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Exploring the Role of Resilience and Basic Psychological Needs as Antecedents of Enjoyment and Boredom in Female Sports[☆]

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ABSTRACT

Positive psychology defends that resilience and satisfaction of the basic psychological needs contribute to predict athletes' quality of engagement and optimal development. Based on self-determination theory the present study aims to test a model analyzing the relationship between young athletes' resilience, satisfaction and thwarting of their basic psychological needs, and their experiences of enjoyment and boredom within their sport practice. Participants of the study are 641 female football and basketball players ($M_{age} = 14.74 \pm 3.91$). Results of the structural equation models show that athletes' resilience is positively associated with satisfaction of basic psychological needs and negatively with its thwarting. Players' psychological needs satisfaction is positively associated with their enjoyment and negatively with their boredom, whereas needs thwarting is positively associated with their boredom and negatively with their experience of enjoyment. Finally, the results show the total mediation of the satisfaction and thwarting of the psychological needs in the relationship between resilience and experiences of enjoyment and boredom. These results emphasize the importance of developing athletes' resilience as it promotes satisfaction and prevents thwarting of the basic psychological needs fostering quality of sport engagement.

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Análisis del papel de la resiliencia y de las necesidades psicológicas básicas como antecedentes de las experiencias de diversión y aburrimiento en el deporte femenino

RESUMEN

La psicología positiva defiende que las variables que promueven la calidad de la implicación, como la resiliencia y la satisfacción de las necesidades psicológicas básicas, contribuyen a predecir el desarrollo óptimo. Desde el marco de la teoría de la autodeterminación, en el presente estudio se analiza la relación entre la resiliencia, la satisfacción y la frustración de las necesidades psicológicas básicas y las experiencias de diversión y aburrimiento en la práctica deportiva. En el estudio participan 641 jugadoras de fútbol y baloncesto ($M_{edad} = 14.74 \pm 3.91$). Los resultados del análisis de ecuaciones estructurales muestran que la resiliencia se asocia positivamente con la satisfacción y negativamente con la frustración de las necesidades psicológicas de las deportistas. La satisfacción de las necesidades psicológicas se asocia positivamente con la diversión y negativamente con el aburrimiento, mientras que la frustración se asocia positivamente con el aburrimiento y negativamente con la diversión. Por último, los resultados muestran la mediación total de la satisfacción y frustración de las necesidades psicológicas en la relación entre la resiliencia y las experiencias de diversión y aburrimiento. Estos resultados enfatizan la importancia de promover la resiliencia de las jugadoras ya que con ello se fomenta la satisfacción y se dificulta la frustración de sus necesidades psicológicas básicas, promoviendo la calidad de la implicación deportiva.

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Introduction

Youth sport serves as a platform for transmitting important proactive values in our society such as respect and commitment (European Commission, 2007; Iturbide-Luquin & Elosua-Oliden, 2017) and offers young people the opportunity to gain benefits for their physical and psychological health (Bauman, 2004; WHO, 2011). Beyond these benefits, sport also represents a context where young people face difficult and unexpected situations, both in matches and in training, to which they need to adapt to get a good performance in sports practice. Learning to cope and to know how to overcome daily adversities helps them in their development as athletes, and this can be extrapolated to other contexts of life.

Currently, women's youth sport receives special attention due to low participation and dropout rates, as well as the unequal conditions that exist in comparison to men's sport, in terms of the availability of spaces, materials, tournaments and other resources. Just to give an example, in football, one of the sports included in this study, male participation compared to female participation is almost three times higher in most European countries (UEFA, 2014). Considering this situation, it is important to analyze some of the motivational and cognitive factors that help the young players to continue making efforts in spite of the difficulties, and to continue in their sport practice. Within the framework of this phenomenon, this article analyses the role of resilience and basic psychological need satisfaction and thwarting in the experiences of enjoyment and boredom of women who play football and/or basketball.

One of the main reasons for young people to practice sport is because of the fun they experience during their sports participation (Castillo, Balaguer, & Duda, 2000). These enjoyable experiences they gain through their sports participation contribute to increase their interest and intrinsic motivation, which translates into a higher quality of their involvement in sport. At the same time, experiences of fun in sport and quality involvement make it easier for young people to continue practicing their sport (Quested et al., 2013) and to develop optimally (Ryan & Deci, 2017). On the contrary, when young male and female athletes experience boredom in training and matches it is more likely that their involvement is of low quality, and that the reasons for continuing their sporting practice, if they have any, are extrinsic, which is related to greater sport drop-out (Weiss & Petlichkoff, 1989). Bearing this in mind, it is understood that important theories of motivation, such as the theory of self-determination (SDT, Deci & Ryan, 2000; Ryan & Deci, 2017), defend that sports adherence and athletes' optimal functioning are favoured when they exhibit quality of involvement.

SDT postulates that basic psychological needs, considered as essential nutrients for personal development and growth, promote quality of involvement (Deci & Ryan, 2000). These needs are the need for competence (the feeling of being able to interact effectively with the environment), the need for autonomy (the feeling of having a choice and being the initiator of one's own actions), and the need for relatedness (feeling connected and valued by others). This theory defends that need satisfaction favours the optimal functioning of people, while need thwarting hinders its occurrence. A female athlete feels her needs satisfied when she perceives that she can meet the demands of the activity, when she feels free to express her ideas and opinions, and when she feels supported and valued by the people around her. On the contrary, an athlete feels her needs thwarted when she notices that people around her impede her competence, push her to behave in a certain way – independently of her will – and when she feels rejected by others.

Previous sports literature shows that when athletes feel that their basic psychological needs are satisfied, they have more enjoyable experiences (Álvarez, Balaguer, Castillo, & Duda, 2009; Quested et al., 2013) and less boredom (Álvarez et al., 2009). On the other hand, although to date no studies have been conducted

exploring the relationship between need thwarting and experiences of enjoyment and boredom in sport, its relationship with other variables related to the quality of motivation has been analyzed (Cantú-Berrueto, Castillo, López-Walle, Tristán, & Balaguer, 2016). Cantú-Berrueto et al. (2016) find in their research that when athletes feel that their needs for autonomy, competence and relatedness are thwarted, they also feel less intrinsic motivation and less involvement, leading to less interest in participation.

The SDT considers that among the antecedents of basic psychological need satisfaction and thwarting is, on the one hand, the social environment surrounding sportsmen and sportswomen, and on the other, the way in which people organize their internal resources in response to the demands of the environment (Ryan, Legate, Niemiec, & Deci, 2012). While in previous research the social environment is the antecedent par excellence of basic psychological needs (Ryan & Deci, 2000, 2017), in this work resilience occupies that place.

Resilience, defined as an individual's ability to face, overcome and grow from life's adversities (Rutter, 1993), is considered in literature as a candidate to capture that inner strength that allows us to continue functioning regardless of difficulties. Scientifically approaching the study of this variable in the context of women's sport offers clarity to understand the psychological processes that help players overcome the difficulties they face every day. Recently the interest in this study is present in different contexts, including sports (e.g., Chacón, Castro-Sánchez, Espejo-Garcés, & Zurita, 2016). Most of these articles analyze the different conceptualizations of the term resilience (e.g., Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003), as well as the different instruments used for its correct evaluation (e.g., Ruiz, de la Vega, Poveda, Rosado, & Serpa, 2012).

The works centred in the study of individual differences in resilience capacity emphasize that this capacity is developed through an interactive process between each individual and the environment in which it develops (Rutter, 1992), as a result of the interactions between protective factors, risk factors and personality factors (Muñoz & de Pedro, 2005), which allow the person to face and overcome the problems and adversities that arise in life (Suárez & Krauskopf, 1995).

The correlates of resilience include the ability to function adaptively, regardless of the characteristics of the environment. For example, Olsson et al. (2003) argue that adolescents with high resilience are those who also have more functional behaviour despite adversity (Olsson et al., 2003), while adults with higher resilience have fewer emotional problems (Samani, Jowkar, & Sahragard, 2007). Studies in the field of sports argue that athletes' resilience is positively related to the perception of endurance and optimism, and negatively to stress and burnout (Codonhato, Nickenig, Andrade, Vinicius, & Fiorese, 2018; Galli & Gonzalez, 2015; Wagstaff, Hings, Larner, & Fletcher, 2018). Based on previous studies, and following Rutter (1993), it can be considered that a female athlete is resilient when she is able to thrive and develop psychologically in a proper and healthy way despite living in a situation of change or adversity. In this sense, it can be hypothesized that those athletes with greater resilience experience to a greater extent that their needs are satisfied, and to a lesser extent that they are thwarted and in turn this contributes to a higher quality of involvement.

In order to better understand the relationship between resilience and quality of involvement in sport, it is necessary to deepen into possible mediating mechanisms. Although there are no known previous studies that jointly analyze the relationship between resilience, basic psychological needs and sports involvement, research in the field of sport shows that both the satisfaction and thwarting of basic psychological needs are an essential mediating mechanism to explain the relationship between variables of the

social context and the quality of motivation (Cantú-Berrueto et al., 2016). Outside the sports field, it is argued that psychological need satisfaction acts as a mediator between personality aspects such as self-control capacity and experiences of well-being and discomfort in young students (Orkibi & Ronen, 2017).

Within the framework of the theoretical postulates of the SDT and the current state of literature, the objective of this paper is to analyze the relationship between resilience, basic psychological need satisfaction and thwarting and the quality of the sport experience, specifically taking as indicators of the latter the feelings of enjoyment and boredom in sports practice.

In order to meet this objective, the following hypotheses are tested: (1) resilience is positively related to need satisfaction and negatively related to need thwarting; (2) need satisfaction is positively related to feelings of enjoyment and negatively related to feelings of boredom; (3) need thwarting is positively related to boredom and negatively related to the enjoyment of young female players; and (4) need satisfaction and need thwarting act as mediators in the relationship between resilience and enjoyment, as well as in the relationship between resilience and boredom.

Method

Participants

The study involved 661 female athletes ($M_{\text{age}} = 14.74$; $SD = 3.91$; range = 8–37), belonging to 64 teams in the Valencian Community (Spain). Of the total, 348 are football players and 313 are basketball players. The sample is selected by convenience sampling after detecting all the football and basketball clubs that have women's teams in the province of Valencia. Athletes spend between 2 and 12 h a week ($M = 5.77$; $SD = 1.67$) with their team, with a wide variety of time spent on football or basketball.

Instruments

Resilience Scale

The resilience of sportswomen is assessed through a new Spanish version prepared for this study, based on the Spanish versions of Ruiz et al. (2012) and Suriá (2012) of the original scale of Wagnild and Young (1993). The scale contains 25 items grouped into two subscales: *personal competence* (17 items; "I usually manage one way or other") and *acceptance of oneself and life* (eight items; "I get along with myself"). The Likert response scale ranges from 1 (strongly disagree) to 7 (strongly agree).

Satisfaction of Basic Psychological Needs Questionnaire

In order to evaluate basic psychological need satisfaction, the 15 items of the Spanish version (Balaguer, Castillo, & Duda, 2008) of the questionnaire that collects the three basic psychological needs are used. Six items ("I think I've been pretty good at this sport") from the *perceived competence* subscale of the Intrinsic Motivation Inventory (McAuley, Duncan, & Tammen, 1989) assess the *satisfaction of the need for competence*. Five items ("I have decided which exercises I have practiced") used by Standage, Duda, and Ntoumanis (2005) assess the *satisfaction of the need for autonomy*. Finally, four items ("I have felt that people have supported me") from the *acceptance* subscale of the Relatedness Need Scale (Richer & Vallerand, 1998) assess the *satisfaction of the need for relatedness*. Players are asked about their experiences in their sport during the last 3–4 weeks and the answers are collected on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Psychological Need Thwarting Scale

Basic psychological need thwarting is assessed through the Spanish version (Balaguer et al., 2010) of the Psychological Need

Thwarting Scale (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). The scale has 12 items grouped into three subscales of four items each: *thwarting of the need for autonomy* ("I have felt that I have been prevented from making decisions regarding my way of learning"); *thwarting of the need for competence* ("There have been situations that have made me feel ineffective"), and *thwarting of the need for relatedness* ("I have felt rejected by those around me"). The scale begins with the statement "During the last 3–4 weeks in this team. . ." and the answers are collected on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Questionnaire of Intrinsic Satisfaction in Sport

Enjoyment and boredom in sport are evaluated through the Spanish version (Castillo, Balaguer, & Duda, 2002) of the Intrinsic Satisfaction in Sport Questionnaire (Duda & Nicholls, 1992). This questionnaire is composed of six items, four items from the *enjoyment* subscale ("I had a good time playing this sport") and two items from the *boredom* subscale ("When I played this sport I was normally bored"). The athletes answer by thinking about what their feelings of enjoyment and boredom had been regarding their sport during the last 3–4 weeks. Items are answered on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Procedure

After obtaining approval for the study by the Human Research Ethics Committee of the University of Valencia, the instruments are adapted to the female sex because in Spanish the conjugation of the verbs varies depending on the sex (e.g., "Estoy satisfecha con lo que he hecho", rather than "Estoy satisfecho con lo que he hecho"). Subsequently, the basketball and football clubs are contacted to present the research project and request their participation in it. After receiving the consent of the heads of each club and specifying the dates for the data collection, informative letters are sent to the families of underage sportswomen to ask if they authorize their daughters to participate in the study. At the time of the questionnaires administration the players are asked to sign a consent to participate freely and anonymously in the study.

A member of the research team assists to the administration of the questionnaires to resolve possible doubts, which are held at the training field, in the changing rooms or in rooms equipped with tables and chairs, and the time spent on completion is approximately 20 minutes.

Statistical analysis

Descriptive statistics, Pearson correlations, and Cronbach alpha coefficients are analyzed with IBM SPSS Statistics, version 20. Composite reliability coefficients (Rho) and extracted mean variance (AVE) are also reported.

The factor structure of the ad hoc adaptation of the Resilience Scale used for this study is analyzed with LISREL 8.8 (Jöreskog & Sörbom, 2006) using the Maximum Likelihood method to estimate model parameters. As fit indices, the root mean square error of approximation (RMSEA), the non-normative fit index (NNFI), and the comparative fit index (CFI) are used. RMSEA values below .08 are considered optimal (Cole & Maxwell, 1985), and NNFI and CFI values above .90 indicate an acceptable fit of the data (Hu & Bentler, 1995). Following the authors of the English version (Wagnild & Young, 1993), a unifactorial and a bifactorial structure (*personal competence* and *acceptance of oneself and life*) are analyzed. Given the high number of items, and following previous authors (e.g., Bartholomew et al., 2011), five latent variables are considered to test the hypothesized model: *resilience*, *need satisfaction*, *need thwarting*, *enjoyment* and *boredom*, using as indicators the different

Table 1
Descriptive statistics and reliability of study variables

	Range	M	SD	Alpha	Rho	AVE	Skewness	Kurtosis
Global Resilience	1–7	5.41	.65	.86	.95	.53	–.28	.14
Personal competence	1–7	5.59	.69	.86	.94	.50	–.29	–.08
Acceptance of oneself	1–7	5.03	.81	.62	.79	.35	–.28	.16
Need satisfaction	1–5	3.65	.58	.85	.95	.58	–.35	.61
Autonomy satisfaction	1–5	3.20	.72	.64	.73	.42	.02	.03
Competence satisfaction	1–5	3.78	.72	.84	.91	.63	–.62	.84
Relatedness satisfaction	1–5	3.98	.78	.84	.89	.68	–.70	.49
Need thwarting	1–5	2.08	.71	.88	.93	.55	.54	.04
Autonomy thwarting	1–5	2.28	.85	.76	.80	.51	.45	–.06
Competence thwarting	1–5	2.30	.94	.78	.83	.55	.50	–.44
Relatedness thwarting	1–5	1.66	.71	.74	.84	.59	1.21	1.44
Enjoyment	1–5	4.47	.66	.84	.93	.78	–1.59	2.84
Boredom	1–5	1.52	.78	.60	.72	.57	1.83	3.70

Note. AVE: average variance extracted.

subscales of these variables: *personal competence* and *acceptance of oneself and life* for resilience, the three needs for *need satisfaction*, and three needs for *need thwarting*. Mediation effects are calculated using the PROCESS macro (model 4) from Hayes (2013). In addition, the bootstrap method based on 5000 samples is applied to estimate the standard errors of indirect effects.

Results

Preliminary analysis of the Resilience Scale

The results of the confirmatory factor analysis of the Resilience Scale show an acceptable fit of the data for the unifactorial structure: $\chi^2(275) = 932.69$, $p < .01$, RMSEA = .071, NNFI = .901, CFI = .909; and for the bifactorial structure: $\chi^2(274) = 849.08$, $p < .01$, RMSEA = .071, NNFI = .907, CFI = .915, the factor saturations of both models are statistically significant ($p < .01$). The correlation between the factors is .80.

Descriptive statistics, reliability and correlations between variables

The descriptive statistics are shown in Table 1. Athletes report having a high *resilience* capacity and their basic psychological needs moderately satisfied, while *need thwarting* scores are slightly below the average of the questionnaire. Likewise, sportswomen report having a lot of enjoyment and getting little bored practicing their sport.

Reliabilities are suitable for all scales (see Table 1). The alpha of the *boredom* dimension (.60) is considered acceptable since it is composed of two items (Hair, Black, Babin, Anderson, & Tatham, 2006), as well as the weak factorial load of some items of the *acceptance of oneself and life* dimension derives in an AVE below the recommended value of .50. Correlation analysis shows that all variables *correlate* significantly to each other and in the expected direction (see Table 2).

Structural equations model and mediation analysis

The hypothesized model has appropriate fit indices, $\chi^2(29) = 79.82$, $p < .01$, RMSEA = .06 (90% CI = .04, .08), NNFI = .96, CFI = .98. Sportswomen *resilience* is positively and significantly associated with *need satisfaction*, and negatively and significantly with *need thwarting*. At the same time, female players *need satisfaction* is positively and significantly associated with *enjoyment* in sport, and negatively with *boredom*, while female athletes *need thwarting* is positively and significantly associated with their *boredom* and negatively and significantly with their experiences of *enjoyment* (see Figure 1).

Mediation results show a non-significant relationship between *resilience* and *enjoyment* ($B = .04$, $SE = .05$, $p = .42$), and between *resilience* and *boredom* ($B = -.01$, $SE = .06$, $p = .80$) when controlling the basic psychological *need satisfaction* and *thwarting*. The bootstrap method shows that basic psychological needs fully mediate the relationship between *resilience* and *enjoyment*, both through *need satisfaction* ($IE = .20$; $SE = .04$, 95% CI = .14, .28) and *need thwarting* ($IE = .03$; $SE = .01$, 95% CI = .01, .06). Likewise, basic psychological needs also fully mediate the relationship between *resilience* and *boredom*, both through *need satisfaction* ($IE = -.08$; $SE = .03$, 95% CI = -.15, -.03; and *need thwarting* ($IE = -.04$; $SE = .02$, 95% CI = -.08, -.02).

Discussion

The results of this study show relationships between the resilience of sportswomen, their basic psychological needs and their experiences of enjoyment and boredom in sports practice. Specifically, this work informs that the resilience of the sportswomen is important to facilitate the satisfaction of their autonomy, competence and relatedness with their teammates and with their coaches, and to difficult its thwarting. At the same time, need satisfaction promotes experiences of enjoyment and hinders experiences of boredom, while their thwarting favours boredom and hinders enjoyment.

On a specific level, the results confirm the first hypothesis and indicate that when sportswomen are resilient, their psychological need satisfaction is favoured, and their thwarting is made more difficult. As stated in the introduction, there is no known sports publication that investigates the relationship between resilience and the two sides of psychological needs: satisfaction and thwarting. The results of a study carried out in the family environment report positive relationships between resilience and the satisfaction of the need for competence and relatedness (Moltafet, Firoozabadi, Zarrincola, & Rod, 2015), while in the present study *resilience* is related to the *satisfaction* of the three needs. The results of this study reinforce the idea that when a player feels that she is able to face and overcome the difficulties she encounters in her sporting life, she is more likely to feel that it is she who takes the initiative to participate in her sport, that she perceives that she is competent in her activities, and that she has a quality relationship with her teammates and her coach. Regarding the negative relationship between the players *resilience* and their psychological *need thwarting*, the results show that when athletes are resilient this acts as a protective shield that somehow cushions the consequences that come from an environment that prevents them from making decisions regarding their way of acting, makes them feel incompetent in their sporting ability and promotes the perception of a bad relationship with their teammates and/or their coaches.

Table 2
Bivariate correlations of study variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Global Resilience	–											
2. Personal competence	.93**	–										
3. Acceptance of oneself	.80*	.55*	–									
4. Need satisfaction	.43**	.38**	.35**	–								
5. Autonomy satisfaction	.27*	.24*	.24*	.74*	–							
6. Competence satisfaction	.42*	.39*	.32*	.78*	.32*	–						
7. Relatedness satisfaction	.32*	.28*	.27*	.84*	.44*	.53*	–					
8. Need thwarting	–.18*	–.13*	–.21*	–.44*	–.27*	–.33*	–.48**	–				
9. Autonomy thwarting	–.11*	–.07	–.15*	–.29*	–.17*	–.20*	–.31**	.84**	–			
10. Competence thwarting	–.18*	–.12*	–.19*	–.44*	–.23*	–.36*	–.45**	.90**	.62**	–		
11. Relatedness thwarting	–.19*	–.14*	–.21*	–.39*	–.17*	–.27*	–.47**	.82**	.52**	.65**	–	
12. Enjoyment	.25*	.25*	.19*	.50*	.30*	.44*	.45*	–.36*	–.26*	–.33*	–.36**	–
13. Boredom	–.13*	–.15*	–.06	–.26**	–.14*	–.22*	–.25*	.32*	.25*	.28*	.31**	–.48**

* $p < .05$.

** $p < .01$.

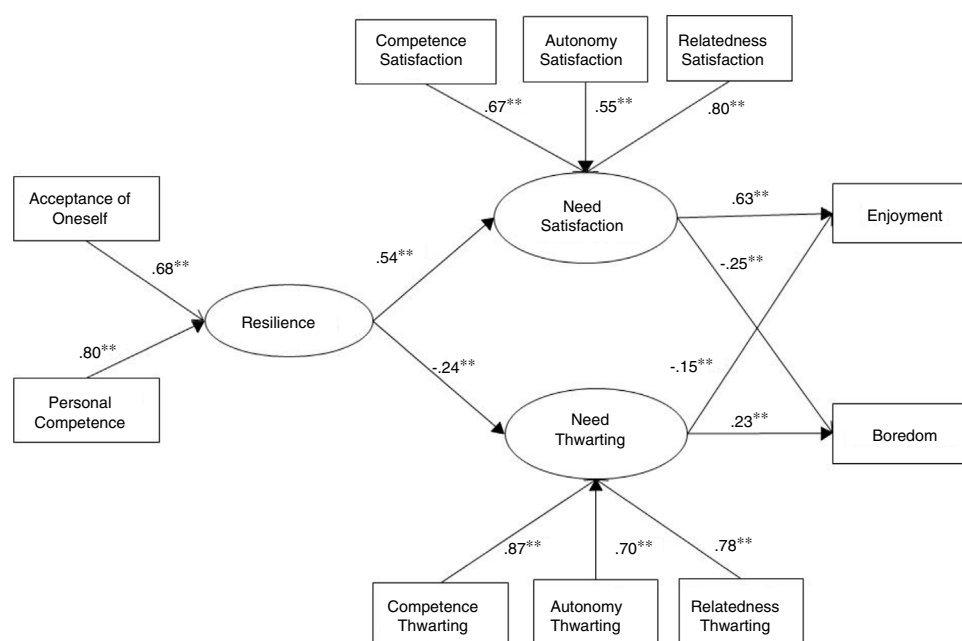


Figure 1. Standardized solution of the hypothesized structural model of the relationship between *resilience*, basic psychological *need satisfaction* and *thwarting* and feelings of *enjoyment* and *boredom* in young athletes. All relationships are significant $p < .01$. There is no visual covariance between *need satisfaction* and *need thwarting* ($-.58$), nor between *enjoyment* and *boredom* ($-.36$).

However, following Rutter (1993) it could be said that there are athletes who do not perceive these relationships between the need thwarting and resilience because resilience highlights the ability of people to overcome and face adversity in a constructive way, being able to overcome difficulties or changes and even grow from them. Following this conceptualization, it would seem that if an athlete is able to satisfactorily overcome the negative situations that happen to her and even emerge stronger from them, it is more likely that she will not be harmed if someone actively tries to thwart her needs.

The second hypothesis defends that psychological *need satisfaction* of sportswomen is positively associated with their experiences of *enjoyment* and negatively with those of *boredom* during training and matches. The results obtained in the study confirm this hypothesis and are consistent with previous works carried out in the field of sport, which report that need satisfaction of sportsmen and women is related to greater experiences of enjoyment and less boredom (Álvarez et al., 2009; Quested et al., 2013).

The results of the study also support the third hypothesis that postulates that need *thwarting* is positively associated with

athletes' experiences of *boredom* and negatively associated with their experiences of *enjoyment* during their sports participation. These results indicate that when players feel that their psychological needs are thwarted, they experience more boredom in their sport and less enjoyment, which leads to a lower quality engagement in their sport. Although we know no previous studies that specifically analyze these relationships, some inform that when athletes feel their needs thwarted, they also show a lack of enthusiasm and show no reason to participate in the sport (Cantú-Berrueto et al., 2016). These results provide information on the problems that need thwarting has for the quality of involvement.

Finally, with respect to the fourth hypothesis of this study which argues that basic psychological *need satisfaction* and *thwarting* act as mediators of the relationship between *resilience* and *enjoyment*, as well as the relationship between *resilience* and *boredom*, the results support this hypothesis. Specifically they confirm the total mediation of basic psychological needs in the relationship between *resilience* and both experiences of *enjoyment* and *boredom*. This has important implications because it indicates that for young sportswomen to have fun and not get bored, it is important

to promote their competence, their autonomy and their relatedness in the sporting context, as well as to prevent the environment from thwarting these needs. Both sides of the needs, satisfaction and thwarting, have a mediating role in the studied relationship. Although we do not know any previous study to date that analyses the relationships analyzed in this work, in the scientific literature we find different publications that confirm the positive effect that resilience has on the development of adaptive behaviours to face adverse situations (Olsson et al., 2003).

In general, it can be concluded that the results obtained have important implications for the world of youth sports, emphasizing the importance of players developing adequate resilience to ensure that they have fun and do not get bored, and also allows us to know some of the mechanisms responsible for this relationship.

From the point of view of social intervention, this work shows the importance of developing young sportswomen resilience and makes us think of the important role that significant people such as parents, teachers or coaches play in helping young women increase their resilience capacity through the interactions they have with them. For example, they can be helped to be more autonomous to face adversity themselves, encouraging them to be responsible and empathetic, and teaching them to look for solving problems in order to face them in a positive way, with confidence and hope (Villasana, Alonso-Tapia, & Ruiz, 2017).

Some limitations are detected in the study, such as the characteristics of the sample. Although one of the main interests of this study is that it focuses specifically on women's sport and its situation of inequality when compared to men's sport, this in turn can be considered a limitation when it comes to generalizing the results. For this reason, it is appropriate that future studies extend the sample to a more heterogeneous population of athletes, including participants of both sexes, of different ages and from different sport disciplines. The correlational approach of the study may be another limitation, since it does not make it possible to infer causal relationships between the studied variables. Finally, it is important that future research expands this study and analyses the role of possible determinants of the social context of resilience, such as the interpersonal styles of the coaches.

To conclude, it should be emphasized that resilience is a capacity that develops throughout life through a dynamic process of interaction between the person and the environment in which he or she lives (Young, 2014), and that it is therefore important to continue carrying out scientific studies that deepen the analysis of their personal and social correlates. Studies such as the present one allow us to know personal variables such as the basic psychological need satisfaction which, together with resilience, help to strengthen adaptive coping capacities, and which are very useful for the positive development of young people, not only in sport, but in their lives in general. Regarding social correlates, resilience theorists (Muñoz & de Pedro, 2005) defend that positive climates can favour their development. In turn, the theory of self-determination defends, and research supports, that the social context surrounding young athletes plays a fundamental role in promoting the satisfaction or thwarting of basic psychological needs (e.g., Balaguer et al., 2012). With this in mind, in the applied field it is important to reinforce the development of adequate motivational climates that promote the empowerment of athletes to improve the satisfaction of their basic psychological needs and their resilience capacity to increase their positive experiences in sport (Duda, Appleton, Stebbings, & Balaguer, 2018).

Conflict of interest

The authors report that there is no conflict of interest regarding the publication of this manuscript.

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References

- Álvarez, M. S., Balaguer, I., Castillo, I., & Duda, J. L. (2009). Coach autonomy support and quality of sport engagement in young soccer players. *The Spanish Journal of Psychology*, 12(1), 138–148. <http://dx.doi.org/10.1017/S1138741600001554>
- Balaguer, I., Castillo, I., & Duda, J. L. (2008). Apoyo a la autonomía, satisfacción de las necesidades, motivación y bienestar en deportistas de competición: Un análisis de la teoría de la autodeterminación. *Revista de Psicología del Deporte*, 17, 123–139.
- Balaguer, I., Castillo, I., Mercé, J., Ródenas, L. T., Rodríguez, A., García-Merita, M., & Ntoumanis, N. (2010, July). Escala de frustración de las necesidades psicológicas, en el contexto deportivo: Análisis de las propiedades psicométricas. In *VII Congreso Iberoamericano de Psicología*
- Balaguer, I., González, L., Fabra, P., Castillo, I., Mercé, J., & Duda, J. L. D. (2012). Coaches' interpersonal style, basic psychological needs and the well- and ill-being of young soccer players: A longitudinal analysis. *Journal of Sport Sciences*, 30(15), 1619–1629. <http://dx.doi.org/10.1080/02640414.2012.731517>
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., & Thøgersen-Ntoumani, C. (2011). Psychological need thwarting in the sport context: Assessing the darker side of athletic experience. *Journal of Sport & Exercise Psychology*, 33, 75–102. <http://dx.doi.org/10.1123/jsep.33.1.75>
- Bauman, A. E. (2004). Updating the evidence that physical activity is good for health: An epidemiological review 2000–2003. *Journal of Science and Medicine in Sport*, 7(1), 6–9. [http://dx.doi.org/10.1016/S1440-2440\(04\)80273-1](http://dx.doi.org/10.1016/S1440-2440(04)80273-1)
- Cantú-Berrueto, A., Castillo, I., López-Walle, J., Tristán, J., & Balaguer, I. (2016). Estilo interpersonal del entrenador, necesidades psicológicas básicas y motivación: Un estudio en futbolistas universitarios mexicanos. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 11(2), 263–270.
- Castillo, I., Balaguer, I., & Duda, J. L. (2000). Las orientaciones de meta y los motivos de práctica deportiva en los jóvenes deportistas valencianos escolarizados. *Revista de Psicología del Deporte*, 9(1), 37–50. Retrieved from http://pure-oai.bham.ac.uk/ws/files/10758105/2000.Castillo_Balaguer_Duda...Goal_orientations_and_motives_of_sports_activity_in_young_athletes_Valencian_school.pdf
- Castillo, I., Balaguer, I., & Duda, J. L. (2002). Las perspectivas de meta de los adolescentes en el contexto deportivo. *Psicothema*, 14(2), 280–287.
- Chacón, R., Castro-Sánchez, M., Espejo-Garcés, T., & Zurita, F. (2016). Estudio de la resiliencia en función de la modalidad deportiva: Fútbol, balonmano y esquí. *Retos*, 29, 157–161.
- Codonhato, R., Nickenig, J. R., Andrade, J. R., Vinícius, M., & Fiorese, L. (2018). Impact of resilience on stress and recovery in athletes. *Revista Brasileira de Medicina do Esporte*, 24(5), 352–356. <http://dx.doi.org/10.1590/1517-869220182405170328>
- Cole, D. A., & Maxwell, S. E. (1985). Multitrait-multimethod comparisons across populations: A confirmatory factor analytic approach. *Multivariate Behavior Research*, 20, 389–417. <http://dx.doi.org/10.1207/s15327906mbr2004.3>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268. <http://dx.doi.org/10.1207/S15327965PLI1104.01>
- Duda, J. L., Appleton, P. R., Stebbings, J., & Balaguer, I. (2018). Towards more empowering and less disempowering environments in youth sport. In C. J. Knight, C. G. Harwood, & D. Gould (Eds.), *Sport psychology for young athletes* (pp. 81–93). New York, NY: Routledge.
- Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology*, 84, 1–10. <http://dx.doi.org/10.1037/0022-0663.84.3.290>
- European Commission. (2007). *White paper on sport*. Brussels: Commission of the European Communities. Retrieved from <http://www.aop.pt/upload/tb-content/320160419151552/35716314642829/whitepaperfullen.pdf>
- Galli, N., & Gonzalez, S. P. (2015). Psychological resilience in sport: A review of the literature and implications for research and practice. *International Journal of Sport and Exercise Psychology*, 13(3), 243–257. <http://dx.doi.org/10.1080/1612197X.2014.946947>
- Hair, J., Black, B., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Hayes, A. F. (2013). *Introduction to mediation, moderation and conditional process analysis. A regression based approach*. Nueva York, NY: The Guilford Press.
- Hu, L. T., & Bentler, P. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling. Concepts, issues, and applications* (pp. 77–99). Thousand Oaks, CA: Sage.
- Iturbide-Luquin, L. M., & Elosua-Oliden, P. (2017). Los valores asociados al deporte: Análisis y evaluación de la deportividad. *Revista de Psicodidáctica*, 22(1), 29–36. [http://dx.doi.org/10.1016/S1136-1034\(17\)30041-2](http://dx.doi.org/10.1016/S1136-1034(17)30041-2)
- Jöreskog, K. G., & Sörbom, D. (2006). *LISREL 8.80 [computer software]*. Lincolnwood, IL: Scientific Software International, Inc.
- McAuley, E., Duncan, T., & Tammen, V. V. (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor-analysis. *Research Quarterly for Exercise & Sport*, 60, 48–58. <http://dx.doi.org/10.1080/02701367.1989.10607413>

- Moltafet, G., Firoozabadi, S. S., Zarrincola, F., & Rod, H. K. (2015). Prediction of resiliency based on family communication patterns and satisfying basic psychological needs. *Global Journal of Psychology Research*, 5(1), 11–17. <http://dx.doi.org/10.18844/gjpr.v5i1.136>
- Muñoz, V., & de Pedro, F. (2005). Educar para la resiliencia. Un cambio de mirada en la prevención de situaciones de riesgo social. *Revista Complutense de Educación*, 16(1), 107–124.
- Olsson, C. A., Bond, L., Burns, J. M., Vella-Brodrick, D. A., & Sawyer, S. M. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence*, 26, 1–11. [http://dx.doi.org/10.1016/S0140-1971\(02\)00118-5](http://dx.doi.org/10.1016/S0140-1971(02)00118-5)
- Orkibi, H., & Ronen, T. (2017). Basic psychological needs satisfaction mediates the association between self-control skills and subjective well-being. *Frontiers in Psychology*, 8, 1–10. <http://dx.doi.org/10.3389/fpsyg.2017.00936>
- Quested, E., Ntoumanis, N., Viladrich, C., Haug, E., Ommundsen, Y., van Hooij, A., . . . , Duda, J. L. (2013). Intentions to drop-out of youth soccer: A test of the basic needs theory among European youth from five countries. *International Journal of Sport and Exercise Psychology*, 11(4), 395–407. <http://dx.doi.org/10.1080/1612197X.2013.830431>
- Richer, S., & Vallerand, R. J. (1998). Construction and validation of the Perceived Relatedness Scale. *Revue Européenne de Psychologie Appliquée*, 48, 129–137.
- Ruiz, R., de la Vega, R., Poveda, J., Rosado, A., & Serpa, S. (2012). Análisis psicométrico de la escala de resiliencia en el deporte del fútbol. *Revista de Psicología del Deporte*, 21(1), 143–151.
- Rutter, M. (1992). *Developing minds: Challenge and continuity across the life span*. Great Britain: Penguin Books.
- Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health*, 14, 626–631. [http://dx.doi.org/10.1016/1054-139X\(93\)90196-V](http://dx.doi.org/10.1016/1054-139X(93)90196-V)
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68–78. <http://dx.doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development and wellness*. New York, NY: Guilford Press. Retrieved from <https://www.guilford.com/books/Self-Determination-Theory/Ryan-Deci/9781462538966>
- Ryan, R. M., Legate, N., Niemiec, C. P., & Deci, E. L. (2012). Beyond illusions and defense: Exploring the possibilities and limits of human autonomy and responsibility through self-determination theory. In P. R. Shaver, & M. Mikulincer (Eds.), *Meaning, mortality, and choice: The social psychology of existential concerns* (pp. 215–233). Washington, WA: American Psychological Association. <http://dx.doi.org/10.1037/13748-012>
- Samani, S., Jowkar, B., & Sahragard, N. (2007). Effects of resilience on mental health and life satisfaction. *Iranian Journal of Psychiatry and Clinical Psychology*, 13(3), 290–295.
- Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology*, 75, 411–433. <http://dx.doi.org/10.1348/000709904X22359>
- Suárez, E., & Krauskopf, D. (1995). El enfoque de riesgo y su aplicación a las conductas del adolescente. Una perspectiva psicosocial. In M. Maddaleno, M. Munist, C. Serrano, T. Silver, E. Suárez, & J. Yunes (Eds.), *La salud del adolescente y del joven* (pp. 183–193). Washington, WA: O.P.S. Publicación Científica.
- Suriá, R. (2012). Resiliencia en jóvenes con discapacidad. ¿Difiere según la tipología y etapa en la que se adquiere la discapacidad? *Boletín de Psicología*, 105, 75–89.
- UEFA. (2014). *Women's football across the national associations (2013–2014)*. Retrieved from https://www.uefa.com/MultimediaFiles/Download/Women/WFDP/02/03/17/67/2031767_DOWNLOAD.pdf
- Villasana, M., Alonso-Tapia, J., & Ruiz, M. (2017). Coping processes and personality factors as predictors of resilience in adolescent students: Validation of a structural model. *Revista de Psicodidáctica*, 22(2), 93–101. <http://dx.doi.org/10.1016/j.psicod.2017.05.004>
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, 1(2), 165–178.
- Wagstaff, C. R. D., Hings, R. F., Larner, R. J., & Fletcher, D. (2018). Psychological resilience moderates the relationship between organizational stressor frequency and burnout in athletes and coaches. *The Sport Psychologist*, 32(3), 178–188. <http://dx.doi.org/10.1123/tsp.2016-0068>
- Weiss, M. R., & Petlichkoff, L. M. (1989). Children's motivation for participation in and withdrawal from sport: Identifying the missing links. *Pediatric Exercise Science*, 1, 195–211.
- World Health Organization (WHO). (2011). *Promoting sport and enhancing health in European Union countries: A policy content to support action*. Copenhagen, Denmark: Publication WHO Regional Office for Europe.
- Young, J. (2014). La resiliencia del entrenador. Qué significa, por qué es importante y cómo desarrollarla. *ITF Coaching and Sport Science Review*, 63(22), 10–12.