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SYMPTOMS OF DEPRESSION, ANXIETY AND STRESS AND LEVEL OF PHYSICAL ACTIVITY IN CYCLISTS AND NON-CYCLISTS IN THE NORTH OF MINAS GERAIS

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ABSTRACT

Introduction: Mental disorders such as anxiety and depression are considered the main causes of disability among the world population. In this context, cycling improves physical conditioning and reduces severe symptoms of these disorders, benefiting mental and physical health. Objective: To compare the occurrence of anxiety, depression and stress symptoms between cyclists and non-cyclists in the north of Minas Gerais. Methodology: This is an observational and quantitative study that analyzed variables such as gender, marital status, income, body mass index, education, level of physical activity, symptoms of anxiety, depression and stress of 233 cyclists and 245 non-cyclists in the north of Minas Gerais. Variables associated with the occurrence of severe symptoms of mental disorders were analyzed by multiple regression, considering a significance of 5% ($p<0.05$). Results: It was observed that 14% to 19% of the participants had severe symptoms of mental disorders. Women, sedentary people, and young adults were more likely to have severe symptoms of depression, while women and unmarried people were more likely to have severe anxiety. Stress, on the other hand, was more intense among women, people without higher education, young people and sedentary people. Conclusion: The results presented point to factors significantly associated with aspects of mental health. Implementing community strategies and awareness campaigns on the benefits of physical activity in the prevention of mental disorders, integrating it with mental health services, can strengthen social support and improve individual and collective well-being, reducing the prevalence of these disorders and promoting a better quality of life in the community.

Keywords: Physical Exercise. Mental health. Emotional Disorders.

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INTRODUCTION

The World Health Organization (WHO) defines mental health as an indispensable component for general well-being, which articulates directly with physical and social health. However, it refers to a parameter that is neglected and sometimes ignored among the population, which underestimates its psychosocial repercussions. Analyzing the principles of global incidence, it is estimated that about one billion people lived with some mental disorder in 2019, highlighting depression, anxiety, and suicide as the main responsible for this rate. It should be noted that mental disorders are the primary causes of disability, reducing life expectancy by up to 20 years when compared to the rest of the population (WHO, 2002; Brazil, 2022).

According to the Ministry of Health, approximately 16.3 million people were living with depression in Brazil in 2019, corresponding to an increase of 34% when compared to 2013. Thus, the disease is considered to be the largest contributor to the global burden of disorders correlated with mental health. Regarding the clinical aspects, it is characterized by a diversity of symptoms that include persistent sadness, loss of interest in previous pleasurable activities, low energy, and feelings of worthlessness or guilt. In summary, depression is defined by the presence of depressed mood and/or loss of pleasure present on most days, for at least two months. Furthermore, it is found that although the condition can develop in anyone, regardless of age or lifestyle, it commonly occurs among individuals with a lower level of physical activity, resonating with general well-being (Brasil, 2021; Brito *et al*., 2022).

On the other hand, anxiety is associated with feelings of apprehension and excessive worry that overwhelm the physiological aspects. The occurrence of somatic symptoms associated with the condition is constantly observed, resulting in physical manifestations that include muscle tension, insomnia, fatigue and irritability, which interfere with the individual's quality of life and daily functioning. The respective disorder has a high prevalence worldwide, being associated with multiple variables that address economic, social, and cultural factors. Different approaches to its clinical management are evidenced, including drug and behavioral therapy. Regarding the latter, physical exercise stands out as one of the pillars of non-pharmacological maintenance treatment, in which it contributes to the reduction of cortisol levels and the release of endorphins and serotonin, promoting an overall improvement in emotional balance (Costa *et al*., 2019).

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In a complementary way, stress is considered a physiological response to everyday challenges or threats, but when it becomes periodic, it has significant repercussions on mental and physical health. Analyzing its results in the field of mental health, it is found that it triggers or aggravates conditions such as anxiety, depression and emotional exhaustion, in addition to causing implications in cognitive functioning, impairing memory and the ability to concentrate. Regarding the epidemiological context, it is noted that stress has become a growing problem, especially among urban populations and in work environments. In addition, aggravating factors have also been associated with stress, such as financial instability, work overload and social isolation, reflecting their long-term impacts and effects (Castiel, 2005).

According to Câmara and Roldi (2022), cycling is a physical activity that offers mental and physical health benefits, considering occasional practitioners and those individuals who adopt the sport as a lifestyle. The respective practice is considered a popular outdoor activity, which allows contact with nature and provides moments of relaxation and relaxation. In this context, there are numerous advantages associated with its regular practice, such as improved physical fitness and reduced symptoms of anxiety and depression.

The present study aimed to analyze the occurrence of signs and symptoms of depression, anxiety and stress, and their relationship with the level of physical activity and associated sociodemographic and clinical factors among cyclists and non-cyclists.

METHODOLOGY

The present study has an observational and quantitative character, being carried out through a cross-sectional approach that aimed to evaluate the mental health aspects of cyclists and non-cyclists. The study took place in the rural and urban areas of northern Minas Gerais, carried out between March and September 2024.

The research sample was composed of cyclists and non-cyclists of both sexes. Cyclists were interviewed during cycling events or on routes where groups of cyclists were riding. Non-cyclists were approached at events for cyclists, as well as people who lived with cyclists.

People over 18 years of age, literate and without any physical or cognitive problem that would prevent them from filling out the data collection forms were included in the study. For the group of cyclists, only practitioners for a period of more than six months were

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selected. Incomplete or inconsistent forms were excluded from the survey. Convenience sampling was performed, and 233 cyclists and 245 non-cyclists were selected, totaling 478 participants.

For data collection, self-administered questionnaires were applied to obtain information about sociodemographic aspects, factors associated with mental health, level of physical activity, cycling, and anthropometric profile. Among the sociodemographic characteristics investigated are gender (female and male), marital status (married and unmarried), employment status (whether they work or not), family income (up to two minimum wages and above two minimum wages) and education (with and without higher education). In another analysis, the anthropometric profile of the participants was evaluated based on the Body Mass Index (BMI), which was a calculation obtained by the formula BMI = weight (kg)/height (m)^2, and this information was self-reported on the form. To classify BMI, the following intervals were adopted: underweight (<18.5), eutrophic (18.5-24.9), overweight (25-29.9), obesity (>29.9) for individuals under 60 years of age, and, for the elderly, normal BMI was considered to be > 22 to <27 Kg/m² according to ABESO (2016).

The International Physical Activity Questionnaire (IPAQ) was also used to estimate the level of physical activity of the participants. The simplified version of the tool was used, which consists of eight questions that analyze the frequency and sessions of physical activities performed in the last seven days, including intense and moderate activities and walking (Guedes; Lee; Guedes, 2005). Thus, the questions were self-administered and after their analysis, the interviewees were divided into three groups: sedentary, irregularly active, and regularly active.

Among sedentary individuals, those who do not perform physical activity for at least ten uninterrupted minutes per week are included. Irregularly active people are those who practice physical activity, but with insufficient frequency or duration, being subclassified as A, fulfilling the criterion of frequency (5 days/week) or duration (150 minutes/week); or in B, those that do not correspond to the criteria of frequency or duration. Finally, those who performed moderate activity (minimum 30 minutes and 5 days/week), vigorous activity (minimum 3 days/week and 20 minutes) or a combination of both (IPAQ, 2007) were considered to be regularly active.

The Depression, Anxiety and Stress Scale (DASS-21) was used to assess the aspects associated with the mental health of the participants. According to Martins *et al.* (2019), is a psychological questionnaire developed with the purpose of individually

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quantifying the levels of depression, anxiety and stress. It consists of 21 questions divided among the three spheres mentioned, which allows the classification of the intensity of emotional and physical symptoms on a scale of 0 to 3 among the interviewees, ranging from "does not apply" to "applies a lot". After counting the answers, the scores were added and multiplied by 2. In this way, this instrument helps to identify the severity of mental symptoms, facilitating the tracking and follow-up of patients with psychological distress, although it does not replace the complete evaluation.

The DASS-21 is divided into three subscales, each containing 7 items, which separately assess the emotional states of depression, anxiety, and stress. Participants were asked to indicate how much each statement applied to them in the past week. The items are organized into three groups: Depression (items 3, 5, 10, 13, 16, 17, 21); Anxiety (items 2, 4, 7, 9, 15, 19, 20); and Stress (items 1, 6, 8, 11, 12, 14, 18). The response scale used is of the *Likert* type, ranging from 0 (not applied at all) to 3 (applied a lot or most of the time). To obtain the final score, the values of each subscale are added and multiplied by two, in order to correspond to the original DASS-42 scale. The classification of stress symptoms is made as follows: 0-10 = normal; 11-18 = mild; 19-26 = moderate; 27-34 = severe; and 35-42 = very severe. Anxiety symptoms were classified as follows: 0-6 = normal; 7-9 = mild; 10-14 = moderate; 15-19 = severe; and 20-42 = very severe. For depression symptoms, the ratings were: 0-9 = normal; 10-12 = mild; 13-20 = moderate; 21-27 = severe; and 28-42 = very severe. In the data analysis, these classifications were simplified into two groups: from normal to mild, and from moderate to very severe (Cavalcante *et al*., 2022).

The data were tabulated and analyzed using *the Statistical Package for the Social Sciences* (SPSS), version 22.0. Descriptive analyses of the variables with absolute and relative frequencies were performed to evaluate the profile of each group, as well as the profile of the participants in relation to the symptomatological conditions of depression, anxiety and stress. To test the association between the independent variables and the occurrence of moderate to very severe symptoms of each psychological disorder, multivariate analysis was performed using binary logistic regression. The final model was obtained following the *backward stepwise conditional* technique, so that odds ratios and their respective confidence intervals were estimated considering a significance level above 95% ($p<0.05$).

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The research was carried out following the ethical precepts for research involving human beings, opinion: 6.655.821/2024.

RESULTS

Table 1 represents the descriptive analysis of the participants in each group according to sociodemographic and anthropometric variables. It is possible to verify that most individuals are male (61.2%), unmarried (43.9%), working (83.3%), income greater than two minimum wages (68.4%), with complete higher education (61.9%), normal BMI (41.4%).

Considering the characteristics of the cyclists (Table 1), it was observed that most were male (68.7%), married (63.1%), working (90.6%), had an income of more than 2 minimum wages (76.4%), completed higher education (70.8%), and had a normal BMI (47.2%).

The sociodemographic and anthropometric profile of the non-cyclists (Table 1) showed that males (54.3%), unmarried (50.6%), working (76.3%), with an income of more than 2 minimum wages (60.8%), complete higher education (53.5%), and overweight (42.0%), prevailed in this group.

Table 1: Sociodemographic profile of the sample of cyclists and non-cyclists investigated. Montes Claros, MG, 2024.

Variables	N (%)	
Age (mean + standard deviation)	43,03 (+13,08)	
	Not cyclists	Cyclists
Sex		
Female	112 (45,71)	73 (31,34)
Male	133 (54,29)	160 (68,66)
Marital status		
Married	121 (49,39)	147 (63,09)
Not married	124 (50,61)	86 (36,91)
Works		
Yes	187 (76,33)	211 (90,56)
No	58 (23,67)	22 (9,44)
Income		
Up to 2 minimum wages	96 (39,18)	55 (23,61)
Above 2 minimum wages	149 (60,82)	178 (76,39)
Schooling		
With complete higher education	131 (53,47)	165 (70,82)
No complete higher education	114 (46,53)	68 (29,18)
IMC		
Low weight	5 (2,04)	6 (2,57)
Normal	88 (35,92)	110 (47,21)

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Overweight	**103 (42,04)**	**88 (37,77)**
Obesity	49 (20)	29 (12,45)
Age (mean + standard deviation)	42,29 (+14,04)	43,82 (+11,97)

Source: prepared by the authors themselves, 2024.

Table 2 compares the groups in relation to the symptomatological conditions of mental disorders. In general, an occurrence of 14.2%, 19.2%, and 16.5% of moderate to very severe symptoms of depression, anxiety, and stress can be observed, respectively. In addition, it was found that moderate to very severe depression, anxiety, and stress were observed in 10.3%, 9.9%, and 12.45% of the cyclists, respectively. Among non-cyclists, 18.0% manifested symptoms of depression, 28.2% of anxiety, and 20.4% had symptoms of stress, ranging from moderate to very severe.

Table 2: Variables of depression, anxiety, and stress in cyclists and non-cyclists.

Depression		
	Non-cyclists	Cyclists
Normal to live	201 (82,04%)	209 (89,70%)
Moderate to very severe	44 (17,96%)	24 (10,30%)
Anxiety		
	Non-cyclists	Cyclists
Normal to live	176 (71,84%)	210 (90,13%)
Moderate to very severe	69 (28,16%)	23 (9,87%)
Stress		
	Non-cyclists	Cyclists
Normal to live	195 (79,59%)	204 (87,55%)
Moderate to very severe	50 (20,41%)	29 (12,45%)

Source: prepared by the authors themselves, 2024.

The multivariate analysis is shown in Table 3. It was identified that women (p=0.001; OR=2.498), young people (p=0.007; OR=0.971) and sedentary (p=0.014; OR=3.514), have a higher chance of manifesting signs and symptoms of moderate to severe depression. Similarly, women (p=<0.001; OR=2.582) and unmarried (p=<0.001; OR=2.753) were more likely to present moderate to severe signs and symptoms of anxiety. In relation to moderate to very severe stress symptoms, the increased chance occurred among women (p=0.023; OR=1.807), young people (p=0.024; OR=0.978), sedentary individuals (p=0.003; OR=4.335) and without higher education (p=0.016; RC=1.877).

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Table 3: Adjusted binary logistic regression model statistically more significant of associations between the variables investigated and the occurrence of symptomatological picture of mental disorders. (*RC: odds ratio. CI: confidence interval).

	Variables	Categories	RC	95% IC	*p*
Depression	Age		0,971	0,951-0,992	0,007
	Gender	Male	Reference		0,001
		Female	2,498	1,455-4,288	
	Physical activity	Regularly active	Reference		0,049
		Irregularly active	1,435	0,666-3,092	0,356
		Sedentary	3,514	1,244-9,931	0,014
Anxiety	Sex	Male	Reference		<0,001
		Female	2,582	1,579-4,220	
	Marital status	Married	Reference		<0.001
		Not married	2,753	1,668-4,543	
	Schooling	With higher education	Reference		0,062
		No higher education	1,604	0,977-2,632	
Stress	Age		0,978	0,958-0,997	0,024
	Gender	Male	Reference		0,023
		Female	1,807	1,086-3,008	
	Schooling	With higher education	Reference		0,016
		No higher education	1,877	1,125-3,134	
	Physical activity	Regularly active	Reference		0,010
		Irregularly active	0,956	0,437-2,090	0,910
		Sedentary	4,335	1,664-11,294	0,003

Source: prepared by the authors themselves, 2024.

DISCUSSION

Analyzing contemporaneity, anxiety and depression stand out as the most relevant mental disorders with the greatest psychosocial impacts, affecting millions of people worldwide. The particularities of modern life are marked by increased economic pressures, fast pace of life, excessive exposure to social networks, and the uncertainties associated with global events, such as the COVID-19 pandemic. These factors intensify the emotional vulnerability of social changes. Thus, it is verified that these scenarios contribute significantly to the increase in the rates of mental disorders, which have a negative impact on psychosocial aspects and affect physical and mental health together (Brito *et al.,* 2022).

In this study, a relatively high occurrence of severe symptoms of depression, anxiety and stress was observed. Among the factors identified with the greatest association with the conditions are female gender and sedentary lifestyle. According to data from the World

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Health Organization (WHO, 2002), approximately 9.3% of the Brazilian population suffers from depression, and 9.6% has anxiety disorders**,** with Brazil being the country with the highest rate of anxiety in Latin America. In addition, according to the *IBGE* within the scope of the *Continuous PNAD* (Continuous National Household Sample Survey), in 2021, about 80% of Brazilians report feeling stressed frequently, which contributes to the high incidence of stress-related diseases, such as heart problems and hypertension. In addition, the World Health Organization emphasizes that chronic stress raises cortisol levels in the body, which can harm the immune and cardiovascular system. These mental disorders often coexist with other illnesses, making treatment more complex (WHO, 2021). Social factors, such as economic inequality, violence, and limited access to health services, are important determinants for the significant increase in these disorders in Brazil.

Alves (2018) points to cycling as a popularized practice encouraged among its practitioners due to the following factors: stress control, improvement of social bonds, health and pleasure. It is a widespread practice among all genders and ages, generating psychological, functional and physiological benefits for its practitioners and, consequently, improving their quality of life. In cohesion with the information presented, when comparing two distinct groups (cyclists and non-cyclists). According to information from the World Health Organization (WHO, *2021), it* **is estimated that 4.4% of the world's population suffers from anxiety disorders, with the prevalence of depressive disorders reaching around 5%.** In this bias, it is highlighted that during the regular practice of physical exercise, the release, regulation, and activation of important neurotransmitters responsible for the feeling of well-being, pleasure, and mood improvement occur, directly contributing to the reduction of depressive conditions (Da Rocha *et al*., 2021). Therefore, individuals who do not practice regular physical activity have a higher risk of developing mental disorders, since physical exercise is a known modulator of stress levels, promoting the release of endorphins and other neurotransmitters that contribute to emotional well-being. The research did not show differences in relation to the practice of cycling, suggesting that physical activity is the main factor, whether cycling or not. Thus, benefits provided by physical activity to mental health are observed.

In this study, sedentary individuals had increased chances of more severe symptoms of depression and stress. The close relationship between stress and physical exercise can be justified by the potentiating effect of a sedentary lifestyle on stress, resulting in a lack of energy and motivation and, thus, contributing to an increase in the risk

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of developing severe signs and symptoms of stress and depression. At this juncture, sedentary lifestyle is considered a worldwide epidemic, being defined by the disorder between physical and psychological demands and response capacity. From this perspective, there is a close relationship between physical activity and mental health, due to the physical and psychological benefits. To prove it, epidemiological data reveal that moderately active people have a lower risk of being affected by mental disorders, being important against cognitive decline and dementia (Stubbs *et al*., 2018). Inactivity, therefore, emerges as one of the main risk factors for modern health. The evidence from physiological and neuroanatomical knowledge indicates that the performance of physical activity acts as a preventive way to prevent the development of depressive symptoms and, when present, has the ability to reduce these symptoms, having benefits similar to psychotherapy.

When considering the three emotional disorders, it was found that females were more likely to have these conditions. The occurrence of this pattern is justified by biological, social, and behavioral factors, contributing to a greater emotional overload and internalization of feelings. According to Gonçalves *et al.* (2018), through their analysis, point out other factors that are associated with the occurrence of depression being prevalent in women, they are: inadequate diet, double and exhausting shifts and little time to exercise. Understanding women's behavior and lifestyle is of paramount importance for a faster diagnosis and can prompt a proposed intervention, aiming at improving health and quality of life (Senicato; Azevedo; Barros, 2018). The authors identify social determinants, such as poverty, gender-based violence, and unequal access to health services, as key factors contributing to this inequality. They point out that women, especially those from lower social classes, are more exposed to these risks, which contributes to greater vulnerability to these mental disorders.

The hormonal variations associated with the menstrual cycle, pregnancy, postpartum, and menopause have an impact on women's mental health, making them more susceptible to problems such as depression and stress. Accordingly, the WHO indicates that women are more susceptible to developing mood and anxiety disorders than men, considering all evolutionary stages of their life (Brasil, 2022). In addition, studies indicate that genetic differences and variations in the concentrations of neurotransmitters, such as serotonin and dopamine, can predispose women to mental disorders.

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Another relevant factor is women's greater exposure to domestic violence, sexual abuse and gender discrimination, conditions that increase the risk of mental disorders, including depression and post-traumatic stress. Psychosocially, females face routine situations of additional pressures, such as overload of domestic and professional responsibilities, gender inequality, and greater exposure to violence, making this group more vulnerable to these conditions. Furthermore, the limitation of access to comprehensive health care is verified from the stigma associated with seeking psychological support, aggravating the situation (Costa *et al.*, 2019).

It was shown that younger individuals had increased chances of more advanced symptoms of depression and stress. This is a growing phenomenon in recent decades, being related to facing unique challenges in this age group, such as academic pressures, social expectations, and uncertainties about the future (Costa *et al.*, 2019). In addition, a survey by the US National Institute of Mental Health (NIMH) showed that 20% to 25% of individuals between the ages of 18 and 45 report important symptoms of stress. According to data from the Centers for Disease Control and Prevention (CDC), suicide rates have increased by 30% in the last 10 years, a direct reflection of the exacerbation of disorders such as depression and stress.

Higher education graduation was associated with reduced chances of moderate to very severe symptoms of stress. According to Souza *et al.* (2022), individuals without a university degree more frequently face situations related to economic insecurity and limited employment opportunities, conditions that contribute to feelings of stress and anxiety. Therefore, the absence of professional qualification can restrict access to more paid jobs and would affect individuals' perception of self-efficacy. In addition, the social and cultural environment in which they are inserted may lack adequate psychological support and easy access, further exacerbating symptoms.

Increased chances of more severe symptoms of anxiety were identified among unmarried participants. The association between single marital status and high levels of anxiety is verified by coping with social pressures and stigmas related to the individual situation, resulting in feelings of inadequacy and loneliness. Costa *et al.* (2019) expose that the absence of an emotional support network provided by a marital relationship increases vulnerability to anxious symptoms. Furthermore, single individuals constantly suffer from uncertainties about the future, such as the search for an ideal partner and the concern with

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the formation of a family, aggravating the scenario through social comparisons and intensifying anxiety.

Although a comprehensive analysis was carried out, it is noteworthy that cross-sectional sampling and convenience sampling can limit the generalization of the results and the establishment of causal relationships between mental health and physical activity, making it ideal to carry out a long follow-up study of the interviewees. Studies with greater control of variables by researchers, such as socioeconomic conditions and social support, may allow for an improved analysis of cycling's role in physical activity and the profile of mental health. However, the present study highlights the relationship between several factors and severe mental disorders. Therefore, strategies can be developed aimed at some population groups such as women, young people, sedentary, unmarried, and without higher education, which revealed increased chances of these conditions.

For the control of severe cases of the disorders addressed in this research, the importance of implementing community strategies that help promote mental health and engage in physical activities is highlighted. There is a need to carry out awareness campaigns for the local population, highlighting the benefits of physical activity in the prevention and control of mental disorders, in addition to encouraging its regular practice, regardless of the modality. Physical exercise has a profound effect on mental health and well-being. Regular physical activity is an effective treatment for depression and anxiety, and integrating mental health services with physical activity can improve health outcomes in both individual and community settings. *(*Mahindru; Patil; Agrawal, 2023*).*

In this regard, it is found that the creation of community groups to perform physical activity can strengthen the sense of support and social belonging, which are protective factors against the development of mental disorders. Community-based physical activity programs can serve as a tool to promote mental health-related inclusion by providing a supportive environment where individuals can engage in physical activity, foster social connections, and receive informal mental health support (Rhodes; Hausenblas; Rebar, 2023). In parallel, it is necessary to integrate mental health services in basic health units, offering screening and appropriate conduct. Thus, the combination of these actions can reduce the prevalence of severe anxiety, depression and stress, promoting a higher quality of life in the community.

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CONCLUSION

The occurrence of more severe symptoms of mental disorders ranged from 14.0% to 19.0% in this study. Increased odds of moderate to very severe symptoms of depression were observed among women, sedentary people, and young adults. Women and unmarried people were more likely to have moderate to very severe signs and symptoms of anxiety. With regard to stress, the chances of more severe conditions were higher among women, individuals without higher education, young adults and sedentary individuals.

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REFERENCES

1. ABESO - Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica. (2016). Diretrizes Brasileiras de Obesidade: 2016. São Paulo. Available at: https://abeso.org.br/wp-content/uploads/2019/12/Diretrizes-Download-Diretrizes-Brasileiras-de-Obesidade-2016.pdf. Accessed on: November 1, 2024.

2. Alves, A. C. dos S. (2018). Fatores motivacionais percebidos por praticantes do ciclismo de rua. Trabalho de Conclusão de Curso (Licenciatura em Educação Física) -- Campus Universitário de Castanhal, Universidade Federal do Pará, Castanhal. Available at: http://bdm.ufpa.br/jspui/handle/prefix/808. Accessed on: October 25, 2024.

3. Brasil, Ministério da Saúde. (2021). Boletim fatos e números: saúde mental. Brasília. Available at: https://www.gov.br/mdh/pt-br/navegue-por-temas/observatorio-nacional-da-familia/fatos-e-numeros/5.SADEMENTAL28.12.22.pdf. Accessed on: October 25, 2024.

4. Brasil, Ministério da Saúde. (2022). OMS divulga Informe Mundial de Saúde Mental: transformar a saúde mental para todos. Brasília. Available at: https://bvsms.saude.gov.br/oms-divulga-informe-mundial-de-saude-mental-transformar-a-saude-mental-para-todos/. Accessed on: October 26, 2024.

5. Brito, V. C. de A., et al. (2022). Prevalência de depressão autorreferida no Brasil: Pesquisa Nacional de Saúde 2019 e 2013. Epidemiologia e Serviços de Saúde, 31(1), 1-13. Available at: https://www.scielosp.org/pdf/ress/2022.v31nspe1/e2021384/pt. Accessed on: October 25, 2024.

6. Câmara, D. V. B., & Roldi, A. P. D. P. (2022). A promoção de saúde pelo ciclismo em tempos de pandemia: um estudo de caso no município de Campos dos Goytacazes, RJ. Editora Científica Digital, 6, 425-441. Available at: https://downloads.editoracientifica.com.br/articles/220910001.pdf. Accessed on: October 25, 2024.

7. Castiel, L. D. (2005). O estresse na pesquisa epidemiológica: o desgaste dos modelos de explicação coletiva do processo saúde-doença. Physis: Revista de Saúde Coletiva, 15, 103-120. Available at: https://www.scielo.br/j/physis/a/gX8TsncfYkpV7HVKt8LzdbM/?lang=pt. Accessed on: November 1, 2024.

8. Cavalcante, F. L. N. F., et al. (2022). Depressão, ansiedade e estresse em profissionais da linha de frente da COVID-19. Revista Portuguesa de Enfermagem de Saúde Mental, 27, 6-20. Available at: https://scielo.pt/scielo.php?script=sci_arttext&pid=S1647-21602022000100006. Accessed on: November 1, 2024.

Revista ARACÊ
ISSN: 2358-2472

9. Costa, C. O. da, et al. (2019). Prevalência de ansiedade e fatores associados em adultos. Jornal Brasileiro de Psiquiatria, 68(2), 92-100. Available at: https://www.scielo.br/j/jbpsiq/a/PSrDy4ZFSGDCzNgJfJwVRxz/?lang=pt&format=html. Accessed on: October 26, 2024.

10. Da Rocha, L. H. M., et al. (2021). Os benefícios da prática de exercício físico no tratamento da depressão. Epitaya E-books, 1(8), 44-51. Available at: https://portal.epitaya.com.br/index.php/ebooks/article/view/235. Accessed on: October 26, 2024.

11. Gonçalves, A. M. C., et al. (2018). Prevalência de depressão e fatores associados em mulheres atendidas pela Estratégia de Saúde da Família. Jornal Brasileiro de Psiquiatria, 67(2), 101-109. Available at: https://www.scielo.br/j/jbpsiq/a/TrQdtMNct5Dk3VSvjpthXtH/abstract/?lang=pt. Accessed on: October 27, 2024.

12. Guedes, D. P., Lopes, C. C., & Guedes, J. E. R. P. (2005). Reprodutibilidade e validade do Questionário Internacional de Atividade Física em adolescentes. Revista Brasileira de Medicina do Esporte, 11(2), 151-158. Available at: https://www.scielo.br/j/rbme/a/YVD5vfZcMVfNbpzzdTRjR6B/?lang=pt&stop=next&format=html. Accessed on: October 20, 2024.

13. IPAQ – International Physical Activity Questionnaire. (2007). Classificação do nível de atividade física IPAQ. São Paulo. Available at: https://edisciplinas.usp.br/pluginfile.php/3343547/mod_resource/content/1/IPAQ.pdf. Accessed on: November 1, 2024.

14. Mahindru, A., Patil, P., & Agrawal, V. (2023). Papel da atividade física na saúde mental e bem-estar: uma revisão. Cureus, 15(1), 1-7. Available at: https://pmc.ncbi.nlm.nih.gov/articles/PMC9902068/. Accessed on: November 21, 2024.

15. Martins, B. G., et al. (2019). Escala de Depressão, Ansiedade e Estresse: propriedades psicométricas e prevalência das afetividades. Jornal Brasileiro de Psiquiatria, 68(1), 32-41. Available at: https://www.scielo.br/j/jbpsiq/a/SZ4xmWDdkxwzPbSYJfdyV5c/?format=pdf&lang=pt. Accessed on: October 25, 2024.

16. OMS – Organização Mundial da Saúde. (2021). Plano de Ação Integral para a Saúde Mental 2013-2030. Geneva: OMS. Available at: https://www.who.int/publications/i/item/9789240031029. Accessed on: October 25, 2024.

17. OMS – Organização Mundial da Saúde. (2002). Saúde mental: nova concepção, nova esperança. Lisboa: OMS. Available at: https://iris.who.int/bitstream/handle/10665/42390/WHR_2001_por.pdf?sequence=4&isAllowed=y. Accessed on: October 26, 2024.

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ISSN: 2358-2472

18. Rhodes, R. E., Hausenblas, H. A., & Rebar, A. L. (2023). Psicologia da atividade física e comportamento sedentário. Jones & Bartlett Learning. Available at: https://samples.jblearning.com/9781284248517/9781284257380_FMxx_Rhodes_Secured.pdf. Accessed on: November 22, 2024.

19. Senicato, C., Azevedo, R. C. S. de, & Barros, M. B. de A. (2018). Transtorno mental comum em mulheres adultas: identificando os segmentos mais vulneráveis. Ciência & Saúde Coletiva, 23(8), 2543-2554. Available at: https://www.scielo.br/j/csc/a/rSxF9pjYHk5MwQ3xrvS5zcT/abstract/?lang=pt. Accessed on: October 27, 2024.

20. Souza, J. P. de A., et al. (2022). Sintomas de ansiedade generalizada entre estudantes de graduação: prevalência, fatores associados e possíveis consequências. Jornal Brasileiro de Psiquiatria, 71(3), 193-203. Available at: https://www.scielo.br/j/jbpsiq/a/phdLZspxdbSmbRtqGs5WtGh/. Accessed on: November 1, 2024.

21. Stubbs, B., et al. (2018). Atividade física e saúde mental. The Lancet Psychiatry, 5(11), 873. Available at: https://pubmed.ncbi.nlm.nih.gov/30245185/. Accessed on: October 27, 2024.