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Original Article

KNOWLEDGE ABOUT RECOMMENDATIONS FOR PHYSICAL ACTIVITY AND PERSONAL PRACTICES OF PRIMARY HEALTH CARE PROFESSIONALS

CONHECIMENTO SOBRE AS RECOMENDAÇÕES DE ATIVIDADES FÍSICA E PRÁTICA PESSOAL DE PROFISSIONAIS DA ATENÇÃO PRIMÁRIA EM SAÚDE

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RESUMO

Visto que as recomendações de atividade física (AF) moderadas e vigorosas para a saúde se constituem como uma importante informação a ser compartilhada no aconselhamento sobre AF, o presente estudo teve como objetivos avaliar o nível de conhecimento de profissionais da saúde sobre as recomendações internacionais de AF para adultos e idosos e verificar se existem associações entre a motivação para a prática de AF com o tempo de AF no lazer, o estágio de prontidão à mudança de comportamento e o índice de massa corporal (IMC) destes profissionais. Para isso, em 2021 foi aplicado, de maneira remota, um questionário com profissionais de saúde. A pesquisa contou com 34 participantes, que responderam questões sociodemográficas, de saúde, conhecimento sobre as recomendações internacionais de AF para adultos e idosos, tempo de AF, estágio comportamental e motivações para a prática de AF. Das cinco questões que avaliaram o conhecimento dos profissionais, três tiveram a maior prevalência de respostas erradas e, os profissionais que possuem uma motivação mais interna para a prática de AF apresentaram associação significativa com atingir as recomendações mínimas de AF e IMC eutrófico. É importante a qualificação profissional aliada ao incentivo à prática de AF, por meio de conteúdos que considerem motivações internas.

Palavras-chave: Profissionais de saúde. Atividade física. Aconselhamento. Motivação. Treinamento.

ABSTRACT

Since the recommendations of moderate-to vigorous physical activity (PA) for health constitute important information to be shared in counseling practice, the present study was aimed to evaluate the level of knowledge of health professionals about the international PA recommendations for adults and elderly and to verify if there are associations between PA motivation with leisure time PA, readiness to change behavior and body mass index (BMI) of these professionals. In 2021, a questionnaire was applied remotely with health professionals from Brazilian health system. The survey had 34 participants, who answered sociodemographic and health questions, knowledge about international PA recommendations for adults and the elderly, PA duration, behavioral stage and motivations for PA practice. Of the five questions that assessed the knowledge of professionals, three had the highest prevalence of wrong answers, and professionals who have a more internal motivation to practice PA showed a significant association with reaching the minimum PA and eutrophic BMI recommendations. Professional qualification is important, together with encouragement to practice PA, through contents that consider internal motivations.

Keywords: Health professionals. Physical activity. Counseling. Motivation. Training.

Introduction

In the current understanding, physical activity (PA) is related to human development, in different moments of the life cycle. With the advancement of research that attests to its relationship to positive health indicators, in recent decades, the debate on PA has reached an important space in the international public health agenda[1]. In this continuum, the actions led by the World Health Organization[2,3] and other agencies such as the International Society for Physical Activity and Health can be highlighted, which culminated, for example, in the inclusion of PA in the list of national public policies, as well as in the elaboration and dissemination of documents, such as the Brazilian physical activity guideline, which aim to guide the population regarding the domains, benefits, types, doses, barriers and facilitators for the practice[4].

Recognizing that such guidance related to PA can be provided by several health professionals, it is important that they can approach and appropriate the most current knowledge on the subject and, in particular, the recommendations for the practice of moderate physical

activities-to vigorous (e.g., in adults: at least 150–300 minutes of moderate-intensity aerobic PA; or at least 75–150 minutes of vigorous intensity aerobic PA)[3], in order to guide a routine of counseling on physical activity[5].

In addition, research on the level of knowledge of health professionals in relation to the scientifically valid knowledge of PA can support the development of educational strategies appropriate to professional practice. It is known that having knowledge about PA recommendations and adhering to a more active life can be beneficial for one's own health and reflect in a greater amount of advice to health users[6,7,8].

Institutions linked to population health reinforce the importance of strategies to promote PA in the Primary Health Care environment[2,1], especially regarding the frequency of counseling on PA by health professionals[9]. Even if it is pointed out in the literature that the level of knowledge and the personal routine of practices are variables that favor the development of counseling opportunities [6,7,8], there are still few studies that seek to discuss these variables from the perspective of motivation to practice physical activity.

Based on a systematic review study, previous evidence suggests that strategies that stimulate a more internal motivation to practice PA are related to more lasting active behaviors for adults and elderly[10], that is, motives related to pleasure, fun and lifestyle are associated with a more active approach. Independent of motivation, in contrast, motives related to pressure and reward are more controlled motivation strategies.

In this way and due to the recent update of the international recommendations on physical activity[3], it is opportune to investigate the knowledge of professionals and their personal practices of PA and health, so that understanding these variables associated with the level of motivation can provide subsidies for benefit more active behaviors for the one who gives the counseling and the one who receives it, through strategies that are consistent with scientific evidence.

Therefore, our first aim was to evaluate the level of knowledge of health professionals about the international recommendations of PA for adults and the elderly. Also, the present research sought to identify if there are associations between the motivation to practice PA and the time of PA in leisure time, the stage of readiness to change behavior and the body mass index of these professionals.

Methods

Delineation

This is a cross-sectional study, written in accordance with the items on the Strengthening the Reporting of Observational studies in Epidemiology – STROBE list[11]. Data collection took place between March and September 2021, involving health professionals of Brazilian health system who work at the Regional Health Department of the Piracicaba region (DRS-10), which covers health facilities in 26 cities belonging to the Urban Agglomeration of Piracicaba, in the interior of the state of São Paulo. The study was approved by the Ethics Committee for Research with Human Beings (protocol nº 4,532,038).

Sample

At first, a partnership was established with the coordination of the DRS-10 and after approval of the study, the electronic questionnaire was disseminated by email and whatsapp groups of managers of Primary Health Care, linked to the cities that make up the DRS-10, so that they could pass it on to all health professionals working in Basic Health Units (BHU). Within the period of the research, five reinforcements were made to the DRS about the study, with positive and agile feedback for forwarding the research, in addition to the participation of the main researcher in a monthly technical meeting, held with the managers of the cities linked

to the department. Thus, in the period that the questionnaire was open, 34 health professionals agreed to participate.

Assessment Instruments

An electronic questionnaire was prepared and applied remotely, through Google Forms. We sought to survey the sociodemographic profile, health conditions (physical activity, chronic diseases and smoking) and knowledge about PA recommendations, based on the development of alternative questions. Body mass and height were self-reported by professionals and the Body Mass Index (BMI) (weight/height²) was calculated, classified according to the standards of the World Health Organization[12]. The International Physical Activity Questionnaire - IPAQ, long version, was also applied to measure the total time of leisure-time PA per week[13], for this, the sum of the practice of walking + moderate physical activities + vigorous physical activities were performed.

The stage of Readiness to Change in Behavior for PA was measured from a single question referring to the Transtheoretical Model[14] - "Do you practice PA regularly in your free time?" - (a) No, I do not intend to in the next 6 months (Pre-contemplative); (b) No, but I intend to start in the next 6 months (Contemplative); (c) No, but I intend to start in the next 30 days (Preparation), (d) Yes, I have been practicing for less than 6 months (Action) or (e) Yes, I have been practicing for more than 6 months (Maintenance).

To assess the motivation to practice physical exercises, the BREQ-3 questionnaire was applied, translated and validated for the Brazilian adult population, which comes from the Theory of Self-Determination. It consists of 23 questions on a Linkert scale, from 0 to 4 pts. From the questionnaire, the Self-Determination Index (IaD) was calculated using a validated formula[15,16].

Statistical Analysis

Descriptive statistics were used for data analysis, presenting observed frequency, mean and standard deviation. BMI was classified as follows: eutrophic ($\leq$24.9 kg/m²), overweight ($\geq$25.0 to 29.9 kg/m²) and obese ($\geq$30.0 kg/m²). Physical activity data were dichotomized according to the minimum international recommendations ($\leq$149 min/week and $\geq$150min/week) and the and the IaD (mean: 11.2) and BMI (mean: 27 kg/m²) from the mean values found in the sample Inferential analysis was applied using Pearson's chi-square or Fisher's exact test. In Figure 1, IaD was analyzed as exposure and physical activity as an outcome. Figure 2 presents two conditions, being the IaD and physical activity as exposures and the BMI as the outcome. Data were analyzed using SPSS 26 software, adopting p=0.05 as significance.

Results

Altogether, 34 health professionals working in nine of the twenty-six cities that make up the DRS-10 responded to the electronic questionnaire. As for the profile of the respondents, an average age of 40.4+8.6 years was observed, with a predominance of female professionals (n=31; 91.2%) and with an income between five and eight minimum wages (n =15; 44.1%), nine or more minimum wages (n=13; 38.2%), from one to four (n=5; 14.7%) and one person preferred not to answer about income (2.9%). Twenty-two nursing professionals (65.7%) participated, six dentists (17.0%), three nursing technicians (8.6%), a physical education professional (2.9%), a physician (2.9%) and an oral health assistant (2.9%). Regarding health conditions, the majority answered not to smoke (n=31; 91.2%), not having chronic diseases (n=21; 61.8%) and performing PA for more than 6 months (n=21; 61.8%).

It was observed that the professionals have an average time of professional practice in the current BHU of 6.4±7.2 years and an average time of work in BHU of 14.1±9.2 years, in addition, 70.6% of the participating BHU have a Family Health Team. Regarding the knowledge of health professionals about the content and recommendations of PA for adults/elderly, it was found that 18 (52.9%) health professionals consider that PA is "any daily movement". When looking at the questions that seek to understand the knowledge of professionals about the recommendations of PA for adults/elderly, it was found that 55.9% consider "3 times a week" the ideal number of days to have health benefits. Also, 41,2% of professionals indicated "150 to 300 min/week" as the correct time to have health benefits, while 58.8% had the wrong answer or said they did not know. Also, 79.4% and 67.6% believe that PA can be performed in "one or more sessions throughout the day" and that the recommended intensity for adults and elderly people who are looking to improve their health is "light to moderate", respectively.

Table 1. Knowledge of health professionals working in BHU about the content and recommendations of PA for adults/elderly (n=34)

Physical Activity Content and Recommendations	n	%
1. Example of physical activity:		
Exercises practiced only in free time: Ex: walking, running, training at the gym, sports and etc.	16	47.1
Any day-to-day movement that uses up energy. Ex: Climbing stairs, cycling to work, etc.	18	52.9
2. How many days a week do you need physical activity to produce health benefits?		
3 times a week	19	55.9
The frequency does not matter, as long as the minimum recommended duration per week is reached	9	26.5
Every day of the week, without exception	4	11.8
I don't know	2	5.8
3. What is the minimum time per week for physical activity to produce health benefits for adults and the elderly?		
From 150 to 300 minutes per week	14	41.2
From 60 to 149 minutes per week	9	26.5
30 to 60 minutes per week	6	17.6
I don't know	4	11,8
Up to 30 minutes per week	1	2.9
4. Should physical activity be performed in just one session or can it be fragmented throughout the day?		
It can be in one or more sessions throughout the day.	27	79.4
I don't know	3	8.8
Only one session, short term	2	5.9
Only one session, no matter what time	2	5.9
5. If an adult/elderly person is doing physical activity to improve their health, which of the following statements best describes how much effort they need to put in?		
From light to moderate intensity	23	67.6
It must not cause changes in the breathing	7	20.6
Moderate to vigorous intensity	4	11.8

Note: BHU – Basic Health Unit
Source: authors

On average, the health professionals participating in the research reach the international recommendations of moderate and vigorous PA in leisure time (mean of 338.6 minutes/week), have an average IaD of 11.2 for the practice of PA and present Mean BMI of 27 kg/m² (Table 2).

Table 2. Profile of leisure-time physical activity, motivation and BMI of health professionals (n=34)

	Mean±SD
Leisure Walking Time (min/wk)	68.9±120.9
Time of Moderate Activity in Leisure (min/wk)	155.2±181.6
Time of Vigorous Leisure Activity (min/wk)	114.4±219.4
Total leisure PA time (min/wk)	338.6±346.7
Motivation for the practice of PA (IaD)	11.2±8.3
BMI (Kg/m²)	27.0±7.3

Note: PA - Physical Activity; IaD – Self-Determination Index; BMI - Body Mass Index
Source: authors

In Figure 1, it was found that having a more internal motivation to practice PA (IaD≥11.2) is significantly associated (p=0.000) with reaching the recommendations (≥150 min/week), as well as being in the behavioral stage of action/maintenance for the practice of PA (p=0.000).

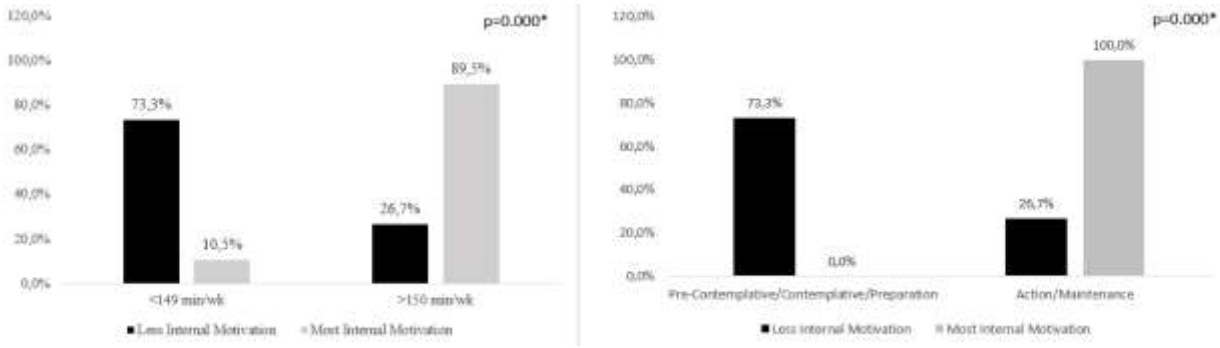

Figure 1. Association between motivation to practice physical activity with the total time of leisure-time physical activity and the behavioral stage of readiness to practice physical activity of health professionals (n=34)
Note: *Pearson's chi-square test
Source: The authors

Figure 2 indicates that having a more internal motivation to practice PA (IaD≥11.2) and reaching the recommendations (≥150 min/week) is significantly associated (p=0.020; p=0.015, respectively) in having a BMI (Kg/m²) classified as eutrophic.

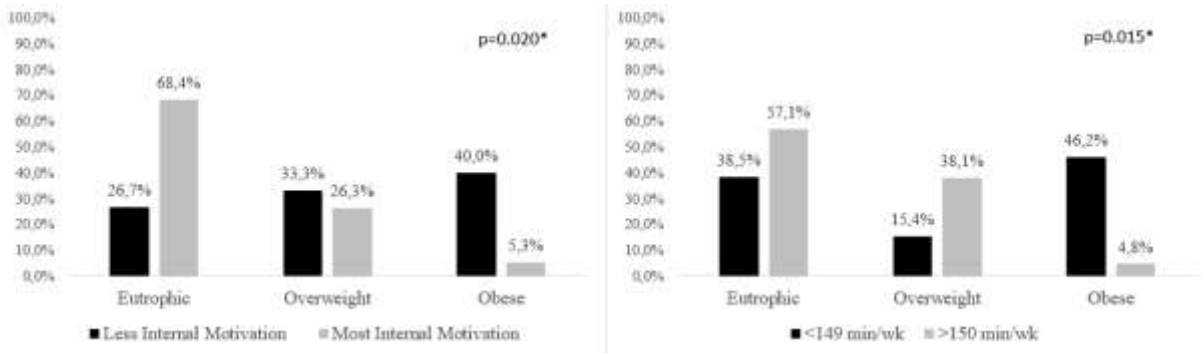

Figure 2. Association between motivation to practice physical activity, total leisure-time physical activity and body mass index of health professionals (n=34)
Legend: *Fischer's exact chi-square test
Source: The authors

Discussion

With the objective of verifying the knowledge of health professionals about the international recommendations of moderate and vigorous physical activities for adults and the elderly, the present study brings as one of its main results that the professionals got right two of the five questions that evaluated the content and knowledge of the recommendations for adults/elderly.

In two previous surveys with Brazilian health professionals, carried out in 2011, 93.2% and 97.6% of professionals were not familiar with the recommendations for physical activity[17,7]. The PA Guide for the Brazilian population[4] was only recently launched, with a complement aimed at health professionals[18], which may favor the dissemination of recommendations to professionals, since one of the objectives after the document's release is its wide dissemination in the National territory. In addition, to date, there are no remote courses disseminated by educational platforms, such as UNA-SUS, platform Arouca, Telesaúde and Fiocruz, for example, for professional qualification.

It is interesting to note that, despite the majority of professionals (52.2%) reporting that PA can be "Any day-to-day movement that uses up energy", there is still a portion of professionals who consider PA as "Exercise practiced only in free time". However, the idea that "every movement counts" is something relatively new in terms of scientific dissemination, being effectively incorporated in the update of the international recommendations on PA published in 2020[2]. This result points to a demand for the dissemination of these points, in order to disseminate the view that "all PA counts" regardless of the domain where PA is practiced.

The second objective of the present study was to verify if there are associations between the motivation to practice PA with the time of PA in leisure, the stage of readiness to change behavior and the BMI of these professionals. Having a more internal motivation for PA was found to be associated with meeting the recommendations, being in the action/maintenance stages of physical activity, and having a eutrophic BMI.

In this sense, the results found are in line with the scientific literature. Similar to the results presented in the systematic review by Teixeira et al.[10], those with more internal motivation to practice PA perform more time of PA and are more likely to meet the recommendations, which was found in a mixed and very diverse sample of healthy individuals, people with chronic diseases, overweight/obesity and exercise practitioners. The most self-determined motivations are favored by pleasant and fun activities and by environments that do not issue judgment and pressure, for example, as opposed to approaches and environments that stimulate fear, which come from controlled motivations[19].

Still, it is advisable that, in addition to proposing updates to health professionals on PA recommendations, there is also an incentive for them to have a more active life, since this behavior is closely related to recommending more PA to the health users[20,7]. However, with the high prevalence of physical inactivity[21], it is necessary to remodel dialogue strategies and propose training actions on the content of PA from a more democratic and encouraging perspective, thus, it is advisable to incorporate educational content that directs the search and guide more active behaviors through more internal motivations for the practice, that is, endowed with meanings and feelings.

Another point found was that the most internal motivation to practice PA was significantly associated with the eutrophic BMI category. It is known that weight loss and its maintenance is a multifactorial and complex condition, however, evidence suggests that more autonomous and active behaviors are positively related to the weight variable[22]. In a behavioral intervention for adult women that aimed to promote autonomous behaviors and a more internal motivation to practice PA based on the Self-Determination Theory (STA), which considers human motivation as the central axis, the authors found a significant reduction in the BMI, longer duration of moderate-vigorous PA and increase in the number of steps per day after 12 months, compared to the control group, in addition to a large effect size for the intervention[23].

Still, through more robust evidence, provided by a recent meta-analysis that sought to evaluate health promotion and disease control interventions from the perspective of STA, the authors found that autonomous (more internal) motivation is related to positive behaviors of health, with modest effects on physical and mental health parameters[24]. In another meta-analysis that sought to analyze interventions in health contexts, also with STA, it was found that support for autonomy within health care is positive and predicted higher levels of basic psychological needs (autonomy, competence and connection), associating with the patient's well-being and favoring health behaviors, such as tobacco abstinence, taking prescribed medications and being physically active[25].

Regarding limitations, alternative issues can make it difficult to represent the real professional knowledge, however, the research was developed remotely and in the context of a pandemic, which in itself is a limitation in the face of the imposed reality. In addition, it is worth considering that “knowing and guiding” the recommendations for moderate and vigorous physical activities is just one of the themes linked to the concept of promoting PA within the Unified Health System, which does not only aim at increasing volume or intensity. For the promotion of PA to occur, in its broader purpose, a longitudinal process of listening, dialogue and adaptation of guidelines to the users' lifestyles is necessary, so that the change in behavior related to PA can be sustained.

The low number of participants may be a limiting factor in the analyses, although adequate statistics have been used to minimize errors. Also, professionals from nine different cities participated, with data diversity being a positive condition. On the other hand, studies involving the variables analyzed from the perspective of motivation to practice PA are scarce, especially with health professionals. Thus, the results found are presented as a strategy to deal with the content of PA from more internal motivations, both in terms of professional training and personal practice.

Therefore, according to the main results, qualifications are suggested for health professionals on the content of PA to optimize counseling to the population, together with encouraging them to lead a more active life, based on training that considers motivation more internal. We also recommend new surveys regarding the outcomes analyzed in this study with professionals from different regions of the country, in order to reinforce or not the findings.

Conclusions

Health professionals partially know the PA recommendations for adults/elderly, although they meet the leisure PA recommendations. The most internal motivation (IaD≥11.2) for the practice was significantly associated with reaching the minimum recommendations for physical activity, being in the behavioral stage of action/maintenance for the practice and having a BMI in the eutrophic condition, as well as reaching the recommendations of PA was also associated with BMI in the eutrophic category.

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