

Coaches' controlling interpersonal style and frustration of basic psychological needs in adolescent judokas

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ABSTRACT

The aim of the study was to analyse the relationships established between the different factors that make up coaches' controlling interpersonal style and frustration of basic psychological needs, as well as to identify the differences that may exist in terms of gender and training hours, and whether the latter may trigger these variables in adolescent judokas. A socio-demographic questionnaire, the Controlling Coach Behaviors Scale (CCBS) (Bartholomew, Ntoumanis & Thøgersen-Ntoumani, 2010), in its Spanish version (Castillo et al., 2014), was administered, as well as the Psychological Need Thwarting Scale (PNTS) (Bartholomew, Ntoumanis, Ryan & Thøgersen-Ntoumani, 2011), also in its Spanish version (Sicilia, Ferriz & Sáenz-Álvarez, 2013). The sample comprised 86 adolescent judokas, who had a federation licence and participated in regional competitions ($M = 14.13$; $SD = 1.38$). Descriptive and correlation analyses of all variables were performed. The Mann-Whitney U-test and the Kruskal-Wallis test were carried out, respectively, to analyse the differences in gender and training hours. The results showed a positive and significant correlation between all study variables. In addition, significant differences were found between genders in the control variable of use of rewards, and in the frustration variable of the basic psychological need of competence, depending on the judokas' training hours. These results suggest that controlling interpersonal styles influence the frustration of basic psychological needs of adolescent judokas, according to their gender or training hours.

Keywords: Interpersonal control; Psychological need thwarting; Judo.

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INTRODUCTION

Today, after many years of evolution and changes, judo is practiced as a sport, but the philosophical framework and moral priorities reflected by its founder, Jigoro Kano, from the very beginning, significantly differentiates it from other sports (Biron, 2008). That is why, although its structure may be similar to that of other sports, where training and competitions are established, the truth is that it differs in terms of some fundamental aspects. Firstly, the coach or master, considered to be the highest authority within the dojo, where very strong emotional ties are established, who may even be considered to be the judoka's "*sporting father*" because of the way he transmits his teachings (Robles, Abad, Robles & Giménez, 2019).

The coaches or masters are the ones who guide the athlete in his or her sporting practice and can influence the motivation of their athletes or students (Ntoumanis, Guerrero, Gadeke & Thøgersen-Ntoumani, 2018). In the interest of analysing the influence of coaches' behaviour on the athletes, sports psychology has carried out numerous studies and contributions (Balaguer, González, Castillo, Merce, & Duda, 2012; Cano, Montero, Cervelló & Moreno-Murcia, 2018; Delrue, Soenens, Morbee, Vansteenkiste & Haerens, 2019; Quedsted et al., 2013). Based on a leadership style approach, and its impact on productivity and on group motivation, two main interpersonal styles have been analysed: one focused on autonomy support and one focused on control strategies (Ryan & Deci, 2002). Most of the research studies have focused on the former, autonomy support (Cantú-Berrueto, Castillo, López-Walle, Tristán & Balaguer 2016; Castillo et al., 2014; Rodrigues et al., 2019; Valero-Valenzuela & Manzano-Sánchez, 2019), based on the social context and its effect on three basic psychological needs (BPNs): competence, autonomy and relatedness (Deci & Ryan, 2000), as well as on the interest in knowing to what extent these are or are not satisfied. Self-Determination Theory (SDT: Deci & Ryan, 1985, 2002) recognises that, beyond the psychological growth and well-being achieved through the satisfaction of the BPNs, people can show cognitive, emotional and behavioural patterns, which represent both the optimal and non-optimal part of human existence. The latter part was shown by Deci & Ryan (2000), who frustrated the BPNs in order to explain the causes of less appropriate behaviours, verifying that this frustration could derive in regulatory control styles.

In line with this, some studies have shown that a controlling style, in relation to some forms of autonomy support, produces a number of undesirable outcomes (Rodrigues et al, 2019; Ryan & Deci, 2000); while other research studies, in contrast, support the belief that in certain situations, or with some athletes, a control-focused approach is justified, and may even be beneficial (Delrue et al, 2019). Bartholomew, Ntoumanis & Thøgersen-Ntoumani (2010) pioneered research into coaches' controlling styles, developing the Controlling Coach Behaviours Scale (CCBS), a scale with four distinct factors that measure the behaviour of sports coaches. First, controlling the use of rewards refers to the use of verbal rewards as an incentive to participate in and complete a task, or to achieve certain goals or standards (Bartholomew et al., 2010; Castillo et al., 2014). By using praise, the coach aims to provoke an increase in the athlete's effort, either during an exercise in training or in competition, trying to reach an end. Secondly, negative conditional regard refers to the denial of love, attention and affection by those in a position of authority, in this case the coach or master, when the athletes' behaviour, or their attitudes, are not as desired (Bartholomew et al., 2010; Castillo et al., 2014). Thirdly, bullying, whereby the coach belittles the students by using verbal abuse, threats, shouting or even physical punishment as a strategy to control their behaviour and actions (Bartholomew et al., 2010; Castillo et al., 2014). And finally, the use of excessive personal control, where the coach interferes in the athletes' personal lives, trying to intrude in areas unrelated to the actual sport (Bartholomew et al., 2010; Castillo et al., 2014).

Taking these controlling behaviours as a starting point, and bearing in mind the type of sport we are dealing with (judo), and the specific conditions of its coaches (masters), this research aims to study the influences that can lead to more or less controlling styles of judo coaches, observing the relationships that can be established with the frustration of the basic psychological needs of competence, autonomy and relatedness, and how these variables may or may not differ, depending on the athletes' gender and the training hours. In this sense, it could be argued that the coach's controlling style includes the demand on athletes to think, feel and behave as the coach says (Reeve, Jang & Jang, 2018), which would not allow the option to give an opinion, would not provide explanations, and would even intimidate the athletes (Bartholomew et al., 2010; Reeve, 2009). Therefore, the coach can be a decisive factor, acquiring a preponderant role, influencing the quality of motivation, well-being and success of the athlete, being on a par, in terms of importance, with the integrated preparation of the judoka to achieve goals (Ntoumanis et al., 2018; Pulido, Fuentes, & Jiménez, 2017; Pulido, de la Vega & Fuentes, 2020).

Recent research with football players has revealed significant relationships between a controlling interpersonal style, frustration of psychological needs and burnout, also showing that a controlling style is a positive predictor of the frustration of basic psychological needs (Mars, Castillo, Lopez-Wane & Balaguer, 2017; Morales-Sánchez et al., 2020). Although these studies can be taken as a reference when establishing future hypotheses, the possible differences that exist between the practice and leadership exercised in team sports, with respect to individual sports, - as we would consider judo in this case -, should be taken into account, since the influence of the team's motivational environment may determine the perceived competence in a training session, and the satisfaction of the athletes with their coach (Pulido et al., 2020).

Much remains to be explored, simultaneously and explicitly, regarding the experiences of both psychological need satisfaction and need frustration within a given context, assessing their differential outcomes in relation to controlling styles (Bartholomew et al., 2011).

Therefore, the aim of this study is to analyse the relationships established between the different factors that comprise coaches' controlling interpersonal style (control of the use of rewards, negative conditional regard, bullying and excessive personal control), the frustration of the judokas' basic psychological needs (competence, autonomy and relatedness), and the identification of the possible differences in terms of gender and training hours, to discover whether these might trigger the different controlling interpersonal styles of the coaches, or the frustration of the basic psychological needs of competing adolescent judokas.

MATERIALS AND METHODS

Participants

The sample was comprised of 86 judokas from different clubs throughout Spain ($n_{\text{men}} = 56$; $n_{\text{women}} = 30$). Groups of athletes were formed depending on the hours they spent training ($n_{3-5\text{hours}} = 55$; $n_{6-8\text{hours}} = 30$; $n_{9\text{orMore}} = 11$). The mean age of the participants was ($M = 14.13$; $SD = 1.38$). The sample selection was incidental according to relevance criteria. The inclusion criteria were that all the athletes had to belong to a Federation in a Spanish autonomous community, and train in their respective clubs, as well as participate in regional level competitions. Moreover, they could not have changed coaches since they started practicing judo. Before participation, experimental procedures were explained to all the participants who gave their voluntary written informed consent, following the Declaration of Helsinki. All the procedures were approved by the Commission of Bioethics and Biosecurity of the University of Extremadura (Spain) (approval number: 130/2015).

Measures

To evaluate the controlling interpersonal style, the Controlling Coach Behaviours Scale (CCBS) by Bartholomew et al. (2010) was used, validated and translated by Castillo et al. This instrument consists of 15 items that measure 4 factors: control of the use of rewards, negative conditional regard, bullying, and excessive personal control. The response scale is Likert type, ranging from 1 "Strongly Disagree" to 7 "Strongly Agree".

The frustration of basic psychological needs was assessed with the Psychological Need Thwarting Scale (PNTS) (Bartholomew et al., 2011) in its Spanish version (Sicilia, Ferriz & Sáenz-Álvarez, 2013). The scale is comprised of 12 items that measure 3 factors: frustration of the basic psychological need of autonomy, frustration of the basic psychological need of competence, and frustration of the basic psychological need of relatedness. The answers are compiled on a Likert type scale where 1 is equivalent to: "Strongly disagree" and 7 is equivalent to: "Strongly agree".

Design and procedure

To begin the study, we contacted the chief coaches of different clubs throughout Spain via email, describing the objectives and purpose of the research as well as the participation requirements for judokas. Once the coaches accepted to participate, they were informed about the procedure to follow during the study. Firstly, the coaches were provided with the express consent documents from parents or guardians, so that the judokas could participate, following Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016. As the category selected for study comprised ages between 12 and 16 years old, all participants had to submit the signed consent document before starting the study. A team of researchers was then responsible for compiling data in each of the clubs using the socio-demographic questionnaires, CCBS and PNTS.

Statistical analyses

Descriptive and correlation analyses of all variables were performed. Cronbach's alpha was used to calculate the internal consistency of the instruments.

Normality and homoscedasticity tests were carried out on the sample (Kolmogorov-Smirnov and Levene, respectively). The data obtained were non-normally distributed, so non-parametric statistics were used.

We conducted the Mann-Whitney U-test to analyse the gender differences (male and female), and the Kruskal-Wallis test to analyse the differences according to the judokas' training hours (3-5, 6-8, 9 or more). The dependent variables in both cases were: control of the use of rewards, negative conditional regard, bullying, and excessive personal control, and the frustration of the basic psychological needs of autonomy, competence and relatedness. The SPSS v.21 statistical package was used to register the sample and process the data.

RESULTS

Results of the descriptive, reliability and correlation analyses between variables

The descriptive statistics, reliability of scales, and correlations are presented in Table 1. The results showed a reliability of the scales ranging from $\alpha = .57$ to $\alpha = .81$. Variables with Cronbach's alpha of less than .70 (.57 for excessive personal control), could be justified, according to several authors, by the small number of items that make up the factor (Hair, Anderson, Tatham & Black, 1998), although future studies should focus on optimising its psychometric qualities.

The dimensions of the controlling style correlated positively and significantly with each other, and positively and significantly with each of the frustration variables of the basic psychological needs. They all showed a significant correlation at the level of .01 (bilateral), except the control variables of the use of rewards, and excessive personal control, whose correlation was significant at the level of .05 (bilateral), as well as the frustration of the basic psychological need of competence, and negative conditional regard.

Table 1. Descriptive statistics, Cronbach's alpha and correlations between study variables.

	Range	M	DT	α	1	2	3	4	5	6
1. Controlling use of rewards	1-7	2.09	1.06	.76						
2. Intimidation	1-7	1.26	0.57	.79	.48**					
3. Negative conditional regard	1-7	1.53	0.83	.74	.52**	.68**				
4. Excessive personal control	1-7	1.49	0.71	.57	.27*	.47**	.40**			
5. PNT relatedness	1-7	1.58	0.77	.74	.34**	.37**	.32**	.39**		
6. PNT competence	1-7	1.85	0.83	.73	.33**	.33**	.28*	.39**	.70**	
7. PNT autonomy	1-7	1.64	0.71	.81	.37**	.44**	.40**	.48**	.72**	.73**

Note: PNT = Psychological Need Thwarting. α = Cronbach's alpha coefficient *p < .05; **p < .01.

Table 2. Result of U de Mann Whitney y Kruskal-Wallis for the variables: Controlling use of rewards, Intimidation, Negative conditional regard, Excessive personal control, PNT relatedness, PNT competence y PNT autonomy.

	Sex	N	Range	U	Sig.	Hours of training	N	Range	Chi.	Sig.
Controlling use of rewards	Male	56	48.47	561.50	.010	From 3 to 5	55	43.86	0.61	.736
	Female	30	34.22			From 6 to 8	20	45.35		
	Total	86				9 or more	11	38.32		
	Total	86				Total	86			
Intimidation	Male	56	44.29	796.00	.627	From 3 to 5	55	41.24	3.26	.196
	Female	30	42.03			From 6 to 8	20	50.75		
	Total	86				9 or more	11	41.64		
	Total	86				Total	86			
Negative conditional regard	Male	56	44.51	783.50	.570	From 3 to 5	55	42.26	0.55	.759
	Female	30	41.62			From 6 to 8	20	46.60		
	Total	86				9 or more	11	44.05		
	Total	86				Total	86			
Excessive personal control	Male	56	45.04	753.50	.398	From 3 to 5	55	40.56	2.54	.281
	Female	30	40.62			From 6 to 8	20	49.63		
	Total	86				9 or more	11	47.05		
	Total	86				Total	86			
PNT relatedness	Male	56	45.35	736.50	.319	From 3 to 5	55	44.52	2.45	.293
	Female	30	40.05			From 6 to 8	20	46.30		
	Total	86				9 or more	11	33.32		
	Total	86				Total	86			
PNT competence	Male	56	44.39	790.00	.647	From 3 to 5	55	44.22	7.08	.029
	Female	30	41.83			From 6 to 8	20	50.90		
	Total	86				9 or more	11	26.45		
	Total	86				Total	86			
PNT autonomy	Male	56	45.91	705.00	.211	From 3 to 5	55	45.32	2.81	.246
	Female	30	39.00			From 6 to 8	20	44.83		
	Total	86				9 or more	11	32.00		
	Total	86				Total	86			

Note: N = Sample size; U = U Mann-Whitney; Sig. = Sig. asymptotic (bilateral); Chi = Chi square; PNT = Psychological Need Thwarting.

Result of U de Mann Whitney y Kruskal-Wallis for the variables

The results from the Mann-Whitney U-test and the Kruskal-Wallis test are presented in Table 2. Firstly, regarding the differences established between genders, the analyses showed significant differences in the coaches' controlling interpersonal style, specifically in the *control of the use of rewards* variable, where the boys determined that the coach applied this control to a greater extent (Sig. = .010). No significant differences were found in the rest of the variables. Secondly, regarding the differences established according to the judokas' training hours, the analyses showed significant differences in the frustration of the basic psychological needs, specifically in the *frustration of the basic psychological need of competence* variable (Sig. = .029). This was greater in the group that trained between 6 and 8 hours per week than in the other two groups. No significant differences were found for the rest of the variables.

DISCUSSION

The present study was designed to analyse the relationships between the factors that comprise the coaches' controlling interpersonal style and the frustration of basic psychological needs. It also aimed to identify differences in terms of gender and training hours, and whether these might trigger different coach controlling interpersonal styles, or the frustration of basic psychological needs of competing adolescent judokas, all depending on the athletes' perception of their coaches.

The results confirmed a positive and significant relationship between all the study variables, highlighting those established between the athletes' perception of the coaches' or judo masters' interpersonal styles, and the frustration of their basic psychological needs, in agreement with studies such as those of Castillo, González, Fabra, Mercé & Balaguer (2012), Mars et al. (2017) or Morales-Sánchez et al. (2020). In this latter study, they analysed the existing relationships between a controlling interpersonal style, frustration of psychological needs, and burnout in adolescent football players. They also verified, with their structural equation model, that a controlling style is a positive predictor of the frustration of basic psychological needs (Bartholomew et al, 2011). These results were derived from the coach's authoritarian and narcissistic behaviour (Matosic, Ntoumanis, Boardley & Sedikides, 2020), with the athletes feeling pressured, oppressed, incompetent and rejected. Despite the negative consequences of these control strategies, these behaviours can also be well intended by highly committed coaches with a high level of discipline in their classes, so a controlling behaviour is not necessarily based on experiences of frustration of basic psychological needs (Morbee, Vansteenkiste, Aelterman & Haerens, 2020). In line with the above, and although many studies have shown that a controlling style generates unfavourable situations in athletes (Pineda-Espejel, Morquecho-Sánchez & Alarcón, 2020), such control could be supported in some specific situations, or with some athletes with whom this could even be beneficial. This theory was researched by Delrue et al. (2019) in their study with 101 adolescent judokas, and whose results showed that situational circumstances cancelled out some of the harmful effects of a coach's control approach.

Regarding the tests carried out to determine if there were differences between genders, the results showed significant differences in the coaches' controlling interpersonal style. More specifically, the boys determined, to a greater extent than the girls, that their coach applied the control of the use of rewards. No significant differences were found in the rest of the variables. These results differ from those obtained in the study by Morales-Sánchez et al. (2020), where the most important indicator within the control style variable was negative conditional regard, which could be defined as the denial of love, attention and affection when the athletes do not show the desired behaviours. Although it is true that, in the previous study, no differences were established in terms of gender, since the sample compendium was comprised exclusively of 103 male football players aged between 12 and 17 years old. We could say that judo coaches or masters exercise

control over their students by applying rewards, in our case specifically in boys, and that this indicator is the least controlling of the four that encompass these styles, since the focus is on the athletes' behaviour, and if they perceive these rewards as beneficial or not (Delrue et al., 2019; Morbee et al., 2020).

The analyses conducted to see if there were differences between athletes in terms of training hours, determine significant differences in the frustration of the basic psychological need of competence, specifically in the group of athletes that trained from 6 to 8 hours per week. No significant differences were found for the rest of the variables. These results are related to those obtained by Morales-Sánchez et al. (2020), where the indicators of the frustration of basic psychological needs variable, which proved to be more important, were the indicators of frustration of autonomy and frustration of competence. The frustration of competence in our study, according to the number of training hours, can be caused by the coach's controlling style in the control of the use of rewards (Balaguer et al., 2012), within this intermediate group, which is usually comprised of athletes who aspire to be at the highest level, but have not yet achieved this, but who are not beginners, either (Pulido, Fuentes & de la Vega, 2019). Therefore, the use of contingent rewards (medals...) may make the athletes feel incompetent and thus frustrate their basic psychological need of competence (Aguirre, Tristán, López, Tomás & Zamarripa, 2016; Bartholomew et al., 2011; Cantú-Berrueto et al., 2016; Castillo et al., 2012; Pineda-Espejel, 2020).

Considering the above, it is important to reflect on the importance of the figure of the coach in the sporting context, and on the adverse consequences, which may affect adolescent judokas.

In relation to the study potential and limitations, we consider it advisable to use a broader sample of judokas to carry out analyses with structural equations, and to see the predictive capacity of the coaches' controlling interpersonal style on the frustration of basic psychological needs, as no studies have been found in this regard.

It would also be interesting to do deeper into the coach's interpersonal style with respect to a group of high level judokas, since the achievement or not of their successes could be related to this variable, which, as we have shown in this study, correlates positively with the frustration of the basic psychological needs.

CONCLUSIONS

As a main conclusion, it should be noted that the results confirmed a positive and significant relationship between all the study variables, placing importance on the relationships generated between the coach's controlling interpersonal style and the frustration of the basic psychological needs. This could result in negative influences on adolescent judokas' psychological experiences, which would be subject to the consideration by the athlete of the controlling behaviours shown by the coach. In the differentiation by gender, we found significant differences between the two, observing that boys perceive greater control by the coach than girls, through the *control in the use of rewards* variable. Finally, in the differentiation according to the hours of weekly training, the results reveal significant differences. Judokas who train between 6 and 8 hours show greater frustration of the basic psychological need of competence than athletes who comprised the other two groups.

In conclusion, this study shows that the creation of coach controlling interpersonal styles has implications on the frustration of basic psychological needs, and that this can affect adolescent judokas, depending on their gender or their weekly training hours.

AUTHOR CONTRIBUTIONS

Conceived the study and collected the data: SPP, JPFG, RDVM. Analysed the data: SPP, JPFG. Interpreted results of research: SPP, JPFG, RDVM. Drafted manuscript and prepared tables: SPP. Edited, critically revised paper, and approved the final version of manuscript: SPP, JPFG, RDVM.

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DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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