





## Being a competent coach and authentic leader influences the fulfillment of the athlete's basic psychological needs

*Ser un entrenador competente y líder auténtico influye en la satisfacción de las necesidades psicológicas básicas del deportista*

*Ser um treinador competente e um líder autêntico influencia a satisfação das necessidades psicológicas básicas do atleta*

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### Abstract

The present study aims to determine the mediating effect that authentic coach leadership has on the interaction between coach competence and athletes' perceived support for basic psychological needs (BPN). A cross-sectional study was conducted with 115 team sports players (17.96 ±2.85 years of age; 8.18 ±4.67 years of experience) using the Basic Psychological Needs Support, Perceived Authentic Leadership, and Athletes' Perceptions of Coach Competence questionnaires. Correlation and mediation analyses (Coach Competence → Authentic Leadership → BPN Support) were performed. The results show a positive and significant indirect effect ( $\beta = 0.288$ ; 95% CI = 0.167, 0.415) of authentic leadership on the direct interaction between coach competence and BPN support ( $\beta = 0.277$ ;  $p < 0.01$ ), increasing the total model effect ( $\beta = 0.555$ ;  $p < 0.01$ ) to aid athletes' perceived BPN support when their coaches are competent and authentic leaders. In conclusion, it is not enough to be a well-prepared coach, he/she must also have the ability to lead, motivate and make decisions taking care of his/her interrelationships with athletes and promoting the satisfaction of basic psychological needs.

**Keywords:** coach competency; leadership; self-determination theory; handball; soccer.

### Resumen

El presente estudio pretende determinar el efecto mediador que el liderazgo auténtico del entrenador tiene sobre la interacción entre la competencia del entrenador y el apoyo percibido por los deportistas a las necesidades psicológicas básicas (NPB). Se realizó un estudio transversal con 115 jugadores de deportes de equipo (17,96 ±2,85 años; 8,18 ±4,67 años de experiencia) midiendo el Apoyo a las Necesidades Psicológicas Básicas, Liderazgo Auténtico Percibido y Percepciones de los Atletas sobre la Competencia del Entrenador. Se realizaron análisis de correlación y mediación (Competencia del entrenador → Liderazgo auténtico → Apoyo de las NPB). Se observó un efecto indirecto positivo y significativo ( $\beta = 0,288$ ; IC 95% = 0,167, 0,415) del liderazgo auténtico sobre la interacción entre la competencia del entrenador y el apoyo a las NPB ( $\beta = 0,277$ ;  $p < 0,01$ ), aumentando el efecto total del modelo ( $\beta = 0,555$ ;  $p < 0,01$ ) reforzando el apoyo a las NPB percibido por los deportistas cuando sus entrenadores son líderes competentes y auténticos. En conclusión, no basta con ser un entrenador bien preparado, también debe tener la capacidad de liderar, motivar y tomar decisiones cuidando sus interrelaciones con los deportistas y promoviendo la satisfacción de las necesidades psicológicas básicas.

**Palabras clave:** competencia del entrenador; liderazgo; teoría de la autodeterminación; balonmano; fútbol.

## Resumo

O presente estudo tem como objetivo determinar o efeito mediador que a liderança autêntica do treinador tem na interação entre a competência do treinador e o apoio percebido pelos atletas às necessidades psicológicas básicas (NPB). Foi realizado um estudo transversal com 115 atletas de desportos colectivos (17,96  $\pm$  2,85 anos de idade; 8,18  $\pm$  4,67 anos de experiência), utilizando os questionários Suporte das Necessidades Psicológicas Básicas, Liderança Autêntica Percebida e Percepções dos Atletas sobre a Competência do Treinador. Foram efectuadas análises de correlação e mediação (Competência do Treinador  $\rightarrow$  Liderança Autêntica  $\rightarrow$  Suporte das NPB). Os resultados mostram um efeito indireto positivo e significativo ( $\beta = 0,288$ ; 95% CI = 0,167, 0,415) da liderança autêntica na interação direta entre a competência do treinador e o apoio das NPB ( $\beta = 0,277$ ;  $p < 0,01$ ), aumentando o efeito total do modelo ( $\beta = 0,555$ ;  $p < 0,01$ ) para ajudar os atletas a perceber o apoio das NPB quando os seus treinadores são competentes e líderes autênticos. Concluindo, não basta ser um treinador bem preparado, é preciso também ter a capacidade de liderar, motivar e tomar decisões cuidando das suas inter-relações com os atletas e promovendo a satisfação das necessidades psicológicas básicas.

**Palabras clave:** competência de treinador; liderança; teoria da autodeterminação; handebol; futebol.

## Introduction

During the last 20 years, the understanding of the athletes' basic psychological needs (BPN) and their relationship with different variables related to the sport performance and enjoyment had been one of the principal topics into the sport psychology scenario (Ryan & Deci, 2017). The literature has explained the crucial role that basic psychological needs satisfaction plays in the success of athletes by optimizing their performance, motivation, and promoting general well-being as a fundamental element as well as adequate training and physical preparation (Alesi et al., 2015; Batista et al., 2022). The study of BPN is grounded in Self-Determination Theory (SDT) proposed by Deci and Ryan (1985), this framework highlights three fundamental psychological needs: autonomy, competence, and relatedness which serve for understanding human motivation and behavior across various domains, including sports (Ames, 1992; Deci et al., 1991; Ryan & Deci, 2017).

According to SDT's explanation of the satisfaction of basic psychological needs, the coaching role and its competence exerts a significant influence on athletes' motivation and performance through various mechanisms (Xitao et al., 2021). The way athletes perceive their coaches' behavior and ability to coach them plays a fundamental role in the relationship between the two (Soto-García et al., 2023). In this sense, it is common for coaches to prioritize knowledge and ability to coach athletes over other psychosocial variables such as leadership or justice, nevertheless, recent evidence supports the relevance of prior the attention on these variables into the sports context (Bosselut et al., 2018; De Backer et al., 2021; Kim et al., 2020).

Coaching competency view from the Myers et al. (2006) proposal, is known as the coach's ability to teach and train players' skills, direct and make decisions, as well as positively influence the disposition of athletes and motivate them to maintain the right energy and confidence in their abilities (Balaguer et al., 2012; Cassiano Neto et al., 2018; Fernández-Espínola et al., 2016; Myers et al., 2011). However, literature suggest that it is not enough to be a well-trained coach in the physical, technical, and tactical development of his or her athletes (Isoard-Gauthier et al., 2016; Jowett, 2017; Jowett & Shanmugam, 2016). In this sense, researchers have pointed out the positive influence of the coach's support of athletes' basic psychological needs in increasing satisfaction during sport activity, commitment, motivation and performance, as well as team cohesion in team sports (García-Calvo et al., 2014; González et al., 2016; Pulido et al., 2020). In contrast, the negative consequences of BPN frustration as an effect of coach behavior have been associated with fear of failure, limitation of future intentions in sport, and conflicts between players on the same team (Castillo-Jiménez et al., 2022; González-Ponce et al., 2018; Ruiz-Sánchez et al., 2017). Thus, according to the evidence, coaches should not only be highly competent professionals, but also support the satisfaction of their athletes' autonomy,

competence, and relationship to help their integral development as they seek to achieve their maximum sporting performance.

The team group dynamics could not be explained only by the coach ability to train or the coach attention to BPN of the athletes. In the middle of the space between these two variables, many other factors affect coach-athlete interaction, as well as sport performance and athlete satisfaction. In response, some authors have investigated the role of psychosocial elements such as leadership or fairness in athletes' perceptions of coaches (Bosselut et al., 2012; De Backer et al., 2011; Leo et al., 2019; Pires et al., 2022; Soto-García et al., 2021, 2023). Leadership in sport is described as a process which the coach, manager or even the same athletes can influence the motivation and behavior of the others (athletes/teammates) to look for and work for achieve a common goal (Turnnidge & Côté, 2018). Nevertheless, the leadership behavior and its consequences on the group are a complex phenomenon which require different characteristics from the leader as being self-awareness and conscious of the effects of his/him decisions over the athletes, has the capacity to process the information and choices in a balanced way, as well as has a deep and internalized moral perspective and apply all of this characteristics with transparency for all members of the team (Walumbwa et al., 2008).

An authentic leader is conceived as someone interested in developing the necessary competencies, as well as promoting autonomy in the control and direction of decisions about the practice of their athletes (Soto-García et al., 2023), which should translate into benefiting the SNPB (Pulido et al., 2020). Previous studies have been reported the relationship between coach competency and leadership behavior (Bosselut et al., 2012), or coach competency with BPN satisfaction (García-Calvo et al., 2014; Pulido et al., 2020), as well as analyzed coaching leadership and BPN (Bandura & Kavussanu, 2018; Soto-García et al., 2021), while the study of Kao and Tsai (2016) reported the mediational role of the coach competency over the transformational leadership and the athlete satisfaction relationship. Since coaching competence is based on the coach's ability that is related to knowledge of the sport, it should be associated with a cognitive ability of its own (Cassiano-Neto et al., 2018) rather than a psychosocial element such as leadership behavior to influence team engagement (Walumbwa et al., 2008). Thus, according to the evidence reported, it is important to know, as perceived by his athletes, the influence that the coach's authentic leadership has on variables such as the coach's own competence and support for the BPN, so the aim of the present study was to determine the mediation role effect that the coach authentic leadership have over the interaction between coach competency and the support of BPN perceived by the athletes. Based on the literature, we hypothesize that the coach authentic leadership perceived by the athletes will mediate the interaction between coach competency and BPN support seen from the athletes' perspective.

## Materials y Methods

### **Participants**

A cross-sectional study was conducted with 115 amateur handball ( $n = 53$ ) and football ( $n = 62$ ) players. Participants were recruited using a convenience sampling method and the sample consisted of 57 females and 58 males, with 17.96 ( $\pm 2.85$ ) years of age and 8.18 ( $\pm 4.67$ ) years of experience in their sport. To be part of the study, all athletes met the following inclusion, exclusion and elimination criteria: a) be part of the team at least six months prior to the study; b) not to have stopped training for more than a week due to any injury during the last three months; c) Not agreeing to participate in the study and not signing the informed consent form; d) not having the informed consent signed by their parents or guardians (underage athletes); e) Failure to complete the entire survey.

### **Instruments**

**Basic Psychological Needs Support (BPNS):** To determine the perception of the basic psychological needs supported by their coach, the athletes responded the questionnaire developed by Sánchez-Oliva et al. (2013) which is composed by 12 items with a five-point Likert scale (1 = Totally disagree ... 5 = Totally agree) and according to the self-determination theory (SDT), athletes evaluate how their coach support its basic psychological needs as: a) autonomy (e.g. Tries to give us freedom when carrying out activities), b) competence (e.g. Encourages us to have confidence in our

ability to do our jobs well), and c) relatedness (e.g. Helps us resolve conflicts amicably). The instrument was developed and validated in a Spanish sample showing good validity and reliability indexes. In our study, the Cronbach Alpha for the global dimension of the BPNS was  $\alpha = 0.82$ .

**Perceived Authentic Leadership Questionnaire (ALQ):** To evaluate the athletes' perception of its coach authentic leadership behavior, the study participants responded to the Spanish version of the questionnaire (Moriani et al., 2011) adapted for sport context. The original development of the instrument (Walumbwa et al., 2008) considered four dimensions of the authentic leadership distributed into 12 items: a) transparency in relationships (e.g., the coach admits mistakes when they make them; b) internalized morality (e.g., the coach shows behaviors consistent with their beliefs); c) balanced processing (e.g., the coach solicits points of view other than their opinions); and d) Self-awareness (e.g., the coach understands that their decisions can affect players). Athletes answered using a Likert scale from 1 (never) to 7 (always). The results of the questionnaire can be analyzed separately by each dimension or grouped into a mean value of the four, thus obtaining the perception of the coach's authentic leadership. In our study, the global reliability of the questionnaire was  $\alpha = 0.92$ .

**Athletes' Perceptions of Coaching Competency Scale II-High School Teams (APCCS II-HST):** To determine the athletes' perception of their coach competence to teach and develop its abilities and sport performance, the Spanish version (González-Ponce et al., 2017) of the APCCS II-HST questionnaire (Myers et al., 2010) was applied. The instrument asks participants respond to 15 items with five-point Likert scale (1 = Incompetent ... 5 = Complete competence) preceded by the phrase "how competent is your head coach in his/her ability to". Items are distributed in four dimensions: a) coach's ability to motivate (e.g., help players maintain confidence in their abilities to perform well when they are underperforming); b) coach's ability to make decisions and managing (e.g., make appropriate substitutions of players during the competition); c) ability to teach and train player skills (e.g., correct technical-tactical mistakes of players during training); d) ability to positively influence the players' character (e.g., effectively promote good player sportsmanship). Data of the instrument can be analyzed by each dimension or as a unique structure which reflects the athletes' perception of their coach competency. In our study, global reliability of the instrument was  $\alpha = 0.89$ .

## **Procedure**

The development of the study was carried out by the research group, and it was approved by the Ethics Committee (ULE-040-2021) of the University of León (Spain). Researchers met with directors and coaches to share the intentions and objectives of the study as well as to explain the procedure to apply the survey to the athletes. Once directors and coaches gave their authorization to the project, a meeting was held with athletes who could participate in the study to exposure the aim similarly as it was prior explained. Underage athletes were asked to be accompanied by their parents or guardians. In the same meeting, athletes were asked to sign the informed consent and response the survey in a single moment. During the questionnaires implementation as well as during the data analysis the researchers safeguarded the integrity and respected the anonymity of each participant's answers based on the guidelines and ethical recommendations for the treatment of subjects and the data obtained as stated in the declaration of Helsinki (World Medical Association, 2013), as well as respect for ethical and procedural standards in sports medicine and exercise science research (Guelmami et al., 2024).

## **Statistical analysis**

The data were examined with the Statistical Package for Social Sciences (SPSS v.25) using descriptive and inferential analyses ( $p$  value  $< 0.05$  was considered as significant). Cronbach alpha was calculated to determine the reliability of the questionnaires, while the normality of the data was analyzed by the Kolmogorov-Smirnov test. A correlation analysis between the variables was performed by the Spearman's Rho test. A simple mediation model (Model 4) was analyzed using the Process V. 3. 5. Macro software extension for SPSS (Hayes, 2018). The model evaluated the mediation influence that authentic leadership (M) has over the effect of the coach competence perceived by the athlete (X) on the basic psychological need support (Y). A bootstrapping of 10,000 samples were used to generate 95% confidence intervals. Partial correlations controlling age, gender and experience were made to demonstrate the invariance of the model.

## Results

The reliability of the questionnaires, descriptive and correlations analysis presented in Table 1 shows a high rate of BPN support and coach competence perceived by the athletes from their coaches during the training experience, as well as they consider than they coaches have a positive authentic leadership behaviour. Furthermore, all variables are significative and positively correlated between it showing a moderate-high coefficient.

**Table 1.** Descriptive data from the sample of the study.

	<i>n</i>	%	<i>M</i>	<i>Age</i> <i>SD</i>	<i>Years of experience</i> <i>M</i>	<i>SD</i>
Female						
Handball	35	61.4%	17.00	2.85	5.49	3.68
Soccer	22	38.6%	19.55	1.77	12.50	3.61
Male						
Handball	18	31%	18.44	3.03	4.67	3.18
Soccer	40	69%	17.70	2.92	9.75	3.97
Total						
Handball	53	46.1%	17.49	2.97	5.21	3.51
Soccer	62	53.9%	18.35	2.70	10.73	4.04

Note. *n* = sub-sample size; % = Percentage of sub-sample size; *M* = Mean; *SD* = Standard deviation.

**Table 2.** Analysis of Cronbach's alpha coefficients, descriptive analysis and Rho Spearman coefficients between variables.

	<i>α</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	1	2
Basic Psychological Needs Support	0.82	2.17	5.00	4.37	0.49	0.59**	0.58**
Authentic Leadership <sup>1</sup>	0.92	2.08	7.00	5.76	1.02	-	0.66**
Coach Competence <sup>2</sup>	0.89	2.80	5.00	4.36	0.51	-	-

Note. *α* = Cronbach alpha; *Min* = Minimum; *Max* = Maximum; *M* = Mean; *SD* = Standard deviation; <sup>1</sup> = Authentic Leadership; <sup>2</sup> = Coach Competence.

Regarding the mediation analysis, in Figure 2, it can observe the significant and positive indirect effect ( $\beta = 0.288$ ;  $SE = 0.064$ ;  $95\% CI = 0.167, 0.415$ ) that the coach's authentic leadership (*M*) has on the direct effect ( $\beta = 0.277$ ;  $p < 0.01$ ) generated by the coach's competence (*X*) on the support for the basic psychological needs (*Y*) that athletes perceive from their coaches.



**Figure 1.** Mediation model analysis of Coach Competence → Authentic Leadership → Basic Psychological Needs Support.

Note. *a* = Direct effect of coach competence on authentic leadership; *b* = Direct effect of authentic leadership on basic psychological needs support; *c* = Direct effect of coach competence on basic psychological needs support; *c'* = Total effect of the model; IE = Indirect effect;  $\beta$  = Coefficient of mediation indirect effect; *SE* = Standard error; *CI* = Confidence intervals; BPN = Basic Psychological Needs. \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

## Discussion

The aim of the article was to analyze the mediating role of the coach's authentic leadership behavior on the existing interaction between competence as a coach and the support of basic psychological needs by coaches as perceived by their athletes. After the analysis of the mediation model, we can point out that the main finding of the study is that from the perspective of the athletes, the positive and significant indirect effect ( $\beta = 0.288$ ; CI 95% = 0.167, 0.415) that coach authentic leadership (M) reinforces the direct influence ( $\beta = 0.277$ ;  $p < .01$ ) that competence as a coach (X) has on the support of basic psychological needs (Y), improving the total effect of the model ( $\beta = 0.555$ ;  $p < .01$ ). This main result of the study proves the stated hypothesis and makes a contribution to the explanation of the factors associated to a good promotion of the BPN satisfaction of the athletes, giving evidence that not only being a good coach is enough to have a better impact over the players, but also consider other variables as leadership (Bandura & Kavussanu, 2018), justice (Soto-García et al., 2023), feedback (Castillo-Jiménez et al., 2022) and motivational climates (Ruiz-Sánchez et al., 2017).

When the model is observed by parts, it can be noted that athletes' coach competency perception has a strong direct effect on perceived authentic leadership ( $\beta = 0.629$ ;  $p < .001$ ) as well as a moderate-high Rho Spearman correlation coefficient (0.66;  $p < .01$ ). Authentic leadership theory provides a conceptual framework to explain the integral characteristics of the coach's behavior towards his athletes, highlighting the ability to be self-aware, make decisions based on balanced information processing, and respect athletes through high internalized morale and being transparent in his relationship with them (Walumbwa et al., 2008). Thus, the high relationship that authentic leadership has with coaching competence can be based on this theoretical structure to define a coach with high competence, considered by (Myers et al., 2011) as a person who can teach, make decisions, direct, motivate and influence the behavior of athletes. This explains the possible benefit of working with a professional area such as coaching competence to affect a behavioral element such as leadership.

Following the partial analysis, authentic leadership shows a positive and significant direct effect ( $\beta = 0.459$ ;  $p < .001$ ) on the perception of support for BPN and a moderate-high Rho Spearman correlation coefficient (0.59;  $p < .01$ ). Players' perception of support for basic psychological needs by coaches is based on the coach's behaviors with athletes during training and competitions. This result is an evaluation made by athletes of their coaches' way of promoting their development of autonomy and competence, as well as creating a climate in the team that favors relationship satisfaction. Thus, the explanation of the relationship between authentic leadership and athletes' positive perception of BPN support may be based on internal interpersonal characteristics in the conceptualization of authentic leadership (Bandura & Kavussanu, 2018; M. Kim et al., 2020; Soto Garcia et al., 2021).

Last but not least, the result of the direct effect ( $\beta = 0.277$ ;  $p < 0.01$ ) of athletes' perception of their coaches' competence in supporting BPN and as well as the moderate-high Spearman's Rho coefficient (0.58;  $p < 0.01$ ) represents further evidence to previous related findings. Although this is a relationship that has been extensively studied, it is important to note that in our study, the players' perception is consistent with previous literature reports (González-Ponce et al., 2018; Isoard-Gauthier et al., 2016; Jowett, 2017; Myers et al., 2011) which suggest the relevance and influence that good coaching competence has on the satisfaction of basic psychological needs. According to this explanation, athletes tend to feel more motivated to work because they perceive themselves as autonomous and competent to practice their sport as a consequence of their coach's ability to teach, motivate and direct them.

## Conclusions

The results of the present study allow us to conclude that the hypothesis is proven and according to the perception of this sample of handball and soccer players, authentic leadership is a variable with a mediating role that enhances the effect that coaching competence has on the basic psychological needs for support. This finding helps in the understanding of the dynamics of training groups, where being a well-prepared coach means having knowledge about the sport and the development of sports performance, as well as having the ability to lead, motivate and make decisions taking care of their interrelationships with athletes and promoting the satisfaction of basic psychological needs.

## Practical Applications

The results of the present study may help the coaching community to pay special attention to psychosocial variables such as the leadership process in sport in order to improve their impact on athlete development, both in relation to sport performance and well-being.

The authors recognize that the study had some limitations such as the limited sample size and the unrelatedness of the athletes' perception of their coaches to the coach's own perception of his or her ability and leadership behavior. Future research should attempt to analyze both the athletes' perception of their coaches and the coaches' own self-analysis.

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