type of mental disorder. With regard to lack of family support, concerns with quality of life, social support, and balance between professional and family life are considered relevant factors for CMDs, as shown by another studies, including those focusing on other economic sectors.
Bonez et al.\textsuperscript{13} assessed the mental health of 19 employees at a penitentiary in the state of Santa Catarina and found a predominance of men (84.2%). Alves et al.\textsuperscript{29} also described the predominance of the male sex, which accounted 84.4% of the 310 employees at Avaré, a penitentiary unit located in the state of São Paulo. This divergence may be explained by the fact that the institution selected for our study housed exclusively female prisoners, which compels the unit to hire more employees of this sex for some functions, such as PSO of pavilions.

Greco et al.\textsuperscript{11} assessed workers at a penitentiary in the state of Rio Grande do Sul and found 50.1% of cases of suspected CMD according to the SRQ-20 questionnaire, a rate higher than that found in the present study. The two questions with the highest number of positive answers were similar to those observed in the present study: poor sleep quality and feeling nervous, tense, or worried. There was also an agreement with regard to the predominance of the female sex (55.7%) and to the association between suspected CMD and use of medications. The authors considered no physical activity and requiring medical attention relevant for suspected CMD, consistent with the results of the present study, although no statistical significance has been demonstrated. As a divergent finding, age up to 44 years was considered a risk factor for CMD.

The reduced number of research participants is considered a limitation of this study, possibly resulting from the impossibility of sending the questionnaires directly to the email address of each employee, due to safety reasons imposed by the unit’s board of directors. The availability of computers in the departments was the alternative found to cover a higher number of employees. Although there was verbal dissemination in all departments during the visits, in addition to posters and leaflets distributed by the unit, the employed filling modality found barriers, such as time unavailability for employees to fill the questionnaire and due to the fact that some workstations did not have a computer nearby. Bonez et al.\textsuperscript{13} also obtained a reduced total sample (19 participants), smaller than that of the present study, and mentioned in their conclusion the difficulty in achieving employees' adherence.

A comparison with the literature showed different results with regard to age group and sex, due to the peculiarity of the prison unit under study, in addition to a lower incidence of CMD, considering the SRQ-20 questionnaire. The administration of the questionnaires to assess CMD showed to be a valid assessment tool, inclusive to be administered in other units of the selected secretariat, in order to obtain a better characterization of civil servants’ mental health.

**CONCLUSIONS**

Despite being high, the prevalence of CMDs found in this study was lower than that reported in the literature. Even with no statistical correlation, the great distance from home to work was considered relevant, as well as the apparently reduced number of employees. Periodical medical examination, as occurs in the private sector, and health promotion and maintenance programs are essential for early diagnosis, treatment, and prevention of CMDs and other conditions. These measures would result in better work condition, improved quality of life, and reduced absenteeism. More studies are needed to better understand the mental and overall health status of state civil servants in the state of São Paulo, Brazil.

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**AUTHOR CONTRIBUTIONS**

ALS was responsible for conceptualization, investigation, data curation, resources, formal analysis and writing – original draft. CRBC participated in the study investigation, project administration, writing – review & editing and validation. FSS-de-A participated in the study methodology, supervision, writing – review & editing and validation. All authors have read and approved the final version submitted and take public responsibility for all aspects of the work.
REFERENCES

1. Valença MS, Cezar-Vaz MR, Brum CB, Silva PEA. O processo de detecção e tratamento de casos de tuberculose em um presídio. Cienc saude coletiva. 2016;21(7):2111-22.

2. Valença MS, Possuelo LG, Cezar-Vaz MR, Silva PEA. Tuberculose em presídios brasileiros: uma revisão integrativa da literatura. Cienc saude coletiva. 2016;21(7):2147-60.

3. Jinnett K, Schwatka N, Tenney L, Brockbank CVS, Newman LS. Chronic conditions, workplace safety, and job demands contribute to absenteeism and job performance. Health Aff (Millwood). 2017;36(2):237-44.

4. Nascimento Sobrinho CL, Carvalho FM, Bonfim TAS, Cirino CAS, Ferreira IS. Condições de trabalho e saúde mental dos médicos de Salvador, Bahia, Brasil. Cad Saude Publica. 2006;22(1):131-40.

5. Braga LC, Carvalho LR, Binder MCP. Condições de trabalho e transtornos mentais comuns em trabalhadores da rede básica de saúde de Botucatu (SP). Cienc e Saude Coletiva. 2010;15(Suppl. 1):1585-96.

6. Cruz CRB, Shirassu MM, Barbosa PLQ, Santana AMR. Transtornos mentais como causa de absentismo e ineficiência de trabalhadores públicos em São Paulo. Arch Clin Psychiatry (São Paulo). 2011;38(6):265-6.

7. Mari JJ, Williams P. A comparison of the validity of two psychiatric screening questionnaires (GHQ-12 and SRQ-20) in Brazil, using Relative Operating Characteristic (ROC) analysis. Psychol Med. 1985;15(3):651-9.

8. Instituto Brasileiro de Geografia e Estatística. Comissão Nacional de Classificação, Tabela CNAE. Brasília: IBGE; 2018 [citado em 8 out. 2018]. Disponível em: https://concla.ibge.gov.br/busca-online-cnae.html

9. Maragno L, Goldbaum M, Gianini RJ, Dutilh Novaes HMD, César CLG. Prevalência de transtornos mentais comuns em populações atendidas pelo Programa Saúde da Família (QUALIS) no Município de São Paulo, Brasil. Cad Saude Publica. 2006;22(8):1639-48.

10. Barbosa REC, Assunção AA, Araújo TM. Distúrbios musculoesqueléticos em trabalhadores do setor saúde do Distrito Federal. Fisioter em Mov. 2007;20(1):53-60.

11. Greco PBT, Magnago TSBS, Urbanetto JS, Luz EMF, Prochnow A. Prevalência de distúrbios psicológicos menores em agentes socioeducadores do Rio Grande do Sul. Rev Bras Enferm. 2015;68(1):93-101.

12. Machado JC, Boldori JDM, Dalmolin MD, Souza WC, Bazzanella SL, Birnkr WMK, et al. A incidência de tuberculose nos presídios brasileiros: revisão sistemática. Rev Aten Saude. 2016;14(47):84-8.

13. Bonez A, Moro ED, Sehnem SB. Saúde mental de agentes penitenciários de um presídio catarinense. Psicol argum. 2013;31(47):507-17.

14. Reinert F, Vergara LGL, Gontijo LA. Percepção das condições de trabalho e saúde pelos agentes penitenciários do presídio masculino de Florianópolis/SC. Rev Ação Ergonomica. 2019;13(1):178-93.

15. Barboza PI, Shirassu MM, Sanchez AM, Koike MK. Business and management students: a view from the United Kingdom. Bus Manag Rev. 2015;4(11):63-70.

16. Morasert T, Worapas W, Kaewmahit R, Uphala W. Prevalence and risk factors associated with tuberculosis disease in Suratthani Central Prison, Thailand. Int J Tuberc Lung Dis. 2018;22(10):1203-9.

17. Kawatsu L, Uchimura K, Kobayashi M, Ishikawa N. The profile of prisoners with tuberculosis in Japan. Int J Prison Health. 2018;14(3):153-62.

18. Pearlstone L, Tewari S, Khabaz-Khoie A, et al. Tuberculosis and associated factors in prisoners in a high-income country: a systematic review and meta-analysis. Respir Med. 2018;132:193-200.

19. Brasil. Ministério do Trabalho e Emprego. NR 4 - Serviços regulamentadores/nr-04.pdf. Brasília: Diário Oficial da União; 1978 [citado em 8 out. 2018]. Disponível em: http://www.gov.br/trabalho/pt-br/inspecao/seguranca-e-saude-no-trabalho/normas-regulamentadoras/nr-04.pdf

20. Brasil. Casa Civil. Decreto-lei no. 5.452, de 1º de maio de 1943. Consolidação das Leis do Trabalho. Brasília: Casa Civil; 1943 [citado em 8 out. 2018]. Disponível em: http://www.planalto.gov.br/ccivil_03/decret.lei/del5452.htm

21. Brazil. Ministério do Trabalho e Emprego. NR 4 - Serviços especializados em engenharia de segurança e em medicina do trabalho. Brasília: Diário Oficial da União; 1978 [citado em 8 out. 2018]. Disponível em: https://www.gov.br/trabalho/pt-br/inspecao/seguranca-e-saude-no-trabalho/normas-regulamentadoras/nr-04.pdf

22. Stenberg C, Holder J, Tallur K. Psicosis relacionadas con el trabajo. In: Hurrel JJ, Murphy LR, Sauter SL, Levi L. Enciclopedia de salud y seguridad en el trabajo. Madrid: Ministerio de Trabajo y Asuntos Sociales; 1998. p.5.5-5.10.

23. Dantas MA, Brito DVC, Rodrigues PB, Maciente TS. Avaliação de estresse em policiais militares. Psicol Teor e Pratica. 2010;32(3):66-77.

24. Lancman S, Jardim TA. O impacto da organização do trabalho na saúde mental: um estudo em psicodinâmica do trabalho. Rev Ter Ocup Univ Sao Paulo. 2004;15(2):82-9.

25. Silva FPS, Thommazo LD, Walsh IAP, Alem MER, Coury HJCG. Níveis de percepção de esforço e de dor em duas estratégias de organização do trabalho. Fisioter em Mov. 2007;20(1):53-60.

26. World Health Organization. Healthy workplaces: a model for action. Geneva: World Health Organization; 2010 [citado 2021 Jul. 23]. Disponível em: https://www.who.int/occupational_health/publications/healthy_workplaces_model_action.pdf
27. Vilela RAG, Almeida IM, Mendes RWB. Da vigilância para prevenção de acidentes de trabalho: contribuição da ergonomia da atividade. Cien Saude Coletiva. 2012;17(10):2817-30.

28. Jackson Filho JM, Maeno M. Desenvolvimentos da análise ergonômica do trabalho no Brasil no contexto da “desorganização do trabalho.” Rev Bras Saude Ocup. 2015;40(131):5-7.

29. Alves V. Condições de trabalho de funcionários penitenciários de Avaré-SP e ocorrência de transtornos mentais comuns [dissertação de mestrado]. Botucatu: Universidade Estadual Paulista; 2009.

30. Jansen K, Mondin TC, Ores LC, Souza LDM, Konradt CE, Pinheiro RT, et al. Transtornos mentais comuns e qualidade de vida em jovens: uma amostra populacional de Pelotas, Rio Grande do Sul, Brasil. Cad Saude Publica. 2011;27(3):440-8.

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