Physical activity guidelines awareness and counselling practice in relation to health care providers' knowledge and behaviour in Qatar

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Abstract

Background: Health care providers represent a credible source to encourage their patients to be physically active. This study aims to assess the level of health care providers' Physical Activity Vital Sign (PAVS) and physical activity knowledge in relationship with health care providers' physical activity interventions.

Method: The study recruited 102 health care professionals from different specialties during the first Qatar physical activity guideline awareness campaign. The data were collected from subjects with information about their PAVS, physical activity knowledge, and counselling practice.

Result: Public health professionals, Physiotherapists, and Family physicians were more active than other health care providers. Verbal advice on physical activity was the most common intervention offered by health care providers to their patients. Health care providers with a high level of PAVS tend to prescribe more referrals of their patients to fitness coaches.

Conclusion: The healthcare providers are influenced by their physical activity vital sign (PAVS) and physical activity knowledge.

Key words: Physical activity, Health care providers, Counselling, physical activity vital sign.

Introduction

Sedentary behavior has become a significant public health threat all over the world. Ranked as the fourth leading risk factor for global mortality, physical inactivity contributes to around 3.2 million deaths worldwide(1). It is commonly known that participation in regular exercise reduces the risk of chronic diseases and premature mortality which eventually helps in reducing the burden exerted on healthcare systems and the economy(1-3).

Global physical activity guidelines and strategies were developed in order to spread awareness about the importance of physical activity; however, the prevalence of obesity and physical inactivity is still on the rise. Hence, it is essential to tackle such an issue differently and find other subsequent means to reach a larger scale of the community. Promoting physical activity has been considered as a public health priority and essential at each of the individual, family, healthcare-setting, community, and governmental levels(1,3). There is a growing literature that confirms the efficacy of promoting physical activity at the primary care settings(4-6). It is deemed that primary care physicians have an important role in affecting the health of a population. They represent a credible source with the authority to educate patients about the importance of physical activity and encourage them to integrate it into their daily routine (7-9). However, minimal research has been done in Qatar on exploring the physical activity involvement of health care professionals and their attitudes towards incorporating physical activity in their consultation as part of the management plan for their patients.

The main purpose of this study was to evaluate the level of awareness among healthcare providers of different backgrounds regarding physical activity and assess their situation concerning incorporating physical activity within their therapeutic plans, in an attempt to predict the appropriate educational and strategic needs for the implementation of exercise interventions in the health care setting.

Method

The study recruited 102 health care providers from different health professional backgrounds to meet the study's goal regarding assessing their level of physical activity awareness, physical activity behavior and counseling practice of physical activity.

Qatar's National Physical Activity Guideline was officially launched in February 2015 in order to highlight the importance of physical activity in health promotion, disease prevention, and treatment for certain chronic conditions. A workshop was conducted to target professionals from different healthcare backgrounds and sectors.

Subjects were handed pre- and post-tests prior to and after delivering the guidelines to evaluate the current status of healthcare providers and the effect of such symposium on raising their awareness. The tests included basic questions to specifically assess the knowledge about physical activity among children and adults and the therapeutic effect of physical activity, and precautions in managing common chronic diseases, e.g. diabetes, hypertension, ischemic heart disease, depression, and osteoarthritis. Some demographic data were collected from subjects with information about their physical activity behavior using physical activity as a vital sign (PAVS), and their use of exercise as their therapeutic plan with their patient. These questions were adopted from the "Active Australia Survey" which was initially designed to measure individuals' participation in physical activity and to assess their knowledge regarding public health messages about health benefits of physical activity(10).

Data were entered directly into the Statistical Package for Social Sciences (SPSS) program using specific codes for each of the test items. All statistical analyses were conducted using the IBM SPSS (SPSS version 21.0, IBM Corp., Armonk, NY, USA).

Results

Baseline data

a. Demographic characteristics

The characteristics of the study subjects are represented in Table 1. The mean age was 39.5 ± 8.8 years, and the subjects had an average experience of 13.5 ± 8.4 years. The study subjects were mainly specialized in family medicine (16.9%), followed by public health (14.7), as shown in Figure 1.

b. Physical activity vital sign (PAVS)

When exploring the PAVS with respect to the background and specialty of each subject (Figure 2), the subjects have a mean PAVS 148.8 ± 90.1 mins/ week. it was noticed that health care professionals with a public health background had the highest PAVS with an average of 290 minutes per week, followed by physiotherapy (216 minutes per week) and family medicine (158 minutes/week). While other specialties reported PAVS below 150 minutes.

c. Use of physical activity intervention

On the other hand, the correlation between different factors and the type of advice given to patients was explored and illustrated in Table 2. Most subjects provide verbal advice to their patients. Those who exercise the most during the day (45 minutes/day) tend to prescribe a pedometer to their patients. Interestingly, those who reach a mean physical activity vital sign (PAVS) up to 170 minutes per week, which is above the average recommended amount of 150 minutes per week, are referring their patients to a fitness coach.

d. National physical activity guideline knowledge assessment

When we assessed the national physical activity guideline knowledge of the participants, we found a significant increase in knowledge after the awareness session. In the pre- and post-tests, the total correct answers were initially 69.3% and increased up to 81.1% after launching

Table 1: Characteristics of the study subjects

Characteristics	Overall Population Mean ± SD
Age *(years)*	39.5 ± 8.8
Experience *(years)*	13.5 ± 8.4
Physical activity vital sign (PAVS) *(minutes/week)*	148.8 ± 90.1

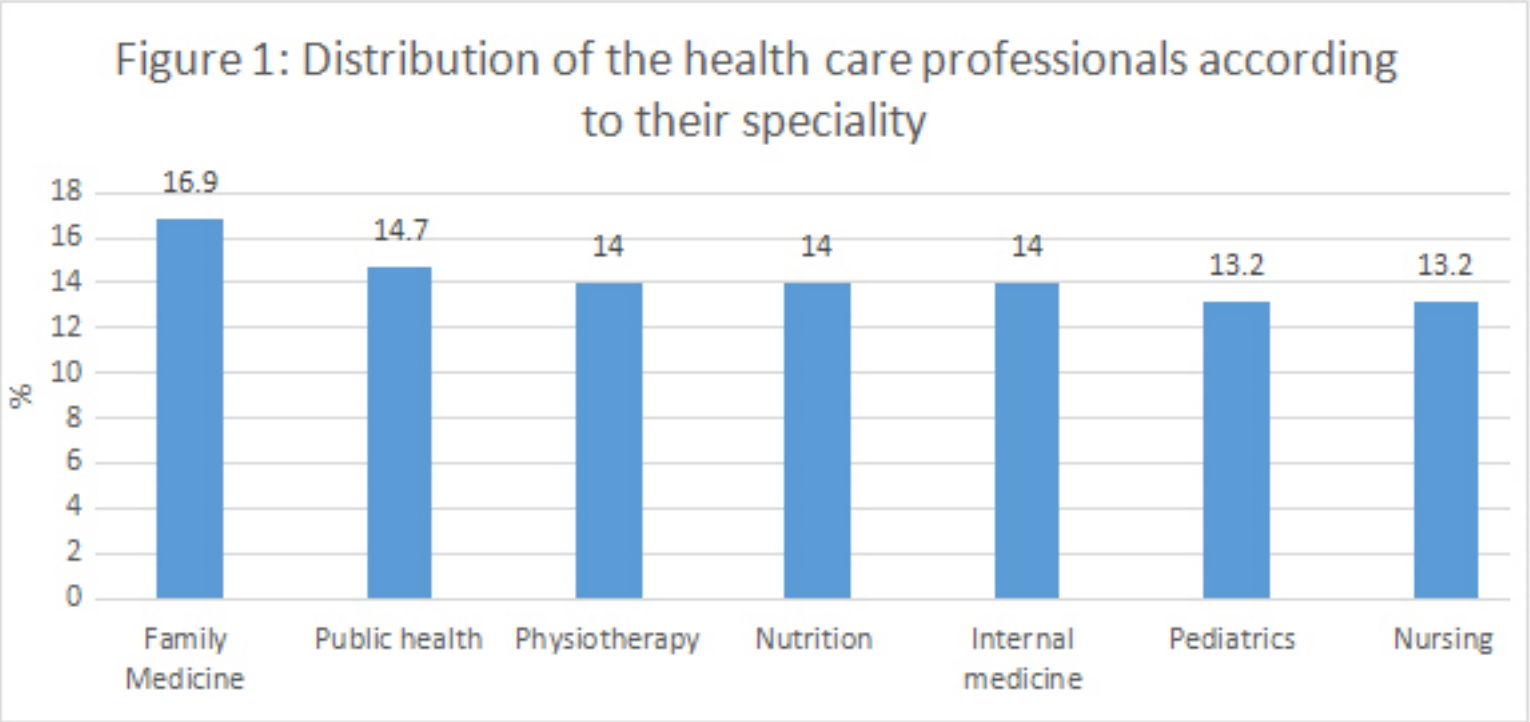


Table 2: Correlation between different factors and the type of advice given to patients

	Verbal advice Mean ± SD	Pedometer Prescription Mean ± SD	Referral to Fitness Coach Mean ± SD
Age *(years)*	39.5 ± 8.7	41.5 ± 13.7	43.3 ± 11.0
Experience *(years)*	13.3 ± 8.0	15.8 ± 9.4	16.1 ± 9.0
PAVS *(Mins/week)*	140.3 ± 89.0	160.0 ± 62.4	170.3 ± 115.0

the physical activity guidelines, t = 19.12, p < 0.0001, as shown in Figure 3. Additionally, when exploring the distribution of correct responses based on the theme of the pre-test questions, as observed in Figure 4, the majority of subjects were found to be more familiar with the therapeutic-related field with a test score of (55.9 %) followed by general guidelines for adults (53.5%), while subjects showed a low level of knowledge in the general guidelines for children with a test score of (19.8%).

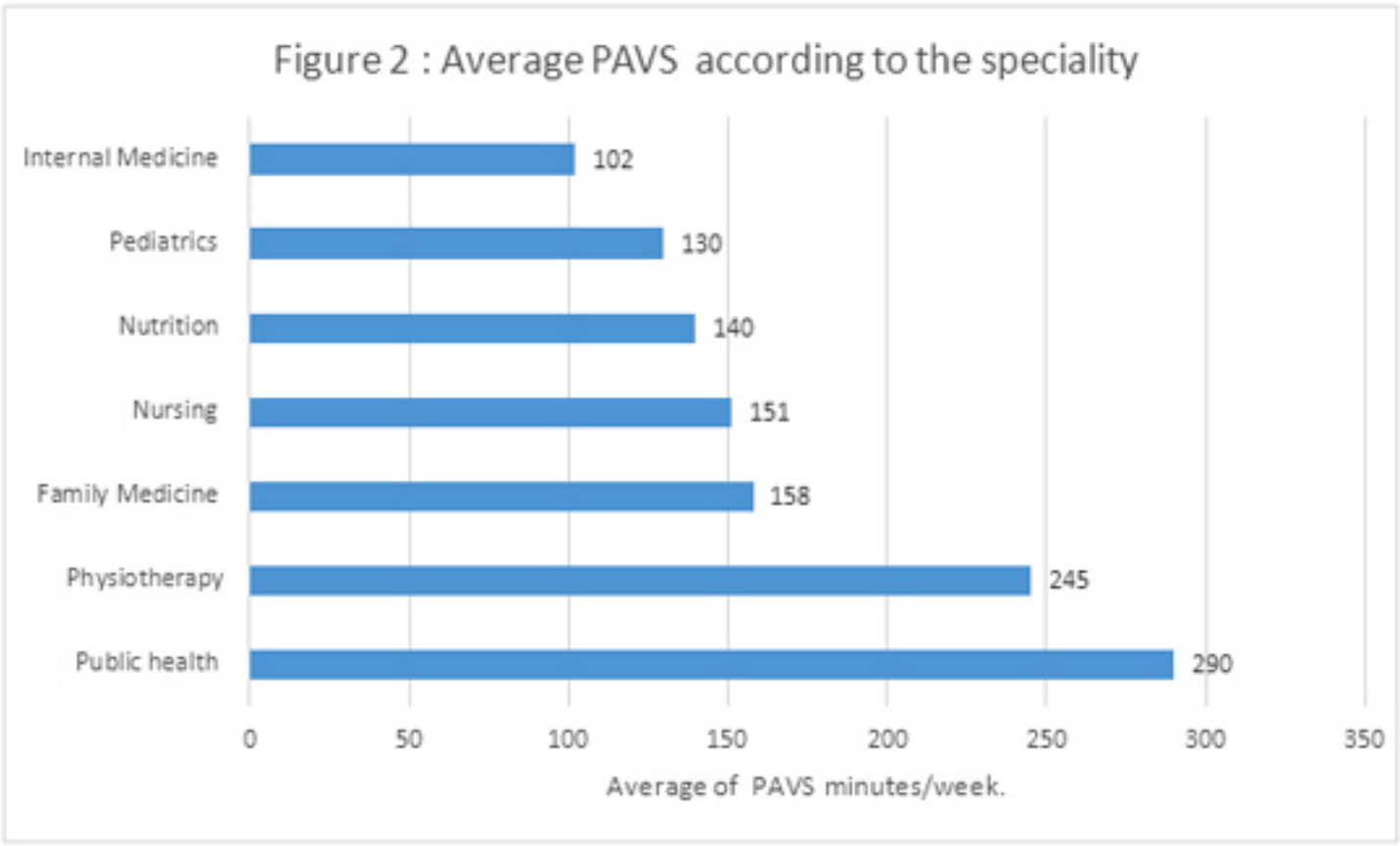


Figure 2 : Average PAVS according to the speciality
Internal Medicine
102
Pediatrics
130
Nutrition
140
Nursing
151
Family Medicine
158
Physiotherapy
245
Public health
290
0
50
100
150
200
250
300
350
Average of PAVS minutes/week.

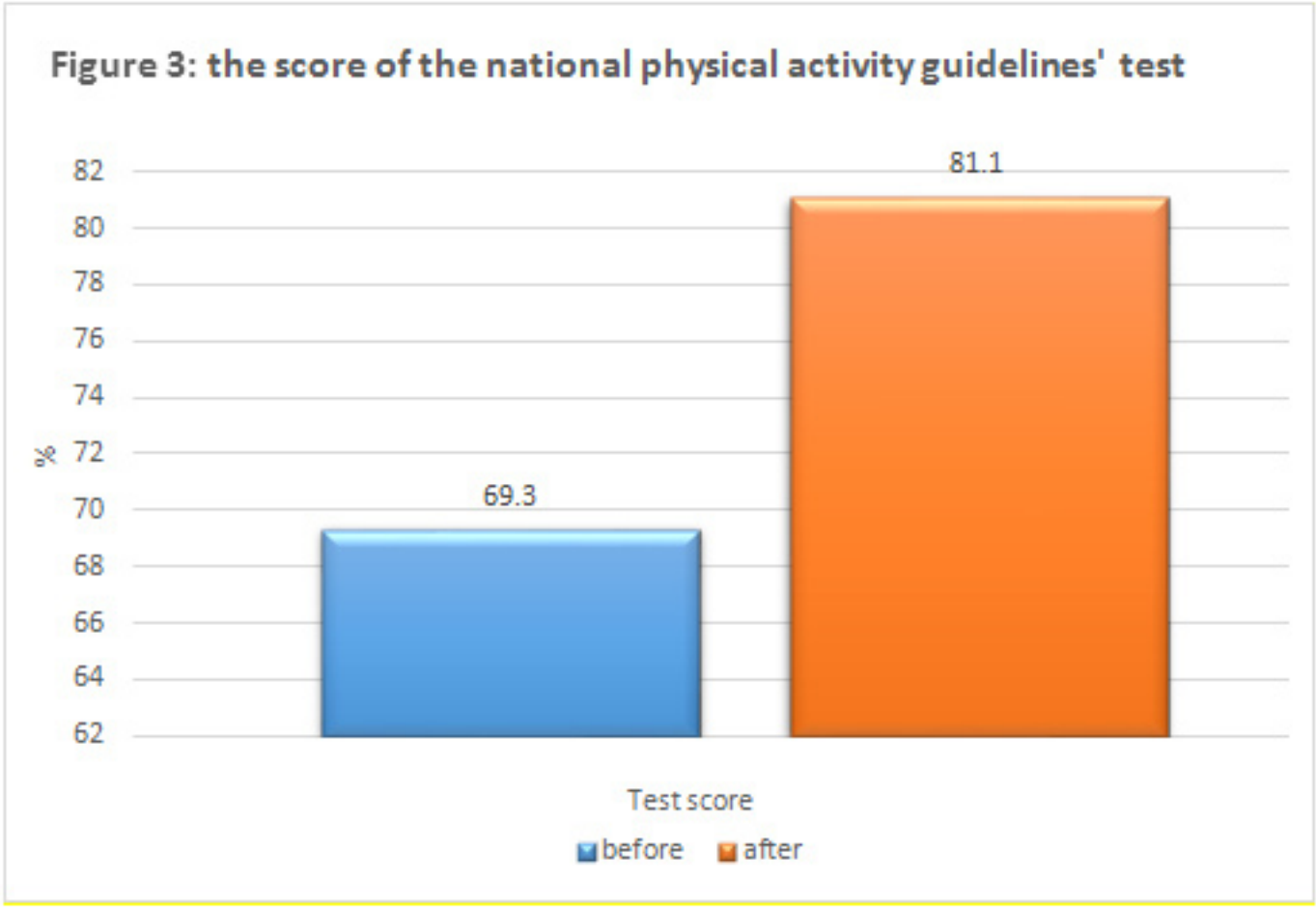
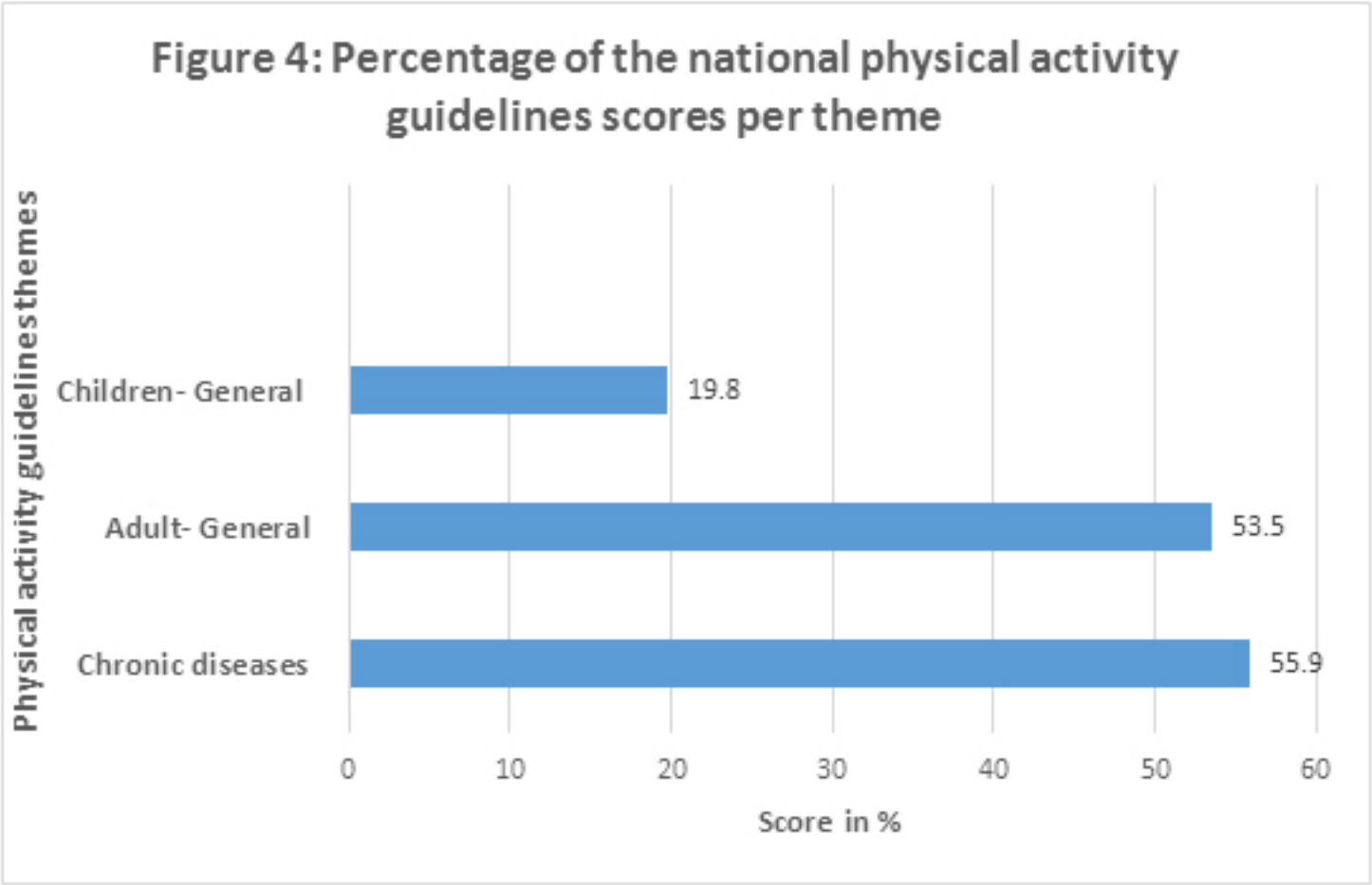


Figure 3: the score of the national physical activity guidelines' test
82
80
78
76
74
72
70
68
66
64
62
%
81.1
69.3
Test score
before
after



Discussion

This study attempts to explore the situation of healthcare providers from different backgrounds with respect to incorporating physical activity within the daily clinical practice. The preliminary results of this study demonstrated different findings related to the relationship between the practitioners' behavior, the level of awareness about the national physical activity guidelines, and using the physical activity intervention with their patients.

In terms of the physical activity behavior, the current study showed that primary care providers, i.e. public health professionals, physiotherapists and family medicine practitioners, were exercising more than the recommended weekly amount of physical activity, which is 150 minutes/ week. This is consistent with other studies that found physicians and health care providers participated in physical activity more than the general public (11). Furthermore, being primary care providers gives the advantage that more lifestyle-related medical conditions are seen in primary care(11).

It was noticed that physical activity intervention provided by the health care professionals is correlated to their physical activity behavior and the duration of their clinical experience. In this study, practitioners with experience of more than 15 years and PAVS > 150 mins/week tend to provide more practical physical activity interventions to their patients such as providing a pedometer or referring patients to fitness coaches, which is consistent with other studies in the literature (12). Also, it adds positive influence during the consultation as the patients regard physicians as role models (12). Moreover, a physician's personal health affects their patient care, meaning if health care providers are active, then they promote and counsel about physical activity and other healthy lifestyle behaviors (12-18). However some studies showed no association between health care providers' personal exercise habits and counseling about physical activity (19-20).

The study showed that practitioners have good knowledge about physical activity guidelines. The results show that providing an awareness workshop increases the knowledge of physical activity guidelines. And as expected, physicians were better in the therapeutic-related field, which has also been found in a review article by Ribeiro et al & Kreuter et al (21-22). The results also showed increased knowledge of Adults physical activity guideline more than children, and this is because our sample was mainly primary care physicians and other specialties more than pediatricians. Hence, they were more familiar with adult care; in future workshops we must increase pediatricians and increase the content on children's' exercise knowledge. This study highlighted the effect of training on overcoming one of the major barriers of physical activity counseling which is the lack of updated knowledge and training on physical activity (13,15,18,23,24) . However, the proper knowledge needs to be supported by other interventions such as PAVS system, to make the health care providers counsel more patients about physical activity on each visit.

Conclusion and Recommendations

Based on the aforementioned findings, we can conclude that primary care professionals are influenced by their behavior when prescribing exercise to their patients. It is clearly noted that their level of physical activity affects the way they advise their patients as well. Even though physical activity advice for patients is being practiced among healthcare professionals in Qatar, still, this is not enough.

It is essential to increase awareness among healthcare professionals, especially those working in a clinical setting such as family medicine physicians, pediatricians, and nutritionists, regarding the importance of incorporating physical activity in primary care. Targeting the primary care team and encouraging them to improve their physical activity levels can support this approach and eventually increase the motivation among the patients to exercise more. Primary care professionals can be guided through regular medical education workshops, promoting the use of pedometers within the healthcare settings, and using PAVS in the medical records.

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