

## MOTIVATION FOR PHYSICAL ACTIVITY PRACTICE AND SATISFACTION WITH LIFE IN HEALTH SCIENCES FIRST-YEAR STUDENTS - RELATIONSHIP BETWEEN GENDER AND DIFFERENT GEOGRAPHIC REGIONS

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**ABSTRACT:** The practice of physical activity in all age groups is fundamental. The risk of many diseases and usual health problems decrease with regular physical activity. This study has as main objective to identify the motivations and satisfaction with the life of first-year students of health sciences bachelor's degrees and compare them between gender and different geographic regions that students came from. A total of 177 students of both genders from 3 different country regions (North, Centre and Interior of Portugal), namely 31 (17.5%) were male and 146 (82.5%) were female, with a mean age of  $20.20 \pm 3.04$  years from 18 to 30 years. Data collection instrument used was a questionnaire of six scales that evaluate each of the variables: Behavioral Regulation in Sport Questionnaire, Basic Psychological Needs Exercise Scale and Life Satisfaction Scale. Descriptive statistics were presented and the Cronbach's alpha was calculated to evaluate the internal consistency of the questionnaires. A level of significance was adopted with a margin of error of 5% for a probability of at least 95% using the Levene and Mann-Whitney techniques for comparisons between genders and regions using SPSS version 20. The results show that the motivation for who maintains a constant practice of PA focuses on intrinsic motivation in both genders with significant differences. In Amotivation, external and introjected regulation women present higher levels for the practice of PA related to men. In the basic psychological needs the male gender presents higher values in all the variables with significant differences in relation and competence. In the satisfaction with life between genders, men present higher means and students who practice PA are the most satisfied with their life's. According to the country region, this variable is more favourable to students from the north. We can conclude that the intrinsic motivation and the satisfaction with life appear as an extremely positive factor in these students that must be kept active for maintaining this satisfaction with life.

**KEYWORDS:** Motivation, Sports Practice, Life Satisfaction, Gender, Country region

**RESUMO:** A prática de atividade física em todas as faixas etárias é fundamental. O risco de muitas doenças e problemas de saúde habituais diminui com a atividade física regular. Este estudo tem como objetivo principal identificar as motivações para a prática desportiva e a satisfação com a vida de alunos inscritos no primeiro ano de cursos de Ciências da Saúde e compará-los entre género e diferentes regiões geográficas do país. O número total de participantes foi de 177 estudantes de ambos os géneros e de 3 regiões diferentes (Norte, Centro e Interior de Portugal). 31 (17,5%) eram do género masculino e 146 (82,5%) do género feminino, com uma idade média de  $20,20 \pm 3,04$  anos dos 18 aos 30 anos. O instrumento de recolha de dados utilizado foi um questionário de seis escalas que avaliam cada uma das variáveis: Escala de Regulação Comportamental no Desporto, Escala das Necessidades Psicológicas Básicas e Escala de Satisfação com a Vida. Foram apresentadas estatísticas descritivas e o alfa de Cronbach foi calculado para avaliar a consistência interna dos questionários. Adotou-se um nível de significância com margem de erro de 5% para uma probabilidade de pelo menos 95% usando as técnicas de Levene e Mann-Whitney para comparações entre géneros e regiões do país utilizando o programa SPSS (v20). Os resultados mostram que a motivação para quem mantém uma prática constante de AF foca-se na motivação intrínseca em ambos os géneros, com diferenças significativas. Na Amotivação, as mulheres com regulação externa e introjetada apresentam níveis mais elevados para a prática de AF em relação aos homens. Nas necessidades psicológicas básicas, o género masculino apresenta valores mais elevados em todas as variáveis com diferenças significativas na relação e na competência. Na satisfação com a vida entre os géneros, os homens apresentam médias mais elevadas e os estudantes que praticam AF são os mais satisfeitos com a vida. Segundo a região do país, essa variável é mais favorável aos estudantes do Norte. Podemos concluir que a motivação intrínseca e a satisfação com a vida resultam como um fator extremamente positivo nestes alunos que devem continuar ativos para manter essa satisfação com a vida.

**PALAVRAS-CHAVE:** Motivação, Prática Desportiva, Satisfação com a vida, Género, Região do País

**RESUMEN:** La práctica de actividad física en todas las edades es fundamental. El riesgo de muchas enfermedades y problemas de salud habituales disminuye con la actividad física regular. Este estudio tiene como objetivo principal identificar las motivaciones para la práctica deportiva y la satisfacción con la vida de alumnos inscritos en el primer año de cursos de Ciencias de la Salud y compararlos entre género y diferentes regiones geográficas del país. El número total de participantes fue de 177 estudiantes de ambos sexos y tres regiones diferentes (Norte, Centro y del Interior Portugal). (17,5%) eran del género masculino y 146 (82,5%)

Manuscript received: 15/06/2019  
Manuscript accepted: 19/09/19

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del género femenino, con una edad media de  $20,20 \pm 3,04$  años de 18 a 30 años. El instrumento de recogida de datos utilizado fue un cuestionario de seis escalas que evalúan cada una de las variables: Escala de regulación de comportamiento en el deporte, Escala de las Necesidades Psicológicas Básicas y Escala de Satisfacción con la Vida. Se presentaron estadísticas descriptivas y el alfa de Cronbach fue calculado para evaluar la consistencia interna de los cuestionarios. Se adoptó un nivel de significancia con un margen de

error del 5% para una probabilidad de al menos el 95% usando las técnicas de Levene y Mann-Whitney para comparaciones entre géneros y regiones del país utilizando el programa SPSS (v20). Los resultados muestran que la motivación para quien mantiene una práctica constante de AF se centra en la motivación intrínseca en ambos géneros, con diferencias significativas. En la amotivación, las mujeres con regulación externa e introjetada presentan niveles más elevados para la práctica de AF en relación a los hombres. En las

necesidades psicológicas básicas, el género masculino presenta valores más elevados en todas las variables con diferencias significativas en la relación y en la competencia. En la satisfacción con la vida entre los géneros, los hombres presentan medias más altas y los estudiantes que practican AF son los más satisfechos con la vida. Según la región del país, esta variable es más favorable a los estudiantes del Norte. Podemos concluir que la motivación intrínseca y la satisfacción con la vida resultan como un factor extremadamente positivo en estos alumnos que deben seguir activos para mantener esa satisfacción con la vida.

**PALABRAS CLAVE:** Motivación, Práctica Deportiva, Satisfacción con la vida, Género, Región del País

## INTRODUCTION

The reasons that make individuals maintain an active sports practice have received great attention, considering it as a fundamental factor (Coimbra, Gomes, Oliveira, Rezende, Castro, Miranda & Bara Filho, 2013). Regardless of age, a high degree of motivation is considered a key element for individuals' permanence and pleasure in this practice. However, subjects' motivation is not directly influenced by the factors of the involvement, but by the satisfaction of the needs of competence, autonomy and relationship (Couto, Cid & Moutão, 2012). So, this lead us to the Self-Determination Theory (SDT). This theory portrays the behaviour of the human being, based on the satisfaction of three basic psychological needs. It proposes that motivation is continually characterized by levels of self-determination from the most self-determined (intrinsic motivation) to self-determined (extrinsic motivation), (Ryan & Deci, 2000). The SDT suggests that we examine motivation as a system of behavioural regulation that is based on a continuous motivational climate, which is not influenced directly by the factors of involvement, but rather by the satisfaction of the basic psychological needs (BPN) of competence (i.e., ability to regulate their own actions) and relationship (i.e., ability to seek to develop links and interpersonal relationships) (Wang, Biddle & Elliot, 2007; Fernandes & Vasconcelos - Raposo, 2005), which portrays consequences, behavioural, cognitive and affective adaptations. Within behavioural adaptations, we can frame health behaviours. According to these same authors these are basic psychological needs, used to better explain the levels of self-determination that will determine the regulation of the behaviour of the subject. Thus, we describe them as follows (Decy & Ryan, 2008):

a) Amotivation - This is the least self-determined form of the subject, is in a state of lack of intention to act, i.e., the subject does not perform the behaviour, nor have intentions to do so. Converting to the context of supervised physical activity, we can say that a practitioner is energized when he says "I do not know the reason to do or continue to exercise"; External Extrinsic Motivation - The subject performs the behaviour to satisfy external requirements, i.e., to obtain rewards or avoid punishments, as it is a must for the individual. Converting to the context of supervised physical activity, we can say that a practitioner is externally motivated when he says "I only practice physical activity because my family and my friends tell me what I should do?";

b) Introjected Extrinsic Motivation - The subject presses on himself and the activity is performed to avoid negative feelings (guilt and / or anxiety), he performs the activity because someone commands. Converting to the context of supervised physical activity, we can say that a practitioner is interjectively motivated when he says: "I need to perform physical activity to be good to myself, otherwise I will feel restless and guilty";

c) Identified Extrinsic Motivation - Reflects a conscious appreciation of behaviour that is accepted as personally important. The subject identifies with his or her purpose and value (an individual who is motivated in an identified way, learns useful skills, and appreciates the results that are the benefit of physical activity). Converting to the context of supervised physical activity, we can say that a practitioner is motivated in an identified way when he says: "Practicing physical activity is not interesting, but despite this, I think it is important to practice because it has benefits for my health and well-being";

d) Integrated Extrinsic Motivation - it is the most self-determined and autonomous form of external motivation, the subject integrates behaviour as part of himself, there being a high degree of congruence with other values and needs. However, the behaviour is still realized by its instrumental value and not only by the satisfaction that is inherent to it. Converting to the context of supervised physical activity, we can say that a practitioner is motivated in an integrated way when he

says: "I do supervised physical activity because it demonstrates who I am, it is already part of my life";

e) Intrinsic Motivation - The subject performs a certain activity for the interest, fun and satisfaction that is inherent in it. It is the highest level of autonomy and represents true self-determined behaviour. Converting to the context of supervised physical activity, we can say that a practitioner is intrinsically motivated when he expresses: "I exercise because of the satisfaction it offers me and because it is fun."

The main objective of this theoretical approach is to focus on the surroundings that promote or inhibit the process of self-motivation. That is, according to Deci & Ryan (2008), the main difference of the SDT is between autonomous motivation (which incorporates intrinsic motivation and integrated and identified extrinsic motivation) and controlled motivation (which incorporates the introjected and external extrinsic motivation). In the first case, when people are autonomously motivated, they experience will (they govern their behaviour by decision and self-will) or feelings of self-approval of their actions. In the second case, when people are reasonably motivated, they experience situations of pressure to think, feel or behave in a particular way (they govern their behaviour by external determinations). Both autonomous and controlled motivation direct and influence the behaviour of the subject, unlike what happens with the amotivation, which reveals an absence of regulatory process. And this is an important fact in the context of exercise because intrinsic motivation is among the most important factors for maintaining exercise behaviour. And people who regulate their motivation intrinsically demonstrate greater persistence, commitment, effort, and pleasure in the activities they do (Deci & Ryan, 2008). The use of this theory in the field of physical activity is of great importance. According to Standage, Duda and Ntoumanis (2003), this theoretical model can provide important explanations about the motivational process, namely connections between the way students regulate behaviour and their commitment to the tasks performed in class. Some recent studies in physical activity have pointed to a positive impact of the motivational climate, when it is perceived by the subject as oriented towards mastery (or that provides the autonomous behaviour), on the satisfaction of the basic psychological capacities (Ntoumanis & Standage, 2009; Murcia, Román, Galindo, Alonso, & Cutre, 2008). Satisfaction with life has a negative propensity with age (Stubbe, Moor, Boomsma, & Geus, 2007). It also tells us that men are significantly more satisfied with their lives than women (Stubbe et al., 2007). In all ages and both sexes, exercise practitioners are more satisfied with their lives than non-practitioners (Stubbe et al., 2007). The concept of satisfaction with life has been linked to a broader concept that is the quality of life. Although satisfaction with life and quality of life often appear as synonyms in scientific theoretical reviews, there is a particularity that distinguishes them, since satisfaction with life refers to the subjective psychological dimension of quality of life, which in turn, encompasses other objective faculties, such as, living conditions and social circumstances (Galinha, 2008). Satisfaction with life refers to a process of personal judgment, in which each person evaluates the quality of life based on a comparison between the circumstances of his life and his ideals (Dias, 2006). From the greater or lesser correspondence between the two, there is a greater or lesser satisfaction with life.

According to Diener, Emmons, Larsen and Griffin (1985), satisfaction with life involves a judgment process through which subjects globally evaluate their lives based on their own criteria and not according to external criteria. Life judgment processes do not occur identically in all individuals, as individuals who achieve greater satisfaction with life seem to give more importance to areas where their lives runs better, and those that report less satisfaction with life seem to give greater importance to the most troublesome aspects of their lives (Leyton, Batista, Lobato, Aspano & Jimenez, 2017). Life satisfaction differs greatly from individual to individual, depending on intimate and personal experiences. Individuals tend to react differently to similar situations, but are influenced by their values, experiences, and life expectancies (Caspi & Elder, 1986; Leyton, Lobato, Batista, Aspano & Jimenez, 2017). Satisfaction with life is a complicated concept and difficult to measure, as already mentioned, it is a subjective state. According to Galinha (2008), satisfaction with life is part of a broad concept that is the quality of life and refers to the "subjective psychological dimension" of quality of life that includes other objective dimensions, such as, living conditions and social circumstances (Galinha, 2008, p.35). Satisfaction with life can also be reported as an indicator of quality of life and, simultaneously, with indicators of physical and mental health, allow us to know to what extent the person is

improving (Veenhoven, 1996; Batista, Castuera, Roman, Lobato & Aspano, 2016). We can establish that satisfaction with life reflects individual well-being, that is, the way and motives that lead people to live their life experiences in a positive way. Currently in the literature, there seems to be a consensus in which satisfaction with life is part of well-being, constituting its cognitive dimension and being present in most well-being measures (Albuquerque & Tróccoli, 2004). However, Siqueira and Padovam (2008) point out that measures of satisfaction with life are not enough to measure subjective well-being, and an additional measure is necessary to address the affective component of this construct. The affective component of subjective well-being is composed of positive affects and negative affects. In order to understand the concept of well-being, we have sought to understand how the individual is influenced by positive affects and negative affects, as well as, the quality of his satisfaction with life. Between satisfaction with life and affectivity there is an analogy, insofar as the greater the positive affect, the greater is the satisfaction with life (Antunes, Couto, Vitorino, Monteiro, Moutão, Marinho & Cid, 2019; Silva, Rosado, Silva & Serpa, 2019). The concept of physical activity is often used without knowing its true meaning. This is a very broad concept, it can range from day-to-day tasks such as sweeping, walking, etc. to the movements of sports activities or leisure activities that involve movement. Haskell et al. (2007) define physical activity as any and all body movement produced by musculoskeletal contraction, resulting from an energy expenditure. Physical activity is the most diversified component of the factors that imply daily energy expenditure (Bouchard et al., 1994). Thus, the absence of physical activity can lead to obesity because there is less energy consumption by the body (Mota & Carvalho, 2001). Physical activity, in addition to aiding muscle gains, it can improve mood, reduce stress, increase energy levels, improve joint flexibility, help to prevent and reduce disease and, generally, increase quality of life (Haskell et al., 2007). Ettinger et al. (2006) proposes the existence of two types of physical activity: physical activity as a lifestyle (where the practice is seen as something intrinsic in the individual, related to their daily life) and physical activity with structured exercises (designed for maintenance or improvement of the physical condition of an individual).

## MATERIAL AND METHODS

The study main objective is to identify the motivations for practice physical activity and the satisfaction with life of first-year students of health sciences bachelor's degrees and compare them between gender and different geographic regions. The methodology used in the execution of this research was selected from the determination of the objectives of the study, using the quantitative method, which is characterized by the use of quantification, both in the collection and in the treatment of information, where we used statistical techniques, aiming at results that avoid possible distortions of analysis and interpretation, as well as, providing a higher safety margin (Diehl, 2004). Regarding the participants, we used a random sampling technique, that is, a procedure to be used in choosing the elements that make up the sample (Cid, 2010). This type of sample can be used successfully in situations where it is more important to grasp general ideas and to identify critical aspects than scientific objectivity itself.

### Participants

The participants were 177 Portuguese students enrolled in the first-year of Health Sciences Bachelor's Degrees in the North, Centre and East of Portugal, who volunteered to participate in this study. They are aged between 18 and 30 years, with a mean age of  $20.20 \pm 3.04$  from which 146 (82.5%) are female and 31 (17.5%) are male.

### Inclusion and exclusion criteria

Participants included in the study would have attend the first-year of Health Sciences Bachelor's Degrees in Portuguese Universities and must had between 18 and 30 years old. Participants who attend the 2nd, 3rd or 4th year of these bachelor's degrees will be excluded, as well as, those who attend the 1st year, had less than 18 years or over 35 years of age.

### Ethical Procedures

Informed consent was obtained from all participants. Before starting to collect data, participants were informed about the scope and objectives of the study, as well as, the methodology that would be used. Data collection was carried out by the researcher himself for the application of the instrument and any doubts clarification. The students were approached in classrooms at the end of their

classes with the authorization of the teacher. They were properly informed of the purpose of the study and that the collaboration will be voluntary and anonymous. There were no correct or wrong answers, we would only like to know each other's opinion about what is being questioned, but we address the fact that it would be extremely important for them to be as sincere as possible. The questionnaires were self-filled in our presence and returned at the same time, inside an envelope ensuring completely anonymous in this process. After the questionnaires were processed, they were destroyed. The study was approved by the Ethics Committee of the university.

### Statistical Procedures

All variables study from the questionnaire inherent to this study were treated statistically using the SPSS for Windows, version 20.0. This statistical treatment consists of a descriptive analysis, based on in some parameters of central tendency and dispersion, as well as, an inferential analysis to determine if there are differences regarding the independent variables, that is, gender and country region and internal consistency (Cronbach's alpha).

### Instruments for data collection

According to what we intend to evaluate, we used: Behavioural Regulation in Sport Questionnaire (BRSQ-6) and Life Satisfaction Scale (SWLS). Therefore, in order to evaluate the motivation of the students of this study, we used the Behavioral Regulation in Sport Questionnaire (BRSQ), with 24 items, divided into 6 subscales evaluated according to a 7-level Likert scale, which varies between 1 (totally disagree) and 7 (totally agree), which reflects the underlying motivation types (Moutão, Monteiro, Baptista & Cid, 2014). This was elaborated with the intention of filling the gaps left by the Sport Motivation Scale (Pelletier, Fortier, Vallerand, Tuson & Blais, 1995) and the revised version of this scale (Mallet, Kawabata, Newcombe, Otero-Forero & Jackson, 2007). The Basic Psychological Needs was used to measure basic psychological needs satisfaction. It was applied the Portuguese version of the Basic Psychological Needs Exercise Scale (BPNES) (Vlachopoulos & Michailidou, 2006) validated by Pires, Cid, Borrego, Alves & Silva (2010). This scale consists of 12 items distributed in 3 dimensions that reflect the basic psychological needs of the self-determination theory: autonomy, competence perception and social relations perception, being each dimension composed of 4 items that can be classified taking into account a Likert type, between 1 (totally disagree) and 5 (totally agree). Moutão, Cid, Alves, Leitão & Vlachopoulos (2012) by confirmatory analysis proved the adequacy of the adaptation made. As for the Life Satisfaction Scale, as the name implies, it was used to evaluate life satisfaction as a cognitive construct (Diener, Emmons, Larsen & Griffin, 1985). This is formed by 5 items and consists of indicating, through a 7-point Likert scale, that varies between Totally Disagree (1) and Absolutely Agree (7), the degree of satisfaction according to each item. SWLS has been shown to have favourable psychometric characteristics; at an initial stage of construction of this scale, 48 items related to life satisfaction were listed, however, some items on positive and negative affects were included. However, after factorial analyses, items that presented levels below 0.60 were eliminated from the scale, resulting in only five. According to Albuquerque, Sousa & Martins (2010), in relation to the validation process Portuguese version of the SWLS, through the confirmatory factorial analysis, adjustment quality indices were considered adequate. Neto (1993) showed that the scale presented high reliability, since the coefficient of internal consistency was satisfactory ( $\alpha = 0.78$ ), which was already expected considering the results obtained through the factorial analysis, with correlation values higher than 0.50. Thus, this author characterizes this scale as being a unifactorial instrument (eigenvalue greater than 1, which explains 53.3% of the variance), with Cronbach's alpha = 0.78.

## RESULTS / OBSERVATIONS

Next, we describe the minimum, maximum, mean, standard deviation and Cronbach's alpha values obtained in the different dependent variables and their dimensions (Table 1).

Initially we present the descriptive values of each variable, and according to the motivation to practice physical activity related to students' gender, it was possible to observe through Table 2 that the female gender presents mean values ( $X = 2.02 \pm \sigma = 0.83$ ), with external regulation ( $X = 1.66 \pm \sigma = 0.85$ ) and introjected regulation ( $X = 2.19 \pm \sigma = 0.80$ ) in relation to the male gender, which in turn presents ( $X = 5.82 \pm \sigma = 0.75$ ), integrated regulation ( $X = 5.55 \pm \sigma = 0.84$ ), as

well as intrinsic motivation ( $X = 6.14 \pm \sigma = 0.89$ ). Only in integrated regulation and intrinsic motivation significant differences occur.

Regarding the basic psychological needs, Table 3 presents the male gender with higher mean values in all dimensions evaluated. In the case of autonomy, the mean value obtained for the male gender was  $X = 4.289 \pm \sigma = 0.76$ , in the competency dimension, the mean value for the male gender is  $X = 4.19 \pm \sigma = 0.88$  and in relation, the mean value presented by the male gender was  $X = 4.28 \pm \sigma = 0.88$ . There were significant differences in these last two dimensions.

Its identified from table 4 that the mean value in relation to the life satisfaction variable is higher in students that practice physical activity, with significant differences.

Regarding the dimension of satisfaction with life between genders, it is verified that the male gender presents higher values in relation to the female gender, nevertheless does not verify significant differences.

Table 6 shows that although there are no significant differences between practicing and non-practicing students by country region, life satisfaction values

Table 1. Descriptive statistics and Alpha Cronbach values of the participants (n=177).

Variables	N	Minimum	Maximum	Mean±SD	α Cronbach
Amotivation	177	1,00	4,67	2.23±1.14	0.83
External regulation	177	1,00	5,00	1,90±1.03	0.85
Introjected regulation	177	1,00	5,75	2,36±1.10	0.80
Identified regulation	177	1,00	7,00	5.30±0.95	0.75
Integrated regulation	177	1,00	7,00	4.74±1.15	0.84
Intrinsic motivation	177	1,00	7,00	5.33±1.17	0.89
Autonomy	177	1,00	5,00	3.91±0.61	0.76
Competence	177	1,00	5,00	3.79±0.67	0.80
Relationship	177	1,00	5,00	3.80±0.77	0.88
Satisfaction with Life	177	1,60	7,00	4.96±1.06	0.88

Table 2. Means, standard deviations and values of significance of the dimensions of the motivation for the practice according to gender variable of the participants.

Gender		Amotivation	External regulation	Introjected regulation	Identified regulation	Integrated regulation	Intrinsic motivation
<b>Male</b> (n=32)	Mean	1.76	1.39	2.13	5.82	5.55	6.14
	SD	1.11	0.67	1.26	0.82	1.03	1.21
<b>Female</b> (n=145)	Mean	2.02	1.66	2.19	5.48	4.86	5.60
	SD	1.11	0.98	1.09	0.88	1.09	1.08
<b>Total</b> (n=177)	Mean	3.78	3.05	4.32	11.3	10.41	11.74
	SD	2.22	1.65	2.35	1,7	2.12	2.29
	Sig.	0.35	0.22	0.82	0.10	0.01*	0.05*

(Mann-Whitney Test ( $p \leq 0.05^*$ ))

Table 3. Means, standard deviations and values of significance of the dimensions of basic psychological needs according to the gender variable of the students.

Gender		Autonomy	Competence	Relationship
<b>Male</b> (n=32)	Mean	4.28	4.19	4.28
	SD	0.49	0.54	0.74
<b>Female</b> (n=145)	Mean	4.06	3.85	3.77
	SD	0.52	0.49	0.78
<b>Total</b> (n=177)	Mean	8.34	8.04	8.05
	SD	1.01	1.03	1.52
	Sig.	0.08	0.00*	0.00*

Mann-Whitney Test ( $p \leq 0.05^*$ )

Table 4. Means, standard deviations and values of significance of life satisfaction dimensions between practitioners of PA and non-practitioners of PA.

	Mean	SD	Sig.
<b>Satisfaction with life non-practitioners (n=83)</b>	4.81	1.09	
<b>Satisfaction with life practitioners (n=94)</b>	5.14	1.01	0.04*
<b>Total (n=177)</b>	4.96	1.06	

Mann-Whitney Test ( $p \leq 0.05^*$ )

Table 5. Means, standard deviation and values of significance of the dimensions of life satisfaction according to gender variable (male and female practitioners).

Gender	Mean	SD	Sig.
<b>Satisfaction with life - males (n=32)</b>	5.32	1.31	0.32
<b>Satisfaction with life - females (n=145)</b>	5.07	0.87	
<b>Total (n=177)</b>	10.39	2.18	

Mann-Whitney Test ( $p \leq 0.05^*$ )

Table 6. Means, standard deviation and values of significance of life satisfaction dimensions between practitioners of PA and non-practitioners of PA according to their region.

	Interior region Mean ± SD n	Centre region Mean ± SD n	North region Mean ± SD n
Satisfaction with life non-practitioners (n=83)	4.64±0.96 n=36	4.91±1.21 n=47	4.92±0.98 n=11
Satisfaction with life practitioners (n=94)	4.99±0.88 n=20	5.13±1.04 n=39	5.28±1.07 n=24
Total (n=177)	4.76±0.94 n=56	5.01±1.14 n=86	5.17±1.04 n=35
Sig.	0.18	0.32	0.45

Mann-Whitney Test ( $p \leq 0.05^*$ )

are always higher in students who maintain PA practice in the regions where they study. Students from the North region have the highest value of satisfaction with life.

## DISCUSSION

Regarding the relationship between gender and motivation, it was possible to observe that there are significant differences in integrated regulation, intrinsic motivation, competence and relationship, the same was not observed in the study by Coimbra et al. (2013), where male individuals have lower levels of amotivation and introjected regulation than female students, that is, they are individuals who are involved in the practice of physical activity, but do not stop valuing it or simply practice as a way of avoiding internal pressures (Ryan & Deci, 2007). However, it is the female gender that has higher levels of external regulation. These results lead us to agree with Chantal, Guay, Dobreva-Martinova & Vallerand (1996) and Murcia, Blanco, Galindo and Gillet & Rosbnet (2008), who also found significantly higher values (present them in numbers) of intrinsic motivation in men, who are more self-determined and who practice the search for external incentives, but also for the pleasure and satisfaction generated by the activity itself. However, there are studies that affirm the opposite (Amado, Leo, Sánchez-Oliva, González & López (2012); Amorose & Horn (2000); Coimbra, et al. (2013); Moreno, Cano, González-Cutre, Cervelló & Ruiz (2009), but it was in the male gender that they found superior values in all the dimensions of the motivation, that can be justified as being a manifestation of the cultural differences existing between both genders. Regarding the basic psychological needs, we verified that there are significant differences between genders, since the male gender presents higher mean values in the three dimensions: autonomy, competence and relation, that is, male students feel that they are given the choice in the varied situations of practice of physical activity and behaviour, they feel able to face this practice, as well as, being able to obtain a positive relationship with others. As Deci & Ryan (1985) report, it is men who have higher levels of intrinsic motivation who feel more competent and autonomous. However, Hollembeak & Amorose (2005) found that it is women who show higher levels of autonomy and relationship, which makes them more autonomous than men (Gené & Latinjak, 2014). However, in the study carried out by Amado, Sánchez-Miguel, Leo, Sánchez-Oliva and García-Calvo (2013), the female gender only obtained higher values (numbers?) in the autonomy dimension, while the male gender presents higher means (numbers?) in the remaining dimensions, which was found in ours. In the studies carried out by Rijo (2014) and Serrano, Marcos, Catalán, Solana & González (2015), it was the male gender that obtained higher mean values for the three dimensions, since they have a more positive appreciation of skills and levels of autonomy, competence and relationship (Moreno, Cano, González-Cutre, Cervelló & Ruiz, and Moreno, Cano, González-Cutre, and Albarca-Sos & Zaragoza, 2009). In addition, an adequate perception of competence predisposes the person to practice exercise and helps in the adoption of healthy routines (Moreno-Murcia, Cervelló, Huéscar, & Llamas, 2011). In the studies conducted by Bebetos, Papaioannou & Theodorakis (2003), there were conflicting values that revealed that the female gender had high values in almost all dimensions. These results seem to confirm the trends reported in several studies (Cid, Chicau, Silva & Moutão, 2008; Lores & Murcia, 2008), since the male gender is more involved with physical activity, (Cid, Couto & Moutão, 2012), that is, we can justify this situation with what individuals look for when performing physical activity. According to this, we can affirm that male students present higher values of life satisfaction than females, not being reflected in the studies conducted by Mora, Villalobos, Araya & Ozols (2004) and Rodrigues (2012), in which women are more vigorous and have higher levels of mental health than men, since physical activity is an essential factor for their physical and psychological well-being. However, it

was the male students, who presented higher mean values of life satisfaction, as we can see in some studies (Berjano, Forguet & González, 2008; Matos et al., 2007; Zanon & Hutz, 2010) and that the mean of satisfaction with life is higher in the female gender (Marconcin, Alves, Dias & Fonseca, 2010).

## CONCLUSION

We sought to know the differences between male and female students, namely at the level of motivation, basic psychological needs and satisfaction with life. Given the objectives outlined and the data from the analysis and discussion of the results, we present some conclusions that justify the relevance of this study. Regarding the motivation to practice physical activity, we find that men feel more intrinsically motivated, because they practice the activity for pleasure, satisfaction voluntarily, without expecting external rewards, unlike women, who present a level of higher motivation. This refers to the relative lack of motivation, since male students perceive a lack of contingencies between actions and results with significant differences between genders at the level of integrated and intrinsic motivation. Regarding the aspects related to autonomy, competence and relationship as the three basic psychological needs, we observed that there are significant differences between female and male students, with men having higher mean values in the three dimensions studied with significant values in competence and relation. We can say that men feel more autonomous, able to regulate their own actions, more effective in interacting with the social environment in which they are involved, as well as, being able to seek and develop interpersonal relationships and relationships.

Regarding satisfaction with life, which aimed to verify the influence of gender on satisfaction with life, we found that there are no significant differences, and it was evidenced by the male gender higher levels, which means that the male students feel more satisfied with life than the female students.

Finally, two more general comparisons were made: life satisfaction between practitioners and non-practitioners of PA, where the highest value is observed in practicing students with significant differences, affirming that PA is a determining factor for a better satisfaction with life. It is also a comparison among students distributed in 3 different regions of the country, where again it is verified that the students practicing PA present in all these regions better results with higher indices in the students of the north region of the country.

## ACKNOWLEDGMENT

The authors have nothing to report

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