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## ORIGINAL

### GENDER DIFFERENCES IN MOTIVATION AND PERCEPTION OF UTILITY OF THE SCHOLAR SPORT

### DIFERENCIAS DE GÉNERO EN LA MOTIVACIÓN Y PERCEPCIÓN DE UTILIDAD DEL DEPORTE ESCOLAR

**Amado, D.; Sánchez-Miguel, P. A.; Leo, F. M.; Sánchez-Oliva, D. & García-Calvo, T.**

Faculty of Sport Sciences. University of Extremadura. E-mail address: [diamal@unex.es](mailto:diamal@unex.es), [pesanchezm@unex.es](mailto:pesanchezm@unex.es), [franmilema@unex.es](mailto:franmilema@unex.es), [davidsanchez@unex.es](mailto:davidsanchez@unex.es), [tgarciaac@unex.es](mailto:tgarciaac@unex.es)

**Spanish-English translator:** Pedro Antonio Sánchez Miguel  
[pesanchezm@unex.es](mailto:pesanchezm@unex.es)

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## **ABSTRACT**

The aim of the study was to analyze the differences between self-determination level and satisfaction of the three psychological needs with respect to gender and their influence on the perception of utility of the sport. The sample comprised 1897 basketball, handball, football and volleyball young players (1378 boys and 519 girls). Different measures were used to examine the differences between the variables contained in the study. Results showed that boys were more intrinsically and extrinsically motivated and showed less a motivation than girls, as well as their scored higher in competence than girls. However, both for boys and girls, self-determined motivation and psychological needs satisfaction led to a greater perception of utility of the sport.

**KEYWORDS:** Self-determined motivation, genre, usefulness of sport, youth athletes.

## RESUMEN

El principal objetivo del estudio es analizar las diferencias entre el nivel de autodeterminación y la satisfacción de las necesidades psicológicas básicas en función del género y su incidencia sobre la percepción de utilidad del deporte. Participaron en el estudio 1897 jóvenes jugadores de baloncesto, balonmano, fútbol y voleibol (1378 chicos y 519 chicas). Diferentes instrumentos fueron utilizados para medir las distintas variables abordadas en el estudio. Los resultados mostraron que los chicos presentan puntuaciones más altas en todos los tipos de motivación y que su sentimiento de competencia es más elevado que el de las chicas. Por otro lado, la motivación autodeterminada y la satisfacción de las necesidades conducen a percibir mayor utilidad del deporte en ambos géneros.

**PALABRAS CLAVE:** Motivación autodeterminada; género; utilidad del deporte; jóvenes deportista.

## INTRODUCTION

In the scholar age, the studies about attitudes, perceptions and opinions regarding their participation in sport – physical activities have gradually increased (Abarca-Sos, Zaragoza Casterad, Generele Lanaspá, and Julián Clemente, 2010; Alvariñas, Fernández-Villarino, and López-Villar, 2009; Moreno, González-Cutre, Martínez, Alonso, and López, 2008; Ruiz-Juan and Zarauz, 2011). This might be due that there are more researches in sport psychology who aim to know the reasons of the adherence in these types of activities, as well as the motives that lead adolescents not to participate. In this regard, it is fundamental to know the utility that young people give to the sport practice, because this knowledgement can avoid a conflict with other social roles that individuals perform, which are normal in these ages (Boiché and Sarrazin, 2007). According to this, motivational processes are a key element to supervise the behavior through the sport practice and achieve the persistence in the future (Taylor, Ntoumanis, Standage, and Spray, 2010; Ulrich-French, and Smith, 2009), because they suppose the curiosity, interest and desire to participate in an activity.

Thus, the conceptual framework of this research is the Self-Determination Theory (Deci and Ryan, 2000, Ryan and Deci, 2000) which studies the degree where human conducts are voluntary of self-determined. The theory proposes motivation as a continuum, distinguishing among three types of behavioural regulation that are associated with varying degrees of self-determination. The highest degree of self-determination is the intrinsic motivation, and refers to the engagement in activities for the feelings of pleasure, interest, and satisfaction that derive from participation. In contrast, extrinsic motivation is associated with the engagement of an activity to achieve certain external goals. According to

SDT, extrinsic motivation is multidimensional comprises by four dimensions: integrated regulation, identified regulation, introjected regulation and external regulation (Vallerand, 1997), and lastly, a third category of motivation is known as amotivation, and represents absence of motivation, intrinsic and extrinsic, when individual engaged in an activity without intention and volition.

Furthermore, the SDT indicates that self-determination levels are determined by the satisfaction of three basic psychological needs (BPN): autonomy, competence and relatedness, which determine the level of self-determination in a person in a social context (Deci and Ryan, 2000).

According to this theory and taking into account the existence of an increasing of the number of adolescents females that dropout the participation in physical – sport activities (Douthitt, 1994; Jaffee and Ricker, 1993) compared to male genre, we aim to know the reasons of this problematic testing the differences between the motivational processes showed by both genre through the sport practice and the incidence of these processes on perception of utility of that practice.

In this regard, some authors have demonstrated that male individuals were more intrinsically motivated by the practice of physical-sport activity than female participants (Amorose and Horn, 2000; Kim and Gill, 1997). Nevertheless, in later investigations several authors have focused the aussence of significant differences between both genre regarding intrinsic motivation, revealing a greater extrinsic motivation and amotivation by the sport practice than female athletes (Arbinaga and García, 2003; Balaguer, Castillo, and Duda, 2007; Moreno, Cervelló, and González-Cutre, 2007; Núñez, Martín-Albo, Navarro, and González, 2006; Recours, Souville, and Grifett, 2004).

Moreover, Moreno, Cano, González-Cutre, Cervelló, and Ruiz (2009) with a sample of 283 federative athletes, 141 male and 142 female belonged to 32 rescue sport clubs, found a greater intrinsic, extrinsic and amotivation values in male than female participants. Furthermore, these individuals showed higher perception of competence and autonomy whereas female had greater scores in the necessity of relatedness.

With respect to the perception of utility of the sport, generally attitudes towards physical activity and Physical Education are more positive when student is more motivated, participates in any extracurricular physical activity and practice sport with more frequent (Chen, 2001; González, Donolo, Rinaudo, and Paoloni, 2011; Moreno and Hellín, 2002; Treasure and Roberts, 2001). In accordance to this, it is important to note that most of the studies have focused on the relationship between motivation and the utility that pupils give to Physical Education (Moreno and Llamas, 2007; Moreno, Llamas, and Ruiz, 2006), because it is considered that positive experiences during these classes are mediators of adherence through sport practice, and therefore, the inclusion of physical activity as healthy habit in the way of life (Coakley and White, 1992).

Hence, due to the inexistence of works that deals with these variables in the sport context, the main aim of this work is to examine the differences between self-determination level and satisfaction of the basic psychological needs with regard to the athlete genre and how these variables are related with perception of utility of sport.

Taking into account the sample characteristics of the current study, the first hypothesis postulated that male individuals will show a more self-determined motivation and a lower perception of utility of the sport practice than female participants. The second hypothesis suggested that higher self-determination levels and satisfaction of the needs of competence, autonomy and relatedness will be the stronger predictors of the utility of sport for both genres.

## METHOD

### *Participants*

The sample of this research was formed by 1897 athletes belonged to basketball ( $n = 284$ ), handball ( $n = 127$ ), football ( $n = 1356$ ) and volleyball ( $n = 130$ ). Participants were male ( $n = 1378$ ) and female ( $n = 519$ ) individuals, ranging in age from 11 to 16 years old ( $M = 12.37$ ;  $SD = 1.48$ ), who played in federative teams of the Region of Extremadura. To data selection, the random sample by conglomerate was used.

### *Instruments*

*Self-determined motivation.* To assess self-determination level, an adapted version by Núñez et al. (2006) of the Sport Motivation Scale by Pelletier et al. (1995) was used in this study. The SMS stems with an introductory sentence (“I practice sport...”) and following by 28-item inventory that assess the different motives of practice. The questionnaire originally was comprised of seven subscales that assess the multifaceted dimensions inherent within self-determination theory, but in our study, after the factorial analysis, the three factors related to intrinsic motivation were joined. Thus, the instrument was divided into 5 factors, to which the first one is referred to intrinsic motivation (12 items, i.e.: “for the pleasure it gives me when I practice this sport”). Other 3 factors were related with extrinsic motivation, divided into identified regulation (4 items, i.e.: “because in my opinion it is one of the best ways to meet people”); introjected regulation (4 items, i.e.: “because I feel bad if I do not spend the necessary time to practice it”); external regulation (4 items, i.e.: “because it allows me to be well regarded by people that I know”). The last factor is called amotivation (4 items, i.e.: “I do not know well, I think that my place is not in this sport”). It is important to note that this questionnaire does not have any factor related to integrated regulation. The reason is that this instrument is orientated to youth and adolescents individuals, and so this type of motivation is associated with the including of physical activity as way of life, and therefore, it

does not appear until the adult age (Deci and Ryan, 2000). Regarding the internal consistency, adequate values Cronbach Alpha coefficient of .86 for intrinsic motivation, .60 for identified regulation, .64 for introjected regulation, .74 for external regulation and .70 for amotivation. Respecting the factors with a lower internal consistency of .70, as was indicated by several studies (Hair, Anderson, Tatham, y Black, 1998; Nunnally and Bernstein, 1995), the internal validity can be accepted due to the low number of items that composed the factor.

*Basic Psychological Needs.* To measure the satisfaction of the basic psychological needs contributions from previous works were used (Reinboth and Duda, 2006; Sarrazin, Vallerand, Guillet, Pelletier, and Cury, 2002; Standage, Duda, and Ntoumanis, 2003), to adapt into Spanish the instruments used and develop the Motivational Mediators Scale (EMM: García-Calvo, Sánchez-Miguel, Leo, Sánchez-Oliva and Gómez, 2009a). This instrument is composed of 18 items grouped in 3 factors: autonomy (6 items, i.e.: "When I practice sport I feel free to express my ideas and opinions"), competence (6 items, i.e.: "I feel satisfied with my perform in my sport") and relatedness (6 items, i.e.: "Some of my best friends belong to this team"). Taking into account that the instrument was not previously validated in Spanish population, a Confirmatory Factorial Analysis was conducted. Appropriate adjusted index were obtained:  $\chi^2 = 309.32$ ,  $p = .00$ ;  $\chi^2/g.l. = 4.18$ ; CFI = .94; IFI = .93; TLI = .92; RMSEA = .05; SRMR = .03. Regarding reliability, Cronbach Alpha of .76 in relatedness, .79 for competence and .72 for autonomy were obtained.

Responses in both instruments were rated in a 5 point Likert – Scale, ranging from 1 ("totally agree") to 5 ("totally disagree").

*Perception of utility of the sport.* To assess perception of utility of the sport, an adapted version of an instrument created by Fredericks and Eccles (2002), composed by 4 items that referred to players' perception about benefits of sport practice and the importance of this practice on their way of life. The items used were the following: "In general, To what extent is useful your learning in your sport?"; "For you, To what extent is important to be good at your sport?"; "Compared with most of the rest of activities, To what extent is important to be good at your sport?". After examine the internal consistency of the instrument, a Cronbach Alpha of .73 was obtained, which indicated us acceptable values over .70. This instrument was responded on a 5 points Likert – scale, ranging from 1 ("Nothing" useful or important for the person") to 5 ("Very much").

### *Procedure*

Prior to data collection, purposes of the research and use of the results to coaches, parents and coaches were informed. Once were obtained the permissions to participate in the study, athletes were informed that their participation was voluntary and their data were confidentially treated. Participants provided verbal assent and written consent and completed their

questionnaires in the locker room prior to a scheduled practice. The primary researcher was present on each occasion and insist on ask questions if athletes needed.

## RESULTS

In Table 1 descriptive values of each variable used in the study were showed, as well as the compare of the averages with regard to athletes´ genre, using the T-Student of independent sample. In this table, the main differences between both genres appeared in the type of motivation, emphasizing in all issues male participants respecting women. With accordance to the basic psychological needs, significant differences were only found in the need of competence, showing male participants greater scores with respect to the female participants. Nevertheless, there are any significant differences in the need of relatedness and autonomy between both genres, as well as the perception of utility of sport.

**Table 1.** Descriptive statistics and T-Student respecting the genre.

Variable	<i>M</i>	<i>SD</i>	<i>α</i>	Male	Female	<i>t</i>	<i>gl</i>	<i>Sig.</i>
<i>Motivation</i>								
Intrinsic	4.09	.72	.86	4.13±.70	3.96±.77	4.42	853.06	.00
Identified	3.66	1.09	.60	3.74±1.07	3.44±1.12	5.29	890.64	.00
Introjected	3.95	.81	.64	4.00±.79	3.81±.82	4.70	892.79	.00
External	3.18	1.04	.74	3.34±1.00	2.74±.98	11.78	947.92	.00
Amotivacion	1.64	.84	.70	1.72±.90	1.45±.61	7.26	1363.31	.00
<i>Needs</i>								
Relatedness	4.09	.66	.76	4.10±.68	4.07±.60	.77	1053.09	.44
Competence	3.88	.76	.79	3.94±.73	3.72±.79	5.64	869.90	.00
Autonomy	4.19	.65	.72	4.18±.66	4.20±.61	-.71	996.18	.48
<i>Utility</i>	4.39	.70	.73	4.39±.72	4.37±.65	.58	1013.73	.56

On the other side, lineal regression analysis was conducted to determine the variables that might predict perception of utility of sport. Thus, in Table 2 the obtained results after conducted a lineal regression analysis using the linear multistep method are showed, taking perception of utility of sport for male participants as dependent variable. As can be seen in the outcomes, need for relatedness emerged as a positive predictor, with an explained variance of 16 %. In the second step, where 20 % of the total variance is explained, intrinsic motivation emerged as positive predictor with 4 % of the explained variance. In the third step, the need for autonomy emerged as positive predictor, explaining 2 % of the variance. In the fourth step, need for competence emerged as positive predictor of perception of utility, explaining 1 % of the variance. It is important to note that need for relatedness is the only need that has an acceptable prediction, because the rest of the variables have a weight of prediction lower than 10 % of the explained variance.

**Table 2.** Multistep regression analysis using perception of utility of the sport for male participants as dependent variable.

Variable	$\beta$	$R^2$	$T$	$P$
Step 1		.16		
Relatedness	.42		16.29	.00
Step 2		.20		
Relatedness	.36		13.27	.00
Intrinsic	.21		7.92	.00
Step 3		.22		
Relatedness	.24		7.56	.00
Intrinsic	.17		6.38	.00
Autonomy	.21		6.26	.00
Step 4		.23		
Relatedness	.20		6.04	.00
Intrinsic	.15		5.40	.00
Autonomy	.17		4.82	.00
Competence	.13		4.34	.00

In the Table 3 the main statistics obtained after multistep linear regression analysis, taking perception of utility of the sport for female participants, are showed. As can be seen in the results, the variable which positively predicts perception of utility of the sport for female genre is the need for autonomy, with a percentage of explained variance of 23 %. In the second step, where accounted the 28 % of the total variance, emerged the feeling of competence as positive predictor variable with 5 % of the explained variable. In the third step, intrinsic motivation emerged as positive predictor, explaining the 1 % of the variance. In the fourth step, amotivation emerged as negative predictor with 2 % of the explained variance. Lastly, in the fifth step, need for relatedness emerged as positive predictor of perception of utility of the sport, accounted the 1 % of the explained variance. As previously happened, only the first variable had an acceptable predictive value over 10 % of the explained variance.



**Table 3.** Multistep regression analysis using perception of utility of the sport for the female genre as dependent variable.

	$\beta$	$R^2$	$T$	$P$
Step 1		.23		
Autonomy	.51		12.38	.00
Step 2		.28		
Autonomy	.38		8.02	.00
Competence	.21		5.70	.00
Step 3		.29		
Autonomy	.33		6.82	.00
Competence	.17		4.53	.00
Intrinsic	.13		3.72	.00
Step 4		.31		
Autonomy	.32		6.67	.00
Competence	.16		4.35	.00
Intrinsic	.14		3.87	.00
Amotivation	-.12		-3.03	.00
Step 5		.32		
Autonomy	.27		5.41	.00
Competence	.13		3.45	.00
Intrinsic	.12		3.35	.00
Amotivation	-.12		-3.00	.00
Relatedness	.13		2.57	.01

## DISCUSSION

The main aim of this research is to examine the differences between self-determination level and satisfaction of the basic psychological needs regarding athletes` genre and how these variables are related with perception of utility of the sport.

After results analysis, it is observed that the first hypothesis which indicated that male participants will show a more self-determined motivation and greater perception of utility of the sport practice than female individuals is not confirmed. Results revealed that male athletes had a higher intrinsic motivation but they also showed higher extrinsic motivation and were slightly more amotivated than female players, finding the greatest differences in the extrinsic motivation. Similar results were recently found by Amado, Leo, Sánchez-Oliva, González, and López (2012) and Moreno et al. (2009), who suggested a different cultural manifestation between both genres.

Moreover, it is important to note that the higher differences appeared in the extrinsic motivation, which suggested us that male gave more value to external benefits to the sport practice such as rewards, social recognition, exhibitionism, competition... In this regard, several authors have found that in the sport

context male participants significantly differed compared with female individuals with respect to extrinsic motivation (Arbinaga and García, 2003; Balaguer et al., 2007; Moreno et al., 2007; Núñez et al., 2006; Recours et al., 2004).

Regarding the basic psychological needs, there are only significant differences in the need for competence, showing more satisfaction male participants than female respecting this need. This finding suggested us that men felt more competent than women when they play sports, which may be due to the fact that they see themselves with more skills to reach any motor aim because traditionally sport activities have been more adapted to the capacity of men than women. These findings have also previously been found by several authors (Mañano, Ninot, and Bilard, 2004; Moreno and Cervelló, 2005; Moreno et al., 2009; Moreno, López de San Román, Martínez-Galindo, Alonso-Villodre, and González-Cutre, 2007).

Following with the second hypothesis, which suggested that self-determined motivation and satisfaction of the psychological needs would be the strongest predictors of perception of utility of the sport for both genres, was confirmed. Results showed that the variables which better predict perception of utility either in men and female were intrinsic motivation and needs for competence, autonomy and relatedness. Although, satisfaction of relatedness is the strongest predictor of perception of utility for men, whereas autonomy was the strongest predictor for women. According to these outcomes, it is emphasized the importance of the satisfaction of these three basic psychological needs to appreciate the sport as something useful, which may conduct to positive consequences such as the intention to persist in youth people.

Respecting the limitations of the research, it is important to note that the sample used in the study comprised a higher number of men with regard to women, which might influence on results, but these data reflected the real number of women that had federative license in the sport modalities tested. Furthermore, the transversal and correlational character of this study avoids setting up causal relationships.

The main conclusion of this work is the necessity to promote intrinsic motivation in people in scholar age, carrying out interventions programs in scholars and sports centers based on the development of teaching programs with coaches, teachers, parents, students and athletes, like the ones carried out in the Autonomous Community of Extremadura (García-Calvo, Sánchez-Miguel, Leo, Sánchez-Oliva, and Gómez, 2009b), to understand the importance of an adequate motivation to the consideration of sport as something useful and beneficial in their lives, setting a commitment with this activity which will help to maintain a healthy way of life. Moreover, it is important to note to focus on satisfaction of the basics psychological needs using different strategies that have been previously used in the sport domain (Moreno and Cervelló, 2010), where several suggestions are established to satisfy the needs for competence, autonomy and relatedness.

It is also interesting to study the motivational antecedents and the incidence of the other significant in the perception of young athletes on the utility of the sport practice, with the aim to develop a deeper analysis of the variables that can lead to know the reasons of the sport commitment.

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