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ORIGINAL

MOTIVATION, FREQUENCY AND ACTIVITY TYPE IN PHYSICAL EXERCISE PARTICIPANTS

MOTIVACIÓN, FRECUENCIA Y TIPO DE ACTIVIDAD EN PRACTICANTES DE EJERCICIO FÍSICO

Moreno-Murcia, J.A.¹; Borges Silva, F.²; Marcos Pardo, P.J.³; Sierra Rodríguez, A.C.⁴ & Huéscar Hernández, E.⁵

¹ Universidad Miguel Hernández de Elche, España j.moreno@umh.es

² Unidad de investigación en Educación Física y Deportes, Universidad de Murcia edfnanda@hotmail.com

³ Universidad Católica San Antonio de Murcia pmarcos@pdi.ucam.edu

⁴ Licenciada en Ciencias de la Actividad Física y del Deporte anikacsr@hotmail.com

⁵ Universidad Miguel Hernández de Elche, España ehuescar@umh.es

Spanish-English translators: Víctor Gutiérrez Martínez Idiomas León victor@idiomasleon.es

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ABSTRACT

The aim of this study was to test the relationship between integrative motivation and practice motives in participants of physical exercise according to frequency and type of practice carried out. 358 subjects participated in fitness rooms doing directed exercises and bodybuilding exercises. We measured integrative motivation and practice motives. After descriptive and differential analysis, the data revealed that people who participated in fitness programs were more worried about image and social recognition. Data regarding the frequency of practice revealed that exercise of any type of physical activity or sport in fitness centers, more than three days a week, was positively related to motivation and most practice motives. Results are discussed in relation to the optimization of physical activity and sports programs through the arrangement between the type of exercise and the different motives.

KEYWORDS: Integrative motivation; physical activity or sports; practice motives; frequency; type of exercise

RESUMEN

El objetivo de este estudio fue comprobar la relación existente entre la motivación integrada y los motivos de práctica en practicantes de ejercicio físico según la frecuencia y tipo de práctica realizada. Participaron 358 practicantes de ejercicio físico en salas de fitness (actividades dirigidas y musculación). Se midió la motivación integrada y los motivos de práctica. Tras los análisis descriptivos y diferenciales, los datos revelaron que las personas que participaban en programas de fitness estaban más preocupadas por la imagen y el reconocimiento social. Respecto a la frecuencia de práctica, los datos revelaron que la práctica de algún tipo de actividad físico-deportiva en salas de fitness más de tres días por semana se relacionaba positivamente con la motivación y con la mayoría de los motivos de práctica. Se discuten los resultados en relación a la optimización de los programas de actividades físico-deportivas a partir del ajuste entre el tipo de práctica y los diferentes motivos.

PALABRAS CLAVE: motivación integrada; actividad físico-deportiva; motivos de práctica; frecuencia; tipo de práctica.

INTRODUCTION

In the past five years there has been an incipient increase in the social demand for physical activity driven by a new general awareness regarding health and body worship, according to the latest survey of sports habits among Spanish people by the Superior Sports Board (*Consejo Superior de Deportes*, 2010).

This fact makes it essential to analyze the different aspects that can influence the start or maintenance of physical activity or sports on a regular basis, due to the important benefits which the practice of this activity has proved at both a physical and psychological level (American College of Sports Medicine, 2000) as well as a social one (Taras, 2005). Nevertheless, and despite these benefits, there is still a predominance of inactive people against those physically active (CSD, 2010), and it is therefore necessary to examine the variables that could be related to the start or maintenance of physical activity or sports (Miquel, 1998).

The study of motivation aims to understand why people choose a certain behavior and carry it out with particular intensity and persistence. Therefore analyzing motivation could be an important determinant for people's commitment to sports (Iso-Ahola and St. Clair, 2000). From among all the approaches that have addressed the study of motivation in sports, the theory of self-determination has stood out (Deci and Ryan, 1985, 2000; Ryan and Deci, 2000). This theory (Deci and Ryan, 1980, 1985, 1991), considers that motivation is a continuum characterized by different levels of self-determination, in such a way that from the lower to higher levels of self-determination

would be a lack of motivation, extrinsic motivation and intrinsic motivation (Deci and Ryan, 1985). The theory of extrinsic motivation establishes four levels. The lowest in terms of self-determination is external regulation, in which the person would act because of an outside incentive (Deci and Ryan, 2000), e.g. "I practice sports to prove to my friends how good I am" (the outside reward would be the recognition from others). Following would be introjection, in which the person would act to avoid the feelings of guilt (Ryan and Deci, 2000), it would be a "ought to" or "have to" do something relation (Ntoumanis, 2002; Sarrazin, Vallerand, Guillet, Pelletier and Cury 2002), for example: "I would feel bad if I did not take the time to work out." Higher on the self-determination scale would be the identified regulation, in which the participant identifies with the importance that the activities have for himself, although the practice would continue being instrumental (Deci and Ryan, 2000). A clear example would be "I practice sports because it is healthy." The most self-determined case of extrinsic motivation would be integrative regulation, in which several identifications are assimilated, hierarchically ordered and matched coherently with other values (Ryan and Deci, 2000). An example would be any participant who works out because of health motives. For this reason it has been the dimension that we have used for this study.

Such types of motivation respond to different motives that define the reasons why the person practices sports and sustains their participation in said practice (Hellin, Moreno y Rodriguez, 2004). Within the self-determination theory framework, parallel to the types of motivation, there are also different reasons depending on the extent of self-determination (Ryan et al., 1997). In this sense, the motives with the highest degree of self-determination or internalization would be related to enjoyment or health improvement, while on the other extreme there would be motives such as social recognition or the improvement of physical appearance. Regarding the latter, less self-determined, we have to acknowledge that in western societies appearance and body image are currently considered an instrument of special importance when interacting with others. Nevertheless, the guidance on health and sports by Spanish people has stood out over the last two decades, highlighting the importance of health in the practice of sports (Castillo and Balaguer, 2001; Garcia Ferrando, 1991, 1996). Thus, Garcia Ferrando (1991) found that 59% of Spaniards identify with the concept of sport for health and 10% with the concept of sport for fun. In the studies in this field these grounds have been related to the different types of motivation laid down by the self-determination theory, highlighting positively high relations between health grounds and integrative motivation and positively low relations between appearance grounds, image improvement or social recognition and those types of regulation with a higher self-determination value. Said motives have been related in the studies in this field with the different types of motivation established by the theory of self-determination, highlighting positively high relations between health motives and integrative motivation, and positively low relations or an absence between appearance motives, image improvement or social recognition and the types of more self-determined regulation (Ingledeew and Markland, 2005).

Moreover, there are other factors that are influencing the participation of people in the practice of physical-sport, such as the type of activity or the frequency (Sicilia, 2002;

Vázquez, 2001). In this sense, a variable to stress because of its positive relation to motivation is the frequency of the practice of sport (Wilson, Rodgers, Fraser and Murray, 2004). Thus, although there are several studies that relate the frequency of practice with the persistence of the person to this same practice (Alexandris, Tsorbatzoudis, and Grouios, 2002; Ryan et al., 1997; Sarrazin et al., 2002; Wilson et al., 2004) there are not as many studies that relate the number of sessions to self-determination. Specifically, it seems that athletes who train more than 3 days a week show a higher self-determined motivation than those who train 2 or 3 days, while the latter reveal a greater ego-orientation and lack of motivation (Moreno, Cervelló, and González-Cutre, 2006). Finally, the frequency of the practice of physical-sport also seems to contribute in a positive way to participants' self-esteem and physical self-concept (Bruya, 1977; McGowan, Jarman, and Pedersen, 1974), because the higher the frequency of the practice of physical activity, the better the participant's mental health, decreasing the extent of depression (Kull, 2002). Sallis, Prochaska, and Taylor (2000) found that physical exercise in adolescents between 13 and 18 years old is positively related to body image and competence perception variables.

On the other hand, if we analyze the difference according to the type of sport (individual or team), the studies in this field state that there is a greater ego-orientation and a higher perception of an ego atmosphere in team sports, while there is a greater task orientation and a better self-determined motivation in individual sports (Moreno et al., 2006). In this regard Hanrahan and Biddle (2002) found that participants of athletics would show a higher task orientation and a lower ego orientation those of squash, football and basketball.

In short, the aim was to study the interests and motivations that move adult people to take part in physical-sport activities in fitness centers depending on the type and frequency of practice. Specifically, from the studies mentioned the hypotheses were:

- Regarding practice motives, we expect to find significant positive associations between the health motives and the rest of the motives, expecting, nevertheless, a lack of relation between those motives and those related to hedonism or social interaction.
- As for integrative motivation, our hypothesis is that there would be positive relations to frequency of practice but negative ones to body image or social affiliation.
- Regarding frequency of practice, our standing hypothesis is that there would be positive relations to integrative motivation.
- Regarding the type of practice, we expect to find positive associations between individual activities and hedonistic motives (image, social recognition) and between team activities and health motives.

METHOD

Participants

The sample was formed by 358 participants of physical exercise with an average age of 27 (SD = 6.7), from both individual and team activities in fitness centers (e.g. weight-training, Pilates, aerobics, swimming, aquatic fitness), belonging to six great sports facilities.

Process

We contacted the heads and trainers of the sports facilities chosen to report our objectives and requested their cooperation. The administration of the questionnaires was carried out under the supervision of the main investigator, to give a short explanation of the study, inform how to complete the instruments and clarify any doubts that might arise during the process. We placed strong emphasis on the anonymity of answers, encouraged honesty and advised reading every item carefully. The time required to fill in the sheets was ten minutes, approximately.

Instruments

The goal content for exercise questionnaire. We used the goal content for the exercise questionnaire (Sebire, Standage and Vansteenkiste, 2008) to measure motives for physical activity. This questionnaire is formed by 20 items which were grouped into five factors (social affiliation, appearance, health, social recognition and ability development). Every item would be introduced by "I work out..." The responses assessment was made according to the Likert rating scale criteria, a 7-point scale system in which 1 would be "absolutely false for me," and 7 would be "absolutely true for me." The Cronbach alpha coefficient that we obtained was .82 for affiliation, .78 for image, .70 for health, .86 for social recognition and .78 for ability development.

Integrative regulation. We used the integrative regulation factor from The Behavioral Regulation in Exercise Questionnaire (BREQ-3) by Wilson, Rodger, Loitz and Scime (2006). The integrative regulation factor is formed by four items ("because it fits with my lifestyle;" "because I believe that physical exercise is a part of me;" "because I understand physical exercise as an essential part of what I am;" "because I believe that physical exercise fits with my personal values."). The dimension was headed by the sentence "I work out..." The responses were marked according to the Likert rating scale criteria from 0 (absolutely false) to 4 (absolutely true). The internal consistence revealed a Cronbach Alpha coefficient of .89.

Data Analysis

First of all, we carried out the statistical descriptions and bivariate correlations among all the factors. Then we carried out the analysis of variance to know the differences between the practice motives and integrative motivation due to frequency of practice (1 or 2 days, 3 days or over 3 days) and the type of practice (collective classes, aquatic

activities or body-building). For the data analysis we used the statistical package SPSS 18.0.

RESULTS

Descriptive and correlation analysis

In this section we show the statistical descriptions and correlations obtained between the studied variables (Table 1). The integrative motivation showed an average value of 4.02. The data revealed a greater mark for the health motive, followed by “ability development motive,” “appearance improvement” and “social affiliation.” In the correlation analysis we noticed that all the factors relate to each other in a positive and significant way, except for the integrative motivation which did not reveal any relation to the appearance motive. On the other hand, the social recognition motive did not relate to the health motive either. Nevertheless, due to the low values obtained from the correlations, the interpretation of the results must be done with a certain degree of prudence.

Table 1. Correlation Analysis of all the variables.

	<i>M</i>	<i>DT</i>	□	1	2	3	4	5	6
1. Integrative Motivation	4.02	.91	.89	-	.25**	-.24	.27**	.14**	.37**
2. Social Affiliation	3.09	1.25	.82	-	-	.24**	.14**	.50**	.37**
3. Appearance	4.48	1.17	.78	-	-	-	.22**	.43**	.19**
4. Health	5.78	.86	.70	-	-	-	-	.06	.44**
5. Social Recognition	2.49	1.21	.86	-	-	-	-	-	.24**
6. Ability Development	4.58	1.18	.78	-	-	-	-	-	-

** $p < .05$

Analysis of variance depending on the frequency of practice

The frequency of physical activity of the participants was input as an independent variable, and the examined variables as dependent ones. Table 2 shows the results found in the analysis of variance (ANOVA) for which we split the sample in three groups: those who practice one or two days a week, three days a week, or more than three days

a week. The multiple comparisons revealed significant differences for the integrative motivation factors ($F = 7.59, p < .05$), image ($F = 8.38, p < .05$), social affiliation ($F = 4.30, p < .05$), and social recognition ($F = 3.74, p < .05$). After an analysis *a posteriori* (Turkey's test) we find that these significant differences were favorable to those who practiced more than three days a week against those who worked out three days a week or the ones who trained one or two days a week with regards to integrative motivation factor, as well as the social affiliation motive, the appearance motive and the social recognition motive. We did not notice any significant differences in health and ability development factors.

Table 2. Anova depending on frequency of the practice of physical activity

	1 o 2 días (n = 45)		3 días (n = 131)		+ de 3 días (n = 182)		F	p
	M	DT	M	DT	M	DT		
Integrative Motivation	3.76	.99	3.96	.92	4.14	.85	7.59	.001
Social Affiliation	3.03	1.42	2.91	1.22	3.23	1.21	4.30	.014
Appearance	4.11	1.35	4.40	1.18	4.63	1.07	8.38	.000
Health	5.80	.84	5.73	.85	5.81	.87	.51	.599
Social Recognition	2.35	1.21	2.36	1.17	2.62	1.23	3.74	.024
Ability Development	4.50	1.24	4.52	1.12	4.64	1.20	.81	.001

Analysis of variance depending on type of sport practiced

Due to the practice of physical activity and sport, (collective classes, aquatic activities or body-building) we found significant differences for the appearance factor ($F = 13.76, p < .05$) social recognition ($F = 13.29, p < .05$), and social affiliation ($F = 4.27, p < .05$). After the *a posteriori* test (Turkey's test), these significant differences for the appearance motive and the social recognition motive were favorable to those who practiced bodybuilding against the participants of collective classes or those who practiced aquatic activities. As for the social affiliation motive, we noticed significant differences in favor of bodybuilding participants as against the participants of collective classes. We did not find any significant differences in integrative motivation, health or ability improvement factors.

Table 3. Anova depending on type of the practice of physical activity.

	Collec	Aquatic	Bodybuilding		<i>M</i>	<i>DT</i>	<i>F</i>	<i>p</i>
	tive (<i>n</i> = 109)	Activ. (<i>n</i> = 135)	(<i>n</i> = 114)					
	<i>M</i>	<i>DT</i>	<i>M</i>	<i>DT</i>	<i>M</i>	<i>DT</i>		
Integrative Motivation	3.94	.95	4.07	.89	4.03	.90	.97	.379
Social Affiliation	2.87	1.17	3.15	1.34	3.22	1.21	4.27	.014
Appearance	4.37	1.09	4.25	1.23	4.80	1.09	13.76	.000
Health	5.71	.88	5.86	.83	5.75	.87	1.76	.172
Social Recognition	2.20	1.13	2.42	1.14	2.81	1.29	13.29	.000
Ability Development	4.41	1.17	4.68	1.20	4.61	1.16	2.74	.065

DISCUSSION

For the moment, most of the studies on relations between people's motivation for the practice of physical activity and sport and the different socio-demographic variables are focused on educational contexts or competitive sport scenarios, with less work focused on non-competitive environments, like the programs carried out in fitness and aquatic centers, in high demand nowadays. According to García Ferrando (2006), new postmodern society values boost new forms of practicing and living sports, putting much stress on recreational behaviors and on the pursuit of new experiences beyond traditional federated sports which are only directed to discipline preparatory training to regulated sports competition. In this sense, the most recent survey published by the Consejo Superior de Deportes (CSD, 2010) points out that the profile of the practice of sports in Spain nowadays reveals a decreased institutionalization, and it is carried out for non-competitive purposes on the whole. This results from the fact that 75% of people who work out do it regardless of any sports center or institution. Concerned about this need as we are, our studies prove the relation between integrative motivation and practice of physical exercise and sports motives according to frequency and type of activity for adult participants of physical exercise of a non-competitive nature.

The results from the descriptive analysis have revealed that according to the participants, the health motive is a very important one to the practice of physical exercise, corroborating those discoveries found in previous research (Castillo and Balaguer, 2001; García Ferrando, 2006; Navarro et al., 2008; Moreno, Cervelló, Borges and Conte, 2009). However, the high marks obtained from the ability development motive and the appearance improvement motive should be highlighted as well. These marks probably reflect the new postmodern societal values in a case of good physical condition (García Ferrando, 2006).

Regarding integrative motivation, the results revealed significant and positive relations between “integrative motivation” and health improvement, social affiliation and ability development motives. There is no connection between integrative motivation and physical appearance improvement. These results coincide with the work done by Ingledew and Mackland (2005), who found that fitness/health motives relate positively to the highest self-determination displays in extrinsic motivation. Likewise, the data from such work also revealed that social motives relate in a positive way to the highest self-determined motivation displays, there being, as well as for the health motive, no relation to external regulation. With regard to image or physical appearance motives, in line with our data, Ingledew and Mackland (2005) found low and positive relations to identified motivation and no connection with intrinsic motivation, so we could state that the image motive would be the lowest in the self-determination scale (Ryan et al., 1997). This is perhaps because people whose motivation to the practice of physical activity and sport only depends on the improvement of their appearance and are influenced by an outside reward which consists of positive and noticeable changes in their bodies due to the canon of ideal beauty.

Regarding frequency of practice, on the whole, due to our results, those participants who worked out more than three days a week are the ones who got the highest scores on every practice motive scale. Moreover, our data reveals that those people who practice any type of physical activity or sport more than three days a week, have greater integrative motivation and get higher scores on the scales for improvement of appearance, social affiliation and social recognition motives. The result contributes to the previous research which related the highest self-determination motives to intrinsic motivation (e.g. Ryan et al., 1997). It states that if those people whose practice relies on lower self-determination motives are still persistent by continuing to work out (more than three days a week), the promotion of such habit may be useful for them, therefore increasing their integrative motivation levels and developing a greater will to practice (Matsumoto and Takenaka, 2004; Moreno, Cervelló and González-Cutre, 2007; Wand and Biddle, 2001).

On that note, in line with new postmodern societal values pointed out by García Ferrando (2006), our data highlights that although the traditional health motive was the most valued by the participants, it seems that the most common motives nowadays among those who practice physical activities or sports on a regular basis are actually appearance, social affiliation and social recognition motives. In this sense, Delgado and Tercedor (2002) point that even though a subject admitted the importance of practicing physical activities, it would not mean that he will carry such practice out.

The data now has been supplemented on our research by that obtained regarding the type of practice, because our data reveals that people who practice bodybuilding would be more worried about their appearance, social recognition and social affiliation. According to this, we could think that the hedonist nature and the need for persistence which such activity requires are actually promoted by an individual need for approval or social recognition.

On the other hand, as far as integrative motivation, improvement of health and ability development are concerned, our research has not revealed significant differences among body-building, instructor-led classes or aquatic activities participants, as presented in the fourth hypothesis. It is likely that the recent motives may be related to other types of physical activities or sports which have not been included in this research, for instance gymnastics, martial arts or foot racing (García Ferrando, 2006)

Lastly, it is important to point out that this research confirms all other aspects considered under the initial hypothesis. We think it is also important to point out a certain number of limitations which suggest that all these findings are interpreted with caution. For instance, it would be interesting if future studies corroborate the results we have obtained using larger samples, including the study of different motivational features (Wang and Biddle, 2001), and particularly accounting for a greater number of socio-demographic variables which this research considers influential when it comes to practicing physical activities and sports such as the age of the participants, gender or physical exercise in the family environment (Hassandra, Goudas and Chroni, 2003; Moreno et al., 2006). Therefore, in the context of the limited studies that analyze integrative motivation and practice motives depending on type and frequency, this research is a first approximation of these aspects within the self-determination theory framework.

In short, this study reiterates the importance of increasing integrative motivation for the participant to achieve a greater commitment through practice. These results could help to optimize the results in physical activities and sports planning in order to get a greater will to practice physical activity.

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