PHYSICAL ACTIVITY PATTERN AND PSYCHOLOGICAL WELL-BEING IN HIGHER EDUCATION STUDENTS

Padrão de atividade física e bem-estar psicológico em estudantes do ensino superior

Padrón de actividad física y bienestar psicológico en estudiantes de enseñanza superior

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ABSTRACT

Background: sedentary lifestyles are a current problem in society, increasing the risk of health problems. Psychological well-being can be influenced by physical activity patterns. **Objectives:** to analyse the pattern of physical activity in students at a higher education institution and its relationship with psychological well-being. **Methodology:** cross-sectional quantitative correlational study using a sing a convenience sample. **Results:** the sample consisted of 48 students aged between 18 and 25, 4 male and 44 female. Although there were no statistically significant relationships, there were differences, as students who performed physical activity with greater intensity tended to have better psychological well-being. There was also a tendency for older students to have a lower sense of health and for students with a better psychological wellbeing coefficient to have a better sense of health and less time spent in sedentary activities. **Conclusion:** those who practise more physical activity are more likely to have better psychological well-being. Greater investment in health literacy about physical activity, its standards and the WHO guidelines to reduce sedentary behaviour is suggested.

Keywords: physical activity; sedentary behavior; students

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RESUMO

Enquadramento: o sedentarismo é um problema atual da sociedade, potenciando o aparecimento de problemas de saúde. O bem-estar psicológico pode ser influenciado pelo padrão de atividade física. **Objetivos:** analisar o padrão de atividade física em estudantes de uma instituição do ensino superior e a sua relação com o bem-estar psicológico. **Metodologia:** estudo correlacional quantitativo transversal com recurso a amostra de conveniência. **Resultados:** amostra constituída por 48 estudantes, com idades entre os 18 e os 25 anos, sendo 4 do sexo masculino e 44 do sexo feminino. Apesar de não existirem relações com significado estatístico verificaram-se diferenças, pois os estudantes que realizam uma atividade física com maior intensidade têm tendencialmente um melhor bem-estar psicológico. Verificou-se ainda que existe tendência para os estudantes com mais idade apresentarem uma menor sensação de saúde e que os estudantes que possuem um melhor coeficiente de bem-estar psicológico possuam uma melhor sensação de saúde e menos tempo de atividades sedentárias. **Conclusão:** tendencialmente quem pratica mais atividade física demonstra um melhor bem-estar psicológico. Sugere-se um maior investimento em literacia em saúde sobre atividade física, seus padrões e as orientações da Organização Mundial de Saúde para reduzir o sedentarismo.

Palavras-chave: atividade física; comportamento sedentário; estudantes

RESUMEN

Marco contextual: el sedentarismo es un problema actual en la sociedad, que propicia la aparición de problemas de salud. el bienestar psicológico puede ser influenciado por los padrones de actividad física. **Objetivos:** analizar el padrón de actividad física en estudiantes de una institución de enseñanza superior y su relación con el bienestar psicológico. **Metodología:** estudio cuantitativo correlacional transversal utilizando una muestra de conveniencia. **Resultados:** la muestra consistió en 48 estudiantes con edades comprendidas entre 18 y 25 años, 4 hombres y 44 mujeres. Aunque no se encontraron relaciones estadísticamente significativas, sí se observaron diferencias, ya que los estudiantes que realizaban actividad física con mayor intensidad tendían a tener mejor bienestar psicológico. También se observó una tendencia a que los estudiantes de mayor edad tuvieran una menor sensación de salud y a que los estudiantes con un mejor coeficiente de bienestar psicológico tuvieran una mejor sensación de salud y dedicaran menos tiempo a actividades sedentarias. **Conclusión:** quienes practican más actividad física tienden a tener mejor bienestar psicológico. Se sugiere una mayor intervención en la alfabetización sanitaria sobre la actividad física, sus normas y las directrices de la OMS para reducir el comportamiento sedentario.

Palabras clave: actividad física; comportamiento sedentario; estudantes

INTRODUCTION

The World Health Organisation (WHO) refers to health as a condition of physical, mental and social well-being and not just the absence of disease (WHO, 1948).

Taking these assumptions into account, it has been verified over time that there is an association between physical activity and better health, with several studies concluding that this association is important for people's health and well-being, and there is even an inverse relationship between the level of physical activity and mortality (Campaniço, 2016; Directorate-General for Health [DGS], 2022a; WHO, 2022b; Quesado et al., 2022; Rodrigues, 2021).

Physical activity is defined by the WHO (2022b) as any bodily movement produced by the skeletal muscles that requires energy consumption. Thus, physical activity refers to all movements, including during leisure time, for transport to and from places, or as part of a person's work.

Also according to the WHO (2022b), it is important to note that both moderate-intensity and vigorous intensity physical activity improve health.

According to numerous studies, physical activity is a preventive practice in the fight against chronic diseases, and its influence on reducing stress, anxiety and depression is recognised (Campaniço, 2016; WHO, 2022b; Quesado et al., 2020; Rodrigues, 2021), and its regular practice is widely known as an effective and efficient public health strategy, boosting people's health and well-being (Rodrigues, 2021).

According to the WHO (2020), four to five million deaths a year could be avoided if the population were more physically active, and regular physical activity is very important for the protection, prevention and control of various non-communicable diseases, such as cardiovascular diseases and type 2 diabetes mellitus.

With this in mind, the WHO (2020) and the DGS (2022a) have developed global guidelines with programmes to promote physical activity, investing in actions that promote physical activity and reduce sedentary lifestyles.

In addition to the aspects mentioned above, physical activity benefits mental health, preventing cognitive decline and symptoms of anxiety and depression, as well as contributing to weight maintenance and general well-being (WHO, 2020). In this way, physical activity can also influence mental health and consequently psychological well-being.

In relation to psychological well-being, the National Health Plan 2021-2030, implemented by the DGS, advocates access to mental health care and the promotion of well-being for all (DGS, 2022b). Mental health is one of the constructs of health and is a basic human right that is crucial for personal, community and socioeconomic development, as it enables individuals to recognise their individual and collective capacities, make decisions, build relationships and shape the world in which they live (WHO, 2022a). The WHO (2022a) also safeguards the importance of mental health in the self-awareness of the individual with an impact on their health, namely in recognising their abilities to cope with the normal demands of everyday life, to work productively and fruitfully and to be able to make a contribution to their community.

Therefore, taking into account the aspects mentioned above, it is important to study the problems inherent in the practice of physical activity and its relationship with psychological well-being, in order to identify risk

situations early on and consequently, if necessary, to be able to act to promote health through appropriate programmes adapted to the population under study, taking into account the objectives recommended by the WHO and DGS.

BACKGROUND

Entering university life is a stage characterised by an adaptation process that is sometimes complicated and compromises students' health, with an increase in psycho-affective problems such as depression and anxiety, consumption of and dependence on psychoactive substances, an inadequate diet and little or no physical activity (Pereira et al., 2018; Pereira, 2019). On the other hand, it is also a period that can be an opportunity to solidify healthy lifestyles (Pereira et al., 2018).

Thus, higher education students experience transition processes (Meleis, 2010), constituting a risk group in terms of adopting unhealthy lifestyles, making them more susceptible to changes in their health (Pereira et al., 2018; Pereira, 2019).

It is therefore essential to promote the adaptation process so that there is a healthy transition, preventing the wellbeing of higher education students from being compromised and, on the other hand, given that studies point to a decrease in physical activity rates, it is also important to identify physical activity patterns and the prevalence of sedentary lifestyles so that actions can be implemented to promote physical activity in line with WHO and DGS guidelines.

Psychological wellbeing can be related to mental health problems, the best known being depression and anxiety, problems that can affect any age and interfere with the ability to deal with daily tasks (Order of Psychologists, 2022). Psychological health is therefore just as important as physical health, and it is essential to recognise changes in health in advance, as there are effective therapies and it is entirely possible to recover and live a full, healthy and productive life (Order of Psychologists, 2022).

Psychological wellbeing is an individual perception that can have consequences for students' health behaviours and "integrates psychological aspects such as vitality, self-control and low anxiety" (Pereira et al., 2018, p.11). It is related to the ability to use skills to manage day-to-day difficulties in all life contexts, reflecting the way people think, feel, assess different situations, make decisions and process relationships with others.

Therefore, as the target population of this study is university students, their physical and psychological health is extremely important and should be a concern for teachers and all those involved in their care, making it important to study aspects related to the pattern of physical activity and psychological well-being that need instruments for their assessment with psychometric properties suitable for the population under study.

Physical activity and mental health are two concepts that are intertwined in an individual's life, and it is essential that both are in balance for their general well-being. For university students, this balance is difficult to achieve or maintain, since at this stage of life, especially the younger ones, there are stress factors inherent in body acceptance, inclusion in groups, frustrations in interpersonal and family relationships, exhausting work, university, labour activity, and in addition to all these factors, social

isolation due to the two years of pandemic that have recently been faced. All these events mean that young people are faced with realities that are different from what they are used to experiencing, pushing them out of their comfort zone, which can lead to possible symptoms of anxiety and disturbances in psychological well-being (Borges, 2021).

Bearing this reality in mind, nurses play a crucial role in promoting health and preventing complications with the aim of achieving health gains through the excellence of the care they provide. It is their responsibility to teach people how to adopt healthy lifestyles, such as physical activity and eating a balanced and healthy diet, in order to prevent complications that may arise from not adhering to these behaviours (Order of Nurses, 2001).

Physical activity can therefore be seen as a first-line non-pharmacological therapy not only for university students, but also for the whole population.

In order to understand whether there is any relationship between the pattern of physical activity and psychological well-being in students at a higher education institution, the following research question was developed: "What is the relationship between the pattern of physical activity and the psychological well-being of students, and what is their relationship with sociodemographic variables?"

METHODOLOGY

A quantitative correlational and cross-sectional study was carried out.

According to Vilelas (2020, p.216), a correlational quantitative study consists of "determining the relationships between variables in a study", verifying the nature of their relationships. The aim was to investigate the relationships between different variables through hypotheses of association, based on the observation of events, carried out by means of a questionnaire without any intervention by the researcher.

On the other hand, a cross-sectional study consists of examining the various variables and the relationships established between them "at a specific point in time", gathering information on existing health problems (Vilelas, 2020, p.225).

The general aim of this study was to analyse the pattern of physical activity among students at a higher education institution and its relationship with psychological well-being.

The following specific objectives were set:

To identify the pattern of physical activity of the institution's students; to assess the students' perception of their health and its relationship with the pattern of physical activity and psychological well-being; to analyse the pattern of physical activity and psychological well-being according to the variables: gender, body mass index, course attended, physical activity they reported practising and to describe the psychological well-being of the students.

Research question

According to Vilelas (2020), research questions take into account the socio-cultural and economic environment of the researcher, and can arise from observation of day-to-day life, professional life, in a research context, personal life and the relationships they establish.

The following research question was therefore established:

What is the relationship between the pattern of physical activity and the psychological well-being of

students and what is their relationship with sociodemographic variables?

Population and sample

The target population was students at a higher education institution.

The sample was considered to be one of convenience, based on publicising the study to participants who were known to the researchers and who were available to respond, as the study was only carried out with students from the institution who had consented to show their interest and willingness to take part. According to Vilelas (2020, p.181), a convenience sample is "one that is obtained without any preconceived plan, with the units chosen resulting from the product of fortuitous circumstances", so that the participants in the study are randomised.

Instruments used

Data were collected using a self-completion questionnaire drawn up using Google Forms and shared via the social networks and email contacts of participants known to the researchers.

A questionnaire is a data collection tool that allows you to record and plan to collect data based on questions.

Therefore, for the questionnaire to be carried out correctly, it is important that the questions are well organised and logical for the participant answering them, thus preventing them from giving up, and it should also be organised into well-defined themes (Vilelas, 2020). The aim of the questionnaire is to obtain systematised and ordered information about the population being studied, about the variables (Vilelas, 2020).

The questionnaire used included sociodemographic variables (age, weight, height, body mass index, course attended, year attended, sense of health, whether physical activity was practised and type of physical activity practised). In addition to these variables, the pattern of physical activity (assessed by the International Physical Activity Questionnaire short version [IPAQ_R]) and the psychological well-being of the students (assessed by the General Psychological Well-Being Questionnaire short version [QBEP_R]) were assessed. The IPAQ short version makes it possible to infer the pattern of physical activity from the population observation of physical activity among adults aged 15 to 69 and the QGBEP-R is a reliable and valid data collection instrument for measuring psychological well-being in higher education students. The QGBEP_R integrates psychological aspects such as vitality, self-control and low anxiety, and was translated and validated by Pereira et al. (2018). The QGBEP-R was based on the Psychological General Well-Being Index associated with the translation by Rainho et al. in 2012 and, based on an analysis of its psychometric qualities, its validity was tested, making it a "...reliable and valid instrument for measuring psychological well-being in higher education students" (Pereira et al., 2018, p.17).

The QGBEP-R consists of six items, answered on a likert scale, some with five response alternatives, from never to always, and others on an intensity likert scale, also with five response alternatives, from feeling full of energy to feeling like I had no energy or vitality at all (Pereira et al., 2018).

The total psychological well-being score is obtained by adding up the scores on the six items, whose value can vary between zero (0) and thirty (30), with "higher scores corresponding to higher levels of psychological well-being" (Pereira et al., 2018, p.11).

Physical activity was assessed using the IPAQ_R proposed by the WHO and validated for the Portuguese population by Campaniço (2016), in order to determine the physical activity pattern of the sample studied.

This instrument consists of a questionnaire designed for population surveillance of physical activity among adults, and has been tested on adults aged between 15 and 69 (Campaniço, 2016).

Quantifying physical activity takes into account energy expenditure both at rest (MET) and actively.

Campaniço (2016, p.8), referring to physical activity, mentions that "recognising patterns of physical activity is also an important way of quantifying it", referring to the type (structured and unstructured activities of low, moderate or vigorous intensity), duration (period), frequency (day, week or month) and intensity of physical activity over a limited period of time (low, moderate and vigorous intensity activities).

Thus, the calculation of physical activity intensity standards takes into account energy expenditure (which varies according to the type of physical activity) and the aspects inherent in the time and frequency in which the activity takes place, which can be classified into low, moderate and vigorous physical activity standards.

After collecting the data, the Statistical Package for the Social Sciences (SPSS) version 28 was used to organise and process the data for descriptive and inferential analysis.

The statistical tests carried out took into account the sample and its distribution, using descriptive statistics (measures of central tendency and dispersion) and inferential statistics to validate hypotheses.

Formal and ethical procedures

In accordance with the Declaration of Helsinki (1964), the research protocol was submitted to the Ethics Committee (EC) and approved before the study began (EC/IPLEIRIA/07/2023).

Participation in the study was confidential and all data was processed by authorised personnel bound by the duty of secrecy and confidentiality. Participation in the study was entirely voluntary and participants could discontinue their participation at any time.

Each of the participants signed an informed consent form, providing information about the study and consenting to the use of the data they provided as confidential and for statistical purposes.

RESULTS

Descriptive analysis

The sample for this study was made up of students from a health college which has around 800 students spread over five degree programmes. Four male students (8.34 per cent) and 44 female students (91.67 per cent) answered the questionnaire. With regard to the year of their degree, 26 students who responded were in their fourth year (54.2%), 7 in their third year (14.6%), 9 in their second year (18.8%) and 6 in their first year (12.5%), aged between 18 and 25.

Table 1

Distribution of students in the sample according to gender and age

Sex			
Age	Male	Average	22,50
		Median	22,50
		Minimum	21
		Maximum	24
		Standard deviation	1,291
	Female	Average	21,23
		Median	21,00
		Minimum	18
		Maximum	25
		Standard deviation	1,854

The questionnaire for this study was shared with students from various courses at a higher education institution in the centre of Portugal, and more responses were obtained from students in their fourth year and from the nursing course, possibly due to the fact that these students may be more aware of the topic and of completing the survey, considering that they already have more training in the area of research at the fourth year level.

The physical activities reported as most practised are the gym, running and walking, the latter being the most practised by the individuals in the sample studied.

Regarding the feeling of health, the result was that the male members consider their feeling of health to be good to excellent, while in the case of the female members, some consider their feeling of health to be lower than the male characterisation, namely 2.27% consider their feeling of health to be bad and 9.09% consider it to be reasonable.

In line with this, the sample also found that the male members had a higher average feeling of psychological well-being than the female members, as shown in table 2.

Table 2

Feeling of psychological well-being in relation to sex

	Sex					
	Male			Female		
	Average	Maximum	Minimum	Average	Maximum	Minimum
QGBEP	19	27	12	16	25	7

Another interesting aspect to characterise is the participants' pattern of physical activity, which is described in table 3.

Table 3

Participants' physical activity patterns

Descriptive Statistics					
	N	Minimum	Maximum	Average	Standard deviation
Vigorous Physical Activity Pattern	23	0	7	2,46	2,093
Pattern of Moderate Physical Activity	13	0	6	1,79	1,713
Low Physical Activity Pattern	12	0	7	4,21	2,133
Sedentary Activity	48	60	720	269,58	161,745
Valid N (from list)	48				

Inferential analysis

To analyse the data, after testing for normality and taking into account the sample size (n=48), we opted to use non-parametric tests and Spearman's non-parametric correlation.

Hypothesis tests were carried out using the U-Mann-Whitney test to study the differences in the distribution of the results obtained in relation to the variables physical activity pattern, psychological well-being and between these and the sociodemographic variables, and it was found that although these tests do not show significant statistical significance, there are differences that are important to analyse.

As for the use of Spearman's non-parametric correlation, it was used to verify the association between variables, and the direction of the association can be direct (positive) or inverse (negative) and with different strengths of association depending on whether it is closer to or further from zero (Vilelas, 2020).

Thus, in relation to gender, analysing the results of the relationship between psychological well-being and gender shows that although there is no statistical significance, there are differences between females and males, as can be seen in table 4.

Table 4

Relationship between psychological well-being and sex

Sex		N	Middle rank	Average	Standard Deviation	Median	Minimum	Maximum	Mann-Whitney U	P
QGBEP	Male	4	28,50	18,50	6,245	17,5	12	27	72,000	0,550
	Female	44	24,14	16,02	5,115	17	7	25		
	Total	48								

It can thus be seen that male members tend to have higher scores for psychological well-being.

On the other hand, with regard to the relationship between the practice of physical activity and psychological well-being, it was found that there is no statistically significant relationship, however, there are also differences, as can be seen by analysing table 5.

Table 5

The relationship between physical activity and psychological well-being

Nursing Students (n=48)								Mann-Whitney U test	
Pratising physical activity		N	Average	Med	SD	Min	Max	sig	U
QGBEP	Low	12	15,33	13,50	4,658	8	24	0,559	255,500
	Moderate	13	16,08	17,00	4,752	8	22	0,862	220,00
	Vigorous	23	16,78	19,00	5,792	7	27	0,508	191,500

Although there is no statistically significant relationship, comparing the mean values obtained in relation to psychological wellbeing and the practice of physical activity at different intensities shows that students who perform physical activity at a higher intensity tend to have better psychological wellbeing when compared to those who practice physical activity at a lower intensity.

Other hypotheses were also tested to check the relationship between psychological wellbeing and physical activity and sociodemographic variables. As mentioned above, there were no statistically significant relationships, but some differences are noteworthy, and it is interesting to note that those who say they practise physical activity tend to have a greater sense of health and better psychological wellbeing (based on the descriptive analysis).

The study thus revealed differences that can be analysed using descriptive analysis, but also the possible existence of measurable associations between variables.

Therefore, despite the fact that correlations do not provide relationships of causality, but rather a recognition of patterns of association between the variables analysed, it was decided to analyse and apply Spearman's non-parametric correlation, taking into account Vilelas (2020), for the interpretative considerations presented in table 6.

Table 6

Spearman correlation between variables

Correlations									
			Age	Weight	Height	Feeling Healthy	Sedentary Activity	BMI	QGBEP
Spearman's Ratio	Age	Coeficiente de Correlação	1,000	0,214	0,174	-,340*	0,045	0,174	-0,272
		Sig. (2 extremidades)		0,145	0,238	0,018	0,764	0,237	0,062
	Weight	Coeficiente de Correlação	0,214	1,000	,620**	-0,184	0,264	,833**	-0,066
		Sig. (2 extremidades)	0,145		0,000	0,211	0,070	0,000	0,656
	Height	Coeficiente de Correlação	0,174	,620**	1,000	-0,127	0,098	0,130	0,142
		Sig. (2 extremidades)	0,238	0,000		0,391	0,508	0,378	0,337
	Feeling Healthy	Coeficiente de Correlação	-,340*	-0,184	-0,127	1,000	-0,124	-0,217	,554**

		Sig. (2 extremidades)	0,018	0,211	0,391		0,400	0,138	0,000
	Sedentary Activity	Coeficiente de Correlação	0,045	0,264	0,098	-0,124	1,000	0,267	-,353*
		Sig. (2 extremidades)	0,764	0,070	0,508	0,400		0,066	0,014
	BMI	Coeficiente de Correlação	0,174	,833**	0,130	-0,217	0,267	1,000	-0,222
		Sig. (2 extremidades)	0,237	0,000	0,378	0,138	0,066		0,129
	QGBEP	Coeficiente de Correlação	-0,272	-0,066	0,142	,554**	-,353*	-0,222	1,000
		Sig. (2 extremidades)	0,062	0,656	0,337	0,000	0,014	0,129	
		N	48	48	48	48	48	48	48

*. The correlation is significant at the 0,05 level (2 ends).

**. The correlation is significant at the 0,01 level (2 ends).

Analysing Table 6, it can be seen that there are relationships of association between variables, namely between feeling healthy and age (weak negative correlation), between weight and height (moderate positive correlation), between weight and body mass index (strong positive correlation), between feeling healthy and psychological well-being (moderate positive correlation) and between minutes per week of sedentary activity and psychological well-being (weak negative correlation).

DISCUSSION

The academic study enabled an interpretative analysis to be made of the relationship between the pattern of physical activity in students at a higher education institution and its relationship with psychological well-being, and although no statistically significant relationships were detected, there were important differences, with those who practise a higher level of physical activity tending to have better psychological well-being.

These results are similar to those of the study carried out by Werneck and Navarro (2011), in which it is mentioned that the regular practice of physical exercise is associated with various psychological benefits, such as a reduction in stress, anxiety and depression, as well as an increase in self-concept and psychological well-being, concluding that the higher the level of physical activity practised, the lower the difference in mood and the higher the psychological well-being of adolescents.

In this study, the physical activities reported as most practised were gym, running and walking, the latter being the most practised by the individuals in the sample studied. Quesado et al. (2020) also obtained similar results, mentioning that the activities most practised by higher education students are gym, walking and swimming.

Thus, given the sample studied, it was found that in relation to the activities mentioned, a total of 25 students reported practising physical activity, which corresponds to 52.08% of the sample, which

compared to the study by Quesado et al. (2020) is a low result, since in that study 73.65% of the sample reported practising physical activity. This may indicate that there may be some lack of knowledge about what physical activity is and its different patterns among the individuals in the sample studied, as only 23 female students and 2 male students reported practising physical activity, but when they filled in the IPAQ short version, they all reported practising physical activity that fell within one of the three patterns of physical activity studied.

With regard to time spent in sedentary activities, the results obtained after the study revealed that for the sample studied, the average student spends 4 hours and 29 minutes a day sitting down. This fact is also observed in the study by Quesado et al. (2020), since according to their results, 78.09 % of students spend around 4 or more hours sitting during a day. It is important to note that the WHO (2020) recommends that adults limit the amount of sedentary time by replacing it with any type of activity, which would provide health benefits.

Therefore, regular physical exercise can be a fundamental factor in disease prevention, and the role of health professionals and sports professionals in encouraging physical exercise is crucial.

Health promotion in terms of physical activity can also be important for promoting psychological well-being.

Health promotion is defined as a process of empowering people to increase their self-control and improve their health. This process is based on an individual approach, including environmental and social interventions, which are not, for the most part, the focus of higher education institutions (Ferreira et al., 2017).

Another important aspect is inherent in productivity and learning outcomes, in which physical activity can play an important role. In the study by Rodrigues and Reis (2020), healthy lifestyle habits not only lead to more productive lives and improvements in learning, but also make an active contribution to society, with schools playing a fundamental role in promoting healthy choices. (2018) also showed that the practice of team sports promotes higher levels of positive relationships with other people, the creation of life goals, self-acceptance and psychological well-being.

It should be emphasised that nurses play an important role in this regard, as they help to equip citizens with the knowledge, skills, attitudes and values that will help them to make choices and decisions that are appropriate for their health (Order of Nurses, 2011). It would therefore be interesting to promote and encourage the practice of team sports in the different higher education institutions, both in terms of curricular activities and extracurricular activities, starting with institutions with undergraduate and postgraduate training in the areas of health.

CONCLUSION

The study enabled the proposed objectives to be met, and it was possible to deduce that for the sample studied, the pattern of physical activity has an impact on students' psychological well-being, and that those who practise a higher level of physical activity tend to have better psychological well-being.

It can be concluded that there is a tendency for older students to have a lower sense of health and that students who have a better psychological well-being coefficient and consequently a better sense of health

have less time spent in sedentary activities.

The fact that the number of people in the sample was small and that the study was limited to just one higher education institution was a limitation in terms of the results obtained, which meant that it was not possible to obtain statistically significant relationships.

It is therefore suggested that future studies with larger samples and in different institutions could be carried out, taking into account the issues addressed.

It is also suggested that there should be greater investment in health literacy about what physical activity is, its different patterns and the WHO and DGS guidelines for reducing sedentary lifestyles and improving physical activity rates.

Another suggestion that could be important is to introduce curricular units in the syllabuses of all higher education courses that could include the promotion and encouragement of physical activity and to energise extracurricular activities that take this practice into account and involve the entire academic community.

It is also concluded that the existence, availability and publicising of follow-up services for psychological support (some of which already exist today), in order to promote a safe space for students to express their concerns, frustrations and emotions related to the academic experience could also be important.

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