

Correlation between teachers' participation in recreational sports activities and the inhibitory factors of participation

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Abstract

Introduction: The physical, health and psychosocial benefits associated with regular participation in sports have been reported by researchers in various populations, while there are factors related with higher or lower frequency in sports participation. **Purpose:** This study aims to investigate the correlation between teachers' participation in recreational sports activities and the inhibitory factors of sports participation. **Methods:** "Leisure Constraints Questionnaire" (LCQ) for inhibitory factors in sports participation was used. Pearson's correlation tests were applied for the investigation of the relationship between frequency in recreational sports and the inhibitory factors of sports participation among teachers. One hundred and forty-six primary and secondary school teachers, aged from 22 to 60 years old, participated in the current study. **Results:** Most of the participants reported that they exercise often or occasionally. Furthermore, the results from Pearson's correlation coefficients showed that there was a negative correlation between five of the seven inhibitory factors and the frequency of participation (Lack of time $p \leq 0.05$, Personal/psychological factors $p \leq 0.05$, Lack of interest $p \leq 0.05$, Accessibility/financial factors $p > 0.05$, Lack of knowledge $p > 0.05$, Lack of partners $p \leq 0.05$, Lack of facilities / services $p \leq 0.05$). **Conclusions:** Our findings suggest that a number of inhibitory factors may have an impact on the frequency of sports-related activities among teachers. Professionals involved in recreational sports activities such as coaches, trainers and sports management experts could take into account the results of the present study and design practical implementations in order to increase the participation of teachers in sports activities.

Key Words: barriers, physical activity, teachers, sports participation, sports management

Introduction

Physical, health and psychosocial benefits associated with sports participation have been reported by researchers in various populations (Alahmed et al., 2016; Alexandris & Carroll, 1997a; Alexandris & Carroll, 1997b; Bloom et al., 2005; Bum, & Lee, 2016; Campos et al., 2017; Cómez-Mármol et al., 2017; Di Palma et al., 2016; Downward & Rasciute, 2010; Hagiwara, 2017; Lee et al., 2020; Sotiriadou, 2009; Graikinis-Evangelinos et al., 2019), while there are various factors related with higher or lower frequency in sports participation. In this context, it is crucial to look into the variables that influence how frequently people participate in sports.

Specifically, inhibitory factors such as daily responsibilities (social, professional, personal, etc.) may prevent people from engaging in other activities, such as recreational sports (Jackson & Henderson, 1995). The results of a study by Alexandris & Carroll, (1997b) showed that significant inhibitory factors of participation in sports activities were factors related to free time and sports facilities or services, while similar results are reported for both the first (Kouthouris, 2005) and the latter factor (Masmanidis et al., 2009). Furthermore, lack of interest is also a factor noted by several results in the literature as an inhibitory factor in engaging in sports participation (Henderson et al., 1988; Henderson, 1991). Thus, participation in recreational sports activities may be affected by various inhibitory factors (Alexandris & Carroll, 1997a; 1997b).

Significant differences were also found between inhibitory factors and individuals' sports participation (occasionally and regularly), i.e., individuals who did not participate regularly in sports activities experienced greater barriers and inhibitory factors (Alexandris & Carroll, 1997b). In cases where individuals reported low frequency in sports participation it was also less likely to engage in a recreational or physical activity in the future, although barriers in sports participation could be encountered by both participants in sports (either systematic or occasional athletes) and non-participants (Kay & Jackson, 1991).

In order to overcome those inhibitory factors in sports participation some researchers refer to potential enhancers of participation such as intrinsic and extrinsic motivation (Alexandris et al., 2002), commitment

(Alexandris et al., 2001), strength of motivation (Carroll & Alexandris, 1997) and previous sports experience (Jackson, 1990). Those motivational enhancers may be used as compensatory factors against the barriers in sports participation. Moreover, policies implemented by various countries worldwide could contribute to the increase of participation in sports clubs or other recreational sport activities (Downward et al., 2009; Downward & Rasciute, 2010; Sotiriadou, 2009). In order to encourage citizens to participate in sports, society could for instance build sports facilities nearby residential areas, as the lack of services and sports facilities was found to be a significant inhibitory factor for participation in sports (Alexandris & Carroll, 1997a; Alexandris & Carroll, 1999).

Furthermore, the demographic and socio-economic characteristics of people could be used to predict participation in various sports (Breuer et al., 2011). Several studies show a strong relationship between sport participation and demographic, individual and social factors, as well as factors related to the performance and motivation of participants. Researchers also identify a significant relationship between sports participation and interpersonal factors such as society and family (Wali et al., 2021). Regarding the factor of gender and educational level, some researchers report that these variables may influence sport participation (Hovemann & Wicker, 2009; Morsal & Zarei, 2014; Sadeghzadeh & Maghami, 2012), however, opposite results are also identified (Rostami & Qasemi (2016). As participation in sport can have several benefits for both physical (George et al. (2016) and mental health (Campos et al., 2017a), it is important to continuously investigate potential factors that limit participation. Especially in Greece, where the present research was conducted, the participation in sport was characterized in a recent survey (Nessel, 2021), as "Low sporting performance" and the country was ranked at the lowest level below the general EU average, in terms of performance in both mass and elite sport. For this purpose, professionals related to sports should seek feedback and the opinion of clients, in order to improve the quality of services (Chiu et al, 2015), and to enhance participation, while the employment of qualified staff also plays an important role (Thompson, 2017). Through the process of feedback on the experience and inhibitors to participation, barriers to sport participation could be further reduced (Campos et al., 2017b).

A positive correlation has been reported between individual characteristics and socioeconomic status with inhibitory factors and sports participation (Crawford et al., 1991), while parental socioeconomic status and gender were significantly associated with screen time levels and physical inactivity levels (Männikkö et al., 2020). Although, according to the researchers (Alexandris & Stodolska, 2004) the inhibitory factors associated with interpersonal factors of individuals' behavior and intention to participate in sports activities should be further investigated. There are several studies that investigate sports participation in various populations (Alahmed et al., 2016; Alexandris & Carroll, 1997a; Alexandris & Carroll, 1997b; Bum, & Lee, 2016; Campos et al., 2017; Gómez-Mármol et al., 2017; Di Palma et al., 2016; Downward & Rasciute, 2010; Hagiwara, 2017; Lee et al., 2020; Sotiriadou, 2009; Graikinis-Evangelinos et al., 2019), although there are not several studies for the inhibitory factors of teachers' participation in sports. The aim of this study was to investigate the correlation between teachers' participation in sports activities and the related factors and barriers that discourage sports participation.

Material & methods

Participants

In the present study one hundred forty-six ($n = 146$) teachers of primary and secondary schools aged from 22 to 60 years old participated (men 37.0%, women 63.0%).

Instruments

For the purposes of this research, the LCQ questionnaire (Leisure Constraints Questionnaire) by Alexandris and Carroll (1997a; 1997b) was used. The scale consists of five-point Likert statements / questions ranging from "1=strongly disagree" to "5 = strongly agree". Factor analysis (Alexandris & Carroll, 1997a; 1997b) indicated 7 inhibitory factors and Cronbach's α of the scale in this study was $\alpha = 0.84$. Specifically, the inhibitory factors for participation in recreational sports activities, according to the manufacturers' instructions were the following:

1. "Lack of time"
2. "Individual/psychological"
3. "Lack of interest"
4. "Accessibility/financial"
5. "Lack of knowledge"
6. "Lack of partners"
7. "Lack of facilities / services"

The frequency of participation in sports activities was recorded through a statement that was answered on a five-point scale (adapted from Alexandris, et al., 2020), including the following statements: 1. I exercise a few times (only a few days per month), 2. I exercise only occasionally, 4. I exercise often, 5. I exercise regularly (almost every day).

Research Procedure

This research focuses on measuring theoretical concepts through a questionnaire (Bryman, 2016) as it is a widespread and easy-to-use data collection tool that provides frequently structured numerical data (Cohen, Manion, Morrison, & Morrison, 2007). For the purposes of the present research, non-probability sampling and in particular convenience sampling was used. The current research involved teachers who, either participated in recreational sports activities in their spare time or not. The questionnaires were completed by the survey participants via e-mail, filling a Google form created by the researchers (Travis, 2010). The questionnaires were anonymous and each one took about 10 to 15 minutes to complete.

Statistical analysis

The statistical analysis was performed using the software IBM SPSS version 25 (IBM, New York, USA). Pearson's correlation tests were applied for the investigation of the correlation between frequency in recreational sports and the inhibitory factors of sports participation among teachers. The statistical significance was set at $p \leq 0.05$. A prior analysis was performed in order to calculate the required number of participants for the current study, for the expected statistical power and effect size (medium), based on statistical data from published researches in scientific journals. The calculation of Effect Size (ES) and statistical power was performed in the environment of G*Power: Statistical Power Analyzes for Windows, Version 3.1.9.7 (Faul, et al., 2007; 2009).

Results

The research's findings are shown in the section below. The data of teachers' sport participation are presented initially, followed by the results of the correlations coefficients between sports participation and the inhibitory factors.

Frequency of teachers' sports participation

As far as the results of teachers' participation in recreational sports activities is concerned, the majority of participants (30.1%) answered "I exercise often (Some days a week)", 23.3% answered "I exercise a few times (Only a few days a month)", while 21.3% answered "I exercise only occasionally (If it happens with my friends, occasionally)". At last, 15.1% answered "I exercise regularly (Almost every day)", while 9.6% answered "I do not exercise at all (I am not interested in exercise, I almost avoid it)", (Fig. 1).

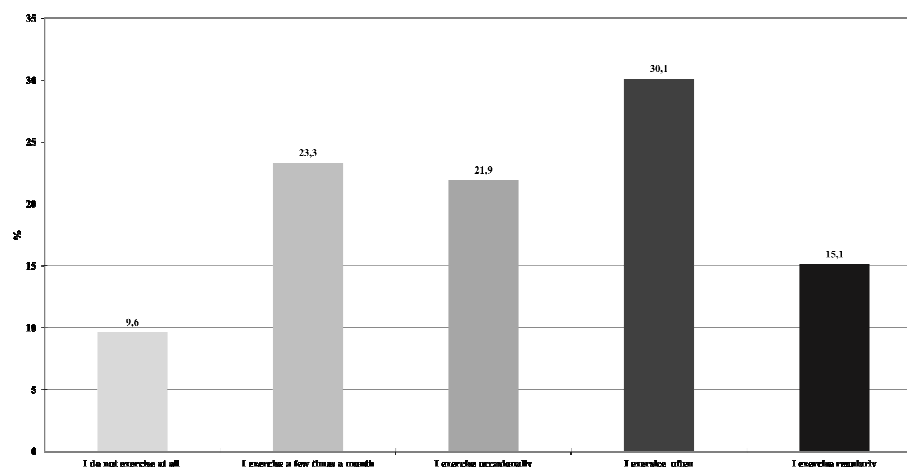


Fig. 1. Frequency of teachers' sports participation (%).

Correlation between the teachers' sports participation and the inhibitory factors

Teachers' sports participation was significantly correlated with several inhibitory factors, according to Pearson's correlation tests applied (Table 1, Table 2, Table 3). Specifically, the frequency of teachers' participation in sports activities during the last week, the last 2 weeks and the last month was negatively correlated with "Lack of time" $p \leq 0.05$, "Individual/psychological" factors $p \leq 0.05$, "Lack of interest" $p \leq 0.05$, "Lack of partners" $p \leq 0.05$ and "Facilities/services" $p \leq 0.05$. No significant correlation was found between the frequency of participation in sports and the factors "Accessibility/financial" and "Lack of knowledge" $p > 0.05$ (Table 1, Table 2, Table 3).

The correlation observed between the inhibitory factor "Lack of time" and the frequency of physical exercise during the last week was $r(146) = -0.312$, $p \leq 0.05$, during the last two weeks was $r(146) = -0.283$, $p \leq 0.05$ and during the last month was $r(146) = -0.197$ *, $p \leq 0.05$.

The correlation observed between the "Individual-psychological" inhibitory factor and the frequency of physical activity during the last week was $r(146) = -0.492, p \leq 0.05$, during the last two weeks was $r(146) = -0.466, p \leq 0.05$ and during the last month was $r(146) = -0.334, p \leq 0.05$.

The correlation between teachers' sports participation and the inhibitory factor "Lack of interest" during the last week was $r(146) = -0.489, p \leq 0.05$, during the last two weeks was $r(146) = -0.458, p \leq 0.05$ and during the last month was $r(146) = -0.372, p \leq 0.05$, (Table 1, Table 2 & Table 3).

The correlation observed between the inhibitory factor "Lack of partners" and the frequency of physical activity during the last week was $r(146) = -0.271, p \leq 0.05$, during the last 2 weeks was $r(146) = -0.278, p \leq 0.05$ and during the last month was $r(146) = -0.206, p \leq 0.05$.

Table 1. Correlation between teachers' sports participation during the last week and the inhibitory factors.

Inhibitory factors	Frequency of physical exercise during the last week
Time	-.312**
Individual/psychological	-.492**
Lack of interest	-.489**
Accessibility/financial	-.110
Lack of knowledge	-.190
Lack of partners	-.271**
Facilities/services	-.353**

** $p \leq .001$

Table 2. Correlation between teachers' sports participation during the last 2 weeks and the inhibitory

Inhibitory factors	Frequency of physical exercise during the 2 weeks
Time	-.283**
Individual/psychological	-.466**
Lack of interest	-.458**
Accessibility/financial	-.126
Lack of knowledge	-.169
Lack of partners	-.278**
Facilities/services	-.355**

factors. ** $p \leq .001$

Table 3. Correlation between teachers' sports participation during the last month and the inhibitory factors.

Inhibitory factors	Frequency of physical exercise during the last month
Time	-.197*
Individual/psychological	-.334**
Lack of interest	-.372**
Accessibility/financial	-.087
Lack of knowledge	-.099
Lack of partners	-.206*
Facilities/services	-.303**

* $p \leq .05$

** $p \leq .001$

The correlation observed between the inhibitory factor "Lack of facilities" and the frequency of physical activity during the last week was $r(146) = -0.353, p \leq 0.05$, during the last 2 weeks was $r(146) = -0.355, p \leq 0.05$ and during the last month was $r(146) = -0.303, p \leq 0.05$. No significant correlation was observed between the inhibitory factor "Accessibility/financial" and the frequency of physical activity during the last week $r(146) = -0.110, p > 0.05$, during the last two weeks $r(146) = -0.126, p > 0.05$ and during the last month $r(146) = -0.087, p > 0.05$. Additionally, no significant correlation was observed between the inhibitory factor "Lack of knowledge" and the frequency of physical activity during the three periods of time investigated (Table 1, Table 2 & Table 3).

Discussion

As participation in sports and physical exercise could have several benefits for both physical (George et al. (2016) and mental health (Bauman, 2004; Campos et al., 2017a; Miles, 2007), such as on self-assessment, self-worth etc., as well as on the cardiorespiratory and muscular systems respectively, it is important to

continuously investigate potential factors that limit participation, especially in Greece, since the country was characterized as "Low sporting performance" and was ranked at the lowest level, below the general EU average in terms of participation in both mass and elite sport (Nessel, 2021). It should be noted that the perception of inhibitory factors varies from person to person and population to population, depending on their demographic and individual characteristics. A positive correlation has been reported between individual characteristics and socioeconomic status with inhibitory factors and sports participation (Crawford et al., 1991).

The results of the present study showed that there is a negative correlation between the inhibitory factors and the frequency of participation in sports activities among teachers, which is consistent with previous researches by Alexandris and Carroll (1997a) and Alexandris and Carroll (1997b), who argued that inhibitory factors reduce or limit individuals' participation in recreational sports activities. Specifically, there was a significantly negative correlation between the frequency of sports participation and factors such as "lack of time", "psychological issues", "lack of interest", "lack of partners" and "lack of facilities or services". The strongest negative correlation was identified with the factor "Lack of interest", while the factor "Lack of time", which has been identified as a major inhibitor of participation in sporting activities in several studies, was also strongly correlated. No relationship was found between the frequency of participation and the factors "lack of knowledge" and "financial / accessibility". However, as far as sports participation is concerned, Kay and Jackson (1991) reported that inhibitory factors may not always be associated with participation in sports.

According to these results, participation in recreational sports activities could be influenced by various factors such as lack of time, lack of interest, lack of accessibility and/or sports facilities or individual, psychological factors and even the absence of a friend as co-athlete. Therefore, in order to increase participation it is necessary to eliminate inhibitory factors by creating appropriate management and coping strategies. Professionals engaged in recreational sports activities in the practical field, but also in the field of management, organization and administration of recreational sports activities and sports clubs, could take into account these inhibitory factors, design and implement practices that could limit them and increase participation (Jackson, 1994). They could for example use appropriate adjustments to their activities, target groups and facilities in order to limit the inhibitory factors and increase participation (e.g. physical exercise for both parents and their children at the same time, at the same sports facility), while enhancing variables that could have a positive effect on participation rate such as commitment (Alexandris et al., 2001), motivational power (Carroll & Alexandris, 1997a; 1997b) and internal, external motivation (Alexandris et al., 2002). Furthermore, the sports management department of sports clubs, gyms, etc., could use survey tools in order to investigate the inhibitory factors in sports participation of their clients. Thus, the barriers and inhibitory factors that are identified, could be addressed and limited, in order to enhance the frequency of participation in recreational sports activities.

Conflicts of interest

The authors declare no conflict of interest.

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