"NOTHING THAT WAS WILL BE": BENEFITS OF PHYSICAL ACTIVITY FOR PROMOTING MENTAL HEALTH

"NADA DO QUE FOI SERÁ": BENEFÍCIOS DA ATIVIDADE FÍSICA PARA PROMOÇÃO DA SAÚDE MENTAL

"NADA DE LO QUE FUE SERÁ": LOS BENEFICIOS DE LA ACTIVIDAD FÍSICA PARA PROMOVER LA SALUD MENTAL

Gleisson Ferreira LIMA[1]
e-mail: gleisson_nega@hotmail.com

Eliany Nazaré OLIVEIRA[2]
e-mail: elianyy@gmail.com

Maristela Inês Osawa VASCONCELOS[3]
e-mail: miosawa@gmail.com

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[1] Federal University of Ceará (UFC), Sobral – CE – Brazil. Master's student in the Graduate Program in Family Health. Physical Education Professional at the Psychosocial Care Center for Alcohol and Other Drugs (CAPS AD) in Sobral, Ceará.

[2] State University Vale do Acaraú (UVA), Sobral – CE – Brazil. Postdoctoral fellow at the Faculty of Psychology and Educational Sciences of the University of Porto, Portugal. Professor in the Graduate Program in Family Health (UFC - Sobral) and the Graduate Program in Family Health (RENASF - UVA).

[3]State University Vale do Acaraú (UVA), Sobral – CE – Brazil. Postdoctoral fellow in Clinical Care in Nursing and Health at the State University of Ceará. Professor in the Graduate Program in Family Health (UFC - Sobral) and the Graduate Program in Family Health (RENASF - UVA).

ABSTRACT: The aim of this study was to present the results of implementing a physical activity program for a group of people diagnosed with depression and anxiety in primary health care. The intervention lasted four months, from August to November 2022. The participants were monitored by primary health care and were taking medication to treat anxiety and depression. The results indicate an improved physical and mental state, as evidenced by the categories of analysis: better strength and disposition; flexibility and better endurance; sociability; and improved mental health. The reduction and withdrawal of psychotropic medication demonstrated the beneficial effects of physical activity in promoting physical and mental health. In this context, it is recommended that the work of physical education professionals be offered in primary health care, so that changes such as those that have occurred can be possible in populations with similar characteristics.

KEYWORDS: Mental health. Health promotion. Primary health care. Physical activity.

RESUMO: *O objetivo deste estudo foi apresentar os resultados da implementação de um programa de práticas de atividades físicas a um grupo de pessoas com diagnóstico de depressão e ansiedade na atenção primária à saúde. A intervenção teve duração de quatro meses, de agosto a novembro de 2022. Os participantes eram acompanhados pela atenção primária à saúde e faziam uso de medicamentos para tratamento da ansiedade e depressão. Os resultados indicam melhora no estado físico e mental, como evidenciado pelas categorias de análise: Melhor força e disposição; flexibilidade e melhor resistência; sociabilidade; e ampliação da saúde mental. A redução e retirada dos medicamentos psicotrópicos demostrou os efeitos benéficos da atividade física na promoção da saúde física e mental. Nesse contexto, recomenda-se que o trabalho do profissional de educação física seja ampliado na atenção primária à saúde, para que mudanças como as que ocorreram possam ser possíveis em populações com características similares.*

PALAVRAS-CHAVE: *Saúde mental. Promoção da saúde. Atenção primária a saúde. Atividade física.*

RESUMEN: *El objetivo de este estudio fue presentar los resultados de la implementación de un programa de actividad física para un grupo de personas diagnosticadas con depresión y ansiedad en atención primaria de salud. La intervención duró cuatro meses, de agosto a noviembre de 2022. Los participantes fueron controlados por atención primaria de salud y tomaban medicación para tratar la ansiedad y la depresión. Los resultados indican una mejora del estado físico y mental, como demuestran las categorías de análisis: mejora de la fuerza y la disposición; flexibilidad y mejor resistencia; sociabilidad; y mejora de la salud mental. La reducción y retirada de la medicación psicotrópica demostró los efectos beneficiosos de la actividad física en la promoción de la salud física y mental. En este contexto, se recomienda ofrecer el trabajo de los profesionales de educación física en la atención primaria de salud, para que cambios como estos sean posibles en poblaciones con características similares.*

PALABRAS CLAVE: *Salud mental. Promoción de la salud. Atención primaria de salud. Actividad física.*

Introduction

The COVID-19 pandemic brought many changes to lifestyle and health that have persisted into the post-pandemic period. According to Malta *et al.* (2020), the pandemic scenario caused significant changes in individuals' behaviors, imposing restrictions and limiting daily life. These limitations resulted in decreased physical activity and increased screen time, as well as higher consumption of ultra-processed foods, cigarettes, and alcoholic beverages, leading to a worsening of lifestyle and an increase in health risk behaviors.

In this context, it is possible that a set of health issues may contribute to the increase of chronic conditions and the emergence of mental health problems. According to Nahas (2017), physical activity is defined as any bodily movement produced by skeletal muscles, hence voluntary, that results in energy expenditure above resting levels. Therefore, the importance of regular physical exercise lies in its ability to maintain both body and mind, potentially improving quality of life to satisfactory levels (Almeida, 2020; Granero-Jiménez *et al.*, 2022).

According to the World Health Organization (WHO) report, mental disorders are responsible for the highest numbers of mortality and disability. Thus, physical exercise presents itself as an ally in combating various symptoms arising from mental disorders and should not be seen merely as an occupational or leisure activity (WHO, 2010).

Furthermore, the study by Batista and Ornellas (2013) shows that more physically active people are better protected against depressive disorders or have a lower degree of depression compared to less active individuals. This practice of physical activity can be used as a therapeutic modality in the life context of a person with psychological distress, also helping in social reintegration, and can be seen as a possibility of rescuing the therapeutic efficacy of social relationships (Lourenço *et al.*, 2017).

The benefits of physical activity for health are unquestionable. Several studies have evidenced powerful results regarding the importance of physical activities for the promotion of health and quality of life in the population (Araújo; Araújo, 2000; Lourenço *et al.*, 2017; Oliveira *et al.*, 2011; Silva *et al.*, 2010).

Health promotion can be defined as a set of strategies and ways of producing health, at both individual and collective levels, aimed at meeting the social needs of health and improving quality of life. The Ottawa Charter of 1986 is one of the most important documents in defense of these actions (Buss; Carvalho, 2009).

Thus, there is a possibility of producing better health quality for the population. Including some form of physical activity in primary care can significantly influence the

reduction of costs related to the treatment of mental illnesses. Regular physical exercise has been associated with a reduction in the use of health services, such as hospital admissions, consultations, and medication consumption. By investing in the promotion of physical activity and mental health, it will be possible to reduce the financial burden on the healthcare system, reallocating resources to other areas of care (Sandri; Delevatti; Matias, 2022).

Based on this context, the objective is to present the results of the implementation of a physical activity program for a group of people diagnosed with depression and anxiety in primary health care.

Methodological Pathways

It is noteworthy that this article is an excerpt from a broader intervention study entitled *O profissional de educação física na estratégia saúde da família: avaliação e intervenção para melhoria das condições físicas e mentais*[4], developed during the Multiprofessional Residency Program in Family Health (RMSF) as a requirement for obtaining the title of Specialist in Family Health by the first author.

The intervention was conducted in the city of Sobral, Ceará, within the *Estratégia Saúde da Família*[5] (ESF), specifically in the physical practices group of the José Mendes Mont'Alverne *Centro de Saúde da Família*[6] (CSF) located in the Pedrinhas neighborhood. This center serves 2,808 families, with an average of 4.1 people per family in its coverage area (Sobral, 2019). The ESF is characterized as the main and important instance of the health team's actions regarding family nucleus care, promoting, protecting, and recovering health in an integral and continuous manner (Batista *et al.*, 2023; Silva; Paula, 2016).

The intervention lasted four months, from August to November 2022. During this period, participants were monitored weekly for verification, stimulation, and evaluation of physical activity practices. The participants were members of the CSF's physical practices group, who were using medications for anxiety and/or depression. Inclusion criteria were being over 18 years old and using antidepressant and anxiolytic medications. Exclusion criteria were individuals with injuries preventing participation in the training program, those who refused the invitation, and those with cognitive impairments, without the ability to understand the execution

[4] The Physical Education Professional in the Family Health Strategy: Evaluation and Intervention for the Improvement of Physical and Mental Conditions.
[5] Family Health Strategy.
[6] Family Health Center.

of the prescribed training program. Thus, the study/intervention included a sample of 18 participants, 17 female and one male.

This intervention research report will present the weekly activity plan implemented over four months and some results evidenced by the participants. Regarding ethical aspects, approval was obtained from the Ethics Committee in Research of the State University *Vale do Acaraú*, as per Opinion No. 5.409.103. Participants received information and clarifications about the study and signed the Informed Consent Form and the Authorization for Use of Image and Testimonials Form.

It is worth emphasizing that the intervention took place in the post-pandemic period, when restrictions were eased, but the remnants and harmful effects of COVID-19 were still present. The intervention's proposal for people diagnosed with depression and anxiety was defended as one of the ways to address the consequences of the negative effects. According to Nascimento (2023), the pandemic also led us to create new forms of interaction and life construction, some positive and others negative. The fact is that humanity had to seek strategies to overcome the global health crisis.

If the Sun Keeps Shining: The Experience of Promoting Mental Health in Primary Care

Mental health in primary care is fundamental to ensuring the overall well-being of individuals, preventing diseases, and promoting quality of life. With adequate monitoring, it is possible to identify potential mental disorders early, offer treatment and support to patients, and contribute to the promotion of healthy habits and the prevention of physical diseases. Thus, primary mental health care becomes essential for promoting global health and developing a more balanced and healthy society.

This intervention primarily focuses on health promotion as the guiding principle of the actions developed in Primary Care. Regular physical practices and activities promote the development of factors that contribute to disease prevention, the control of chronic conditions, and the maintenance of health and well-being. According to Amaral *et al.* (2022), this type of intervention carried out by residency students benefits the population receiving the actions and serves as a powerful training opportunity for residents who experience and develop practices based on the territory's needs.

The intervention plan was prepared based on the recommendations of Ferreira and Najar (2005), who state that encouraging regular physical activity has been identified as an essential public health action.

Table 1 - Presentation of the characteristics of the intervention activity schedule, Sobral, Ceará, 2022

Months	Days	Shifts	Schedules	Performed activities	Meetings
August	Monday and Wednesday	Morning	7:00 am to 8:00 am	Stretching, Functional Circuit with moderate series, Dance Class and integration dynamics	10
September	Monday and Wednesday	Morning	7:00 am to 8:00 am	Stretching, Localized Gymnastics, Functional Circuit with Moderate Series, Games, and Integration Dynamics	08
October	Monday and Wednesday	Morning	7:00 am to 8:00 am	Stretching, Functional Circuit with Moderate Series. Step class, localized gymnastics with poles, dynamics, and games	09
November	Monday and Wednesday	Morning	7:00 am to 8:00 am	Stretching, Functional Circuit with Moderate Series, Dance Class, Step Class, Localized Gymnastics with Poles, and Integration Dynamics	08
				Total encounters	**35**

Source: Authors' elaboration.

Table 1 presents how the intervention plan for physical activities was constructed and its respective characteristics, highlighting the diversity of activities during the period. This diversity is very important because, according to Sandri, Delevatti, and Matias (2022), health promotion involves both affective and cognitive aspects, which helps in behavior change.

According to Gomes and Duarte (2012), the diversification of activities allows for motivation and behavior change, as having a physical activity that can effectively contribute, along with attractive and creative methodologies, can provide participants with better control over the factors that impact physical and mental health.

Roeder (2012) states that participation in a regular exercise program is an effective intervention modality to reduce and prevent the number of functional declines associated with disease. Bavoso *et al.* (2017) support this by affirming that physical activity is related to self-esteem and a better perception of body image.

Upon completing the intervention plan/program, which lasted four months, a semi-structured interview was conducted with the participants after the intervention. During this time, the following analysis categories emerged: Improved strength and disposition;

Flexibility/mobility and better endurance; social interaction and sociability; and enhanced mental health. In the category of Improved strength and disposition, participants described:

> "I feel more energetic. When I finish exercising and go to work, I have this energy all day long. Every day, you know, professor, I feel that I am getting better both physically and mentally." P01
> "At the beginning of the study, I felt a lot of pain. But over time, it got better, I feel more active and energetic. When I get back from training, I will go to the market, which is full of energy." P04
> "I have been feeling more energetic, my breathing has improved, the laziness has gone away, my anxiety has reduced, my strength has improved, and the pain is almost 100% gone. It was just a lack of movement." P09
> "Since I started exercising, my strength has improved. I can even lift a water jug now, haha, which I couldn't do before." P10

The participants' reports in this category are quite positive. Comparing them to the initial reports, we can see the evolution of each participant. Oliveira *et al.* (2011) add that engaging in physical activity has real potential to enhance well-being, promoting a closer relationship with mental health, which is evident in the reports. Participants showed improved energy and strength, as well as mental health. Lourenço *et al.* (2017) also mention that regular physical activity helps individuals recognize themselves more positively, as seen in the results, with improved body image, weight loss, and enhanced physical strength.

In the category of Flexibility/Mobility and Better Endurance, participants expressed:

> "I am feeling very well physically, I have improved a lot compared to how I was before. My flexibility has improved significantly, I was very stiff before, but now I feel more flexible, my mobility has improved a lot. In other words, I am feeling very well and more energetic." P03
> "My flexibility has improved a lot with the stretches. Before, I used to feel pain in the back of my legs, but now it has improved a lot, and I can do it without pain." P05
> "With the exercises, I have gained more endurance. Before, I used to be lazy and sit around saying, 'Oh God, give me courage.' Now, I am full of energy." P11
> "I feel better because of the exercises, feeling less pain. Before, it was terrible. The exercises have given me some endurance and improved my mobility." P14

Regarding flexibility, Holland *et al.* (2002) state that a decline of 20-50% in flexibility can be observed between the ages of 30 and 70. Physical exercises prevent the gradual decline of physical abilities. Associating this statement with the post-intervention period, we can practically recognize how physical exercise contributes to greater flexibility/mobility, as

participants showed significant improvement. Movements they couldn't do or didn't have the energy for before, they started to perform post-intervention.

In the category of Social Interaction and Sociability, participants presented:

> "It is very good to interact with other people. I feel great; it's nice, you know, creating new friendships is good for the heart." P01
> "The friendships I made with the girls are very good. We help each other a lot, like real friendship, always looking out for one another." P04
> "The interaction with my colleagues is very good. We have a great bond. We joke around, relax, and feel comfortable. It's great to be with the girls, only peace, thank God." P07
> "The friendships I made with the girls were very good for me. It's a new cycle because I used to be very quiet and afraid to say this or that. But with the social interaction there, I opened up, I only gained." P12

Physical activities are increasingly gaining space in public health settings due to the recognition of the importance of interventions that include social reintegration (Azevedo; Miranda, 2010). According to Moretti *et al.* (2009), the inclusion of physical practices is important as they should be based on educational processes that go beyond knowledge transmission and be linked to developing negotiation skills, overcoming difficulties, strengthening identity, solidarity, empowerment, and understanding of one's own life and health. This approach helps incorporate healthy individual and collective knowledge.

People came out of a pandemic where they couldn't see anyone and communicated only through phone calls or video calls. This intervention period, with meetings, contact, and conversation, motivated participants to reintegrate, strengthen bonds, create friendships, and promote empowerment and identity strengthening. In the category of Enhanced Mental Health, participants noted:

> "So, my mental health is very good. As I mentioned at the beginning, my anxiety consumed me, took away my sleep, and made me stressed. But today, after developing a habit of physical activity, I can sleep very well; both my afternoon nap and night sleep are complete. It's a blessing; in other words, I am in high spirits." P01
> "Look, professor, honestly, I have never felt so good in my life mentally, reaching the best age, seeking a better quality of life. Very nice. If it continues like this, until I'm a hundred years old [laughs]." P03
> "Mentally, I am very well. I lost weight, my energy and breathing improved a lot, my will to live. I used to be lazy about everything, I wouldn't even get out of bed. My desire was to stay in bed, I was lazy about everything. Today, I am not lazy about anything. On the contrary, I am lazy about lying down. I feel useless when I am lying down." P11

Oliveira *et al.* (2011) highlight that physical exercise can be an alternative to improve cognitive function. When individuals are actively involved in regular activities such as systematic training, they are optimizing mental health as they seek their own well-being. Additionally, physical exercise allows individuals to see improvements in mood, a more logical and critical mindset, and better responses to external and internal stimuli. These combined factors contribute to better mental health, helping to overcome daily crises and problems. Souza *et al.* (2021) aimed to compare the mood levels in adult women who engage in regular physical activity with those in sedentary women. It was observed that the active women scored higher than the sedentary ones, demonstrating that physical activity correlates with improved mood levels.

According to the participants' reports, there was an improvement in anxiety, the weight they felt, lack of energy, and overall mood. Macedo et al. (2012) emphasize that there is a positive response to mental health through physical activity, representing better control of nervousness, reduced depression and discouragement, increased calmness and tranquility, and happier individuals. The results of the intervention are directly linked to the benefits of physical activity. According to the *Guia de Atividade Física para a População Brasileira*[7], os efeitos benéficos da atividade física são muitos, como: prevenir e diminuir a mortalidade por diversas doenças crônicas; ajudar a conquistar uma vida plena com melhor qualidade; promover o desenvolvimento humano e bem-estar; reduzir o estresse e os sintomas de ansiedade e depressão (Brasil, 2021).

The participants who adhered to the intervention proposal were precisely those seeking positive ways to cope with the harmful effects of the COVID-19 pandemic. By agreeing to participate in a four-month physical activity program, they demonstrated decisively that they were accepting help to improve their quality of life.

[7] Physical Activity Guide for the Brazilian Population.

Table 2 - Presentation of psychotropic medications consumed by the participants of the group, before and after the intervention, Sobral, Ceará, 2022

Participants	Diagnostics	Medications and dosage before	Medications and dosage after
P01	Anxiety/Depression	Sertraline 50mg (1-0-0) Fluoxetine 20mg (1-0-0)	Sertraline 50mg
P02	Anxiety	Fluoxetine 20mg (1-0-0)	Stopped using
P03	Anxiety	Fluoxetine 20mg (1-0-0)	Fluoxetine 20mg 2-0-0
P04	Anxiety	Fluoxetine 20mg (1-0-0)	Fluoxetine 20mg 0-0-1
P05	Anxiety	Fluoxetine 20mg (1-0-0) Diazepam 5mg (1-0-1)	Fluoxetine 20mg (1-0-1) Diazepam 5mg (1-0-1)
P06	Anxiety	Fluoxetine 20mg (1-0-0)	Stopped using
P07	Anxiety	Escitalopram 10mg (1-0-0)	Stopped using
P08	Anxiety	Escitalopram 10mg (1-0-0)	Stopped using
P09	Anxiety/Depression	Clonazepam 2mg (1-0-0) Fluoxetine 20mg (1-0-0)	Stopped using
P10	Anxiety	Fluoxetine 20mg (1-0-0)	Stopped using
P11	Anxiety	Escitalopram 10mg (0-1-0) Clonazepam 2,5mg(0-0-2G)	Stopped using
P12	Anxiety	Sertraline 25mg (0-0-1)	Stopped using
P13	Anxiety	Amitriptyline 25mg (0-0-2) Diazepam 5mg (0-0-1)	Diazepam 5mg (0-0-1)
P14	Anxiety	Nortriptyline 25mg (0-0-2)	Nortriptyline 25mg (0-0-1)
P15	Anxiety	Nortriptyline 25mg (0-0-2)	Stopped using
P16	Anxiety	Venlafaxine 75mg (1-0-0)	Venlafaxine 75mg 1-0-0
P17	Anxiety/Depression	Fluoxetine 20mg (1-0-0)	Stopped using
P18	Anxiety/Depression	Fluoxetine 20mg (1-0-0) Sertralina 50mg (1-0-0)	Desvenlafaxine 100mg (1-0-0)

Source: Authors' elaboration.

Table 2 presents the diagnoses and psychotropic medications consumed by the group participants before and after the intervention. It is worth noting that the inclusion criterion for this intervention group was the use of medications for anxiety and/or depression. The results demonstrate changes in medication use regarding type, dosage, and the reduction or total withdrawal of medication consumption. According to the information, ten participants stopped taking medications (2, 6, 7, 8, 9, 10, 11, 12). Four participants continued with the same medication and dose (3, 4, 5, 16), while four participants (1, 13, 14, 18) experienced a reduction or change in medication and daily dose. In summary, there were modifications in medication

use concerning type, dosage, reduction, and total withdrawal. Many participants showed positive progress by no longer needing the medication, while others reduced their dosage.

In an experience with individuals on chronic benzodiazepine use, where a set of activities, including physical and bodily practices in Primary Care, was developed, the authors reported that all participants managed to partially or entirely reduce benzodiazepine use, present cognitive gains, and decreased dizziness, thereby improving the quality of life for the group participants (Monteiro; Silvestre, 2020).

In a study coordinated by Hernandez and Voiser (2019), a significant difference was observed between participants who practiced physical activity and those who did not, especially concerning depression levels. Correa *et al*. (2022), in their literature review, found various pieces of evidence confirming the benefits of physical exercise, providing improvements in self-esteem, social interaction, and sleep quality for people with anxiety and depression. These aspects play a crucial role in mental and physical health.

Lago *et al.* (2016) highlight that physically active people tend to reduce medication use. Therefore, implementing Physical Exercise Programs (PEP) in Primary Health Care Units (UBS) would be highly beneficial, promoting lifestyle changes that can reduce public costs on medications, treatments, and hospitalizations.

It is relevant to mention that the GM/MS Ordinance No. 635/2023 established multiprofessional teams in Primary Health Care (eMulti), composed of health professionals from different areas and categories. In this context, PEP professionals can play an interdisciplinary role in the territories, collaborating with the *Rede de Atenção à Saúde*[8] (RAS).

The presence of a physical education professional within the eMulti team is crucial for ensuring appropriate and safe supervision of physical activity participants. This professional possesses the specialized knowledge required to design personalized workout programs, taking into account each participant's individual characteristics, such as age, physical condition, goals, and any potential physical limitations. Moreover, they are capable of correctly guiding exercise execution, preventing injuries, and ensuring the effectiveness of the workouts. They also play a vital role in setting realistic goals and motivating participants, contributing to the achievement of satisfactory results. The integrative review indicates that physical exercise, when combined with pharmacological therapy, presents beneficial effects. However, it emphasizes the importance of having a qualified professional oversee the exercise program (Silva *et al.*, 2022).

[8] Health Care Network.

Supporting these findings, a review study concluded that regular physical activity can enhance overall well-being, providing significant benefits for emotional and physical states. This includes reducing emotional responses to stress, decreasing mild and moderate levels of depression and anxiety, enhancing creativity and memory, and increasing concentration (Oliveira *et al.*, 2011).

Final considerations

When examining physical and mental health perceptions among participants of a bodily practice group before and after an intervention in Primary Care, the results were positive, indicating significant improvements in these areas. The systematic implementation of a physical activity and bodily practice program proved effective in promoting participants' physical and mental health over four months.

This intervention research identified effective strategies to enhance the physical and mental quality of life for those in primary care. It became evident that a regular physical activity program contributed to increased physical and mental well-being, including a reduction or elimination of psychotropic medication use, demonstrating the benefits of bodily practices for participants' physical, mental, and emotional health.

The crucial role of the physical education professional in this process is highlighted, as they guide the regular importance of bodily practices, prescribe and monitor exercise execution, and promote self-care and health. It is therefore recommended that the work of physical education professionals be integrated into primary health care, enabling the replication of positive changes across different contexts and territories. The Multidisciplinary Residency in Family Health emerges as an important training strategy in health, aligned with the principles of the Unified Health System (SUS), with initiatives directly impacting the improvement of quality of life for individuals, families, and communities.

For future research, it is recommended that the effects of physical activity practices on Body Mass Index (BMI) be analyzed. Investigating how regular physical activity influences body weight can provide valuable insights for developing even more effective health programs.

REFERENCES

ALMEIDA, L. G. M. **Educação física escolar, saúde e qualidade de vida no contexto da formação humana integral**. 2020. 142 f. Dissertação (Mestrado Profissional de Educação Profissional e Tecnológica) - Instituto Federal Paraíba, João Pessoa, 2020.

AMARAL, V. F. D.; SOUSA, B. D. S.; ARRUDA, L. P.; LOPES, R. E. Ações e práticas realizadas em Programa de Residência Multiprofissional em Saúde da Família. **Revista Brasileira em Promoção da Saúde**, [*S. l.*], v. 35, p. 7, 2022.

ARAÚJO, D. S. M. S.; ARAÚJO, C. G. S. Aptidão física, saúde e qualidade de vida relacionada à saúde em adultos. **Revista Brasileira de Medicina do Esporte**, [*S. l.*], v. 6, n. 5, p. 194-203, 2000.

AZEVEDO, D. M.; MIRANDA, F. A. N. Práticas profissionais e tratamento ofertado nos CAPSad do Municípios de Natal-RN: com a palavra a família. **Escola Anna Nery**, [*S. l.*], v. 14, n. 1, p. 56-63, 2010.

BATISTA, C. L. F.; FERNANDES, L. H.; GEVAERD JÚNIOR, R. H.; LOPES, A. R.; MOMBELLI, M. A. Atributos da atenção primária à saúde: a teoria e a prática em uma unidade de saúde da família na perspectiva de acadêmicos de medicina. **Arquivos de Ciências da Saúde da UNIPAR**, [*S. l.*], v. 27, n. 2, p. 829-842, 2023.

BATISTA, W. S.; ORNELLAS, F. H. Exercício físico e depressão: relação entre o exercício físico e o grau de depressão. **Revista Brasileira de Prescrição e Fisiologia do Exercício**, [*S. l.*], v. 7, n. 42, p. 474-482, 2013.

BAVOSO, D.; GALEOTE, L.; MONTIEL, J. M.; CECATO, J. F. Motivação e autoestima relacionada à prática de atividade física em adultos e idosos. **Revista Brasileira de Psicologia do Esporte**, [*S. l.*], v. 7, n. 2, p. 26-37, 2017.

BRASIL. Ministério da Saúde. **Guia de atividade física para a população brasileira**. Brasília, DF: Ministério da Saúde, 2021.

BUSS, P. M.; CARVALHO, A. I. Desenvolvimento da promoção da saúde no Brasil nos últimos vinte anos (1988-2008). **Ciência e Saúde Coletiva**, [*S. l.*], v. 14, n. 6, p. 2305-2316, 2009.

CORREA, A. R.; PEDRIALI, A. M. S.; QUEIROZ, T. S.; HUNGER, M. S.; MARTELLI, A.; DELBIM, L. R. Exercício físico e os transtornos de ansiedade e depressão. **Revista Faculdades do Saber**, [*S. l.*], v. 7, n. 4, p. 1072-1078, 2022.

FERREIRA, M. S.; NAJAR, A. L. Programas e campanhas de promoção da atividade física. **Ciência & Saúde Coletiva**, [*S. l.*], v. 10, p. 207-219, 2005.

GOMES, M. A.; DUARTE, M. F. S. Efetividade de uma intervenção de atividade física em adultos atendidos pela estratégia saúde da família: programa ação e saúde Floripa - Brasil. **Revista Brasileira de Atividade Física e Saúde**, [*S. l.*], v. 13, n. 1, p. 44–56, 2012.

GRANERO-JIMÉNEZ, J.; LÓPEZ-RODRÍGUEZ, M. M.; DOBARRIO-SANZ, I.; CORTÉS-RODRÍGUEZ, A. E. INFLUENCE of physical exercise on psychological well-being of young adults: a quantitative study. **International Journal of Environmental Research and Public Health**, [*S. l.*], v. 19, n. 7, p. 4282, 2022.

HERNANDEZ, J. A. E.; VOSER, R. C. Exercício físico regular e depressão em idosos. **Estudos e pesquisas em psicologia**, [*S. l.*], v. 19, n. 3, p. 718-734, 2019.

HOLLAND, G. J.; TANAKA, K.; SHIGEMATSU, R.; NAKAGAICHI, M. Flexibility and physical functions of older adults: a review. **Journal of Aging and Physical Activity**, [*S. l.*], v. 10, n. 2, p. 169-206, 2002.

LAGO, C.; MORAIS, G.; GUARDA, F.; SIMÕES, P.; FARIAS, J. M. Relação do nível de atividade física habitual e consumo de medicamentos em usuários do Sistema Único de Saúde. **Revista Brasileira de Atividade Física e Saúde**, [*S. l.*], v. 21, n. 4, p. 373-380, 2016.

LOURENÇO, B. S.; PERES, M. A. DE A.; PORTO, I. S.; OLIVEIRA, R. M. P. DE; DUTRA, V. F. D. Physical activity as a therapeutic strategy in mental health: an integrative review with implication for nursing care. **Escola Anna Nery**, [*S. l.*], v. 21, n. 3, p. e20160390, 2017.

MACEDO, C. DE S. G.; GARAVELLO, J. J.; OKU, E. C.; MIYAGUSUKU, F. H.; AGNOLL, P. D.; NOCETTI, P. M. Benefícios do exercício físico para a qualidade de vida. **Revista Brasileira de Atividade Física & Saúde**, [*S. l.*], v. 8, n. 2, p. 19-27, 2012.

MALTA, D. C.; SZWARCWALD, C. L.; BARROS, M. B. de A.; GOMES, C. S. A pandemia da COVID-19 e as mudanças no estilo de vida dos brasileiros adultos: um estudo transversal. **Epidemiologia e Serviços de Saúde**, [*S. l.*], v. 29, n. 4, p. e2020407, 2020.

MONTEIRO, T. A.; SILVESTRE, F. C. S. S. Relato de experiência com grupo de desmame de benzodiazepínico. In: CONGRESSO MINEIRO DE MEDICINA DE FAMÍLIA E COMUNIDADE, 8., [*S. l.*], 2020. **Anais do 8º Congresso Mineiro de Medicina de Família e Comunidade**. Juiz de Fora: Revista de APS, 2020.

MORETTI, A. C.; ALMEIDA, V.; WESTPHAL, M. F.; BÓGUS, C. M. Práticas corporais/atividade física e políticas públicas de promoção da saúde. **Saúde e Sociedade**, [*S. l.*], v. 18, n. 2, p. 346-354, 2009.

NAHAS, M. V. **Atividade física, saúde e qualidade de vida:** Conceitos e sugestões para um estilo de vida ativo. 7. ed. Florianópolis: Ed. do Autor, 2017. 362 p.

NASCIMENTO, M. S. Apresentação: Pandemia de COVID-19: Da descoberta de novos meios do educar aos sintomas de ansiedade na educação. **DOXA: Revista Brasileira de Psicologia e Educação**, [*S. l.*], v. 24, p. e023019, 2023.

OLIVEIRA, E. N.; AGUIAR, R. C. de; ALMEIDA, M. T. O. de.; ELOIA, S. C.; LIRA, T. Q. Benefícios da atividade física para saúde mental. **Saúde Coletiva**, [*S. l.*], v. 8, n. 50, p. 126-130, 2011.

WHO. World Health Organization. **People with mental disabilities cannot be forgotten**. Geneva: WHO, 11 dez. 2010. Disponível em: https://www.who.int/news/item/11-12-2010-people-with-mental-disabilities-cannot-be-forgotten. Acesso em: 06 maio 2023.

ROEDER, M. A. Benefícios da atividade física em pessoas com transtornos mentais. **Revista Brasileira de Atividade Física e Saúde**, [*S. l.*], v. 4, n. 2, p. 62-76, 2012.

SANDRI, A.; DELEVATTI, R. S.; MATIAS, T. S. Estratégias para promover motivação para a atividade física no contexto da atenção primária à saúde. **Revista Brasileira de Atividade Física e Saúde**, [*S. l.*], v. 27, p. 1-7, 2022.

SILVA, M. A. S.; PAULA, M. A. B. Uso de recursos e estratégias pedagógicas na saúde da família. **Revista de Ensino, Educação e Ciências Humanas**, [*S. l.*], v. 17, n. 2, p. 181-185, 2016.

SILVA, R. S.; SILVA, I. da; SILVA, R. A. da; SOUZA, L.; TOMASI, E. Atividade física e qualidade de vida. **Ciência & Saúde Coletiva**, [*S. l.*], v. 15, n. 1, p. 115-120, 2010.

SILVA, R. Y. C.; GALVÃO, A. M. do N.; SANTOS, E. A. dos; BARBOSA, A. C. dos S. Efeitos benéficos do exercício físico no tratamento da depressão: uma revisão integrativa. **Research, Society and Development**, [*S. l.*], v. 11, n. 1, p. 1-9, 2022.

SOBRAL. Secretaria Municipal de Saúde. **Territorialização das Pedrinhas**. Sobral: Secretaria Municipal de Saúde, 2019. 38 p.

SOUZA, H. dos S. de; SANTOS, D. M. dos; XAVIER, G. H. C.; SANTANA, B. A.; OLIVEIRA, V. de; TERTULIANO, I. W. A influência da prática de atividade física no estado de humor de mulheres adultas. **Arquivos de Ciências da Saúde da UNIPAR**, [*S. l.*], v. 25, n. 2, p. 87-94, 2021.

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