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Práctica de actividad física y su asociación con la violencia, la inteligencia emocional y el desarrollo del autoconcepto en estudiantes universitarios.

Practice of physical activity its association with violence, emotional intelligence, and self-concept development in undergraduates.

Prática da actividade física a sua associação com a violência, inteligência emocional, e desenvolvimento do auto-conceito em estudantes universitários.

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RESUMEN

Hoy en día se sabe que la actividad física influye positivamente en la salud tanto física como mental. Por ello, este estudio pretende arrojar luz sobre hasta qué punto la inteligencia emocional y el autoconcepto pueden ser útiles para reducir las conductas violentas en los deportistas españoles. Se realizó un estudio transversal sobre una muestra formada por 457 estudiantes universitarios ($23,86 \pm 12,24$), que cursaban diferentes titulaciones en la Universidad de Granada. Los instrumentos utilizados fueron un cuestionario demográfico, la versión española de la Forma 5 de Autoconcepto, la versión española de la Escala de Violencia Escolar y la versión española del Inventario de Autoinforme de Schutte (ISIS). Los resultados revelan que casi la totalidad de la muestra practicaba actividad física con regularidad; además, las dimensiones mejor valoradas fueron la gestión de la autoestima en cuanto a la inteligencia emocional, la agresión relacional pura en cuanto al tipo de violencia, y la académica en cuanto al autoconcepto. Por último, se observó una correlación negativa entre la inteligencia emocional general y todos los tipos de violencia, así como entre todos los tipos de violencia y el autoconcepto académico.

Palabras clave: Práctica de actividad física, Violencia, Autoconcepto, Inteligencia Emocional

ABSTRACT

Nowadays, physical activity is known to have a positive influence on both physical and mental health. Therefore, this study aims at shedding light on the extent to which emotional intelligence and self-concept may be useful to reduce violent behaviours in Spanish sportspeople. A cross-sectional study was conducted on a sample consisted of 457 undergraduates (23.86 ± 12.24), who were studying different degrees in University of Granada. Instruments used were a demographic questionnaire, the Spanish version of the Self-Concept Form 5, the Spanish version of the School Violence Scale, and the Spanish version of the

Schutte Self-Report Inventory (SSRI). Results reveal that nearly all of the sample regularly practised physical activity; moreover, the highest-rated dimension were Self-Emotional management as regards emotional intelligence, Pure Relational Aggression as for the type of violence, and academic with regards to self-concept. Lastly, there was a negative correlation between general emotional intelligence and all types of violence, as well as between all the types of violence and academic self-concept.

Keywords: Physical activity practice, Violence, Self-Concept, Emotional Intelligence

RESUMO

Hoje em dia, sabe-se que a actividade física tem uma influência positiva tanto na saúde física como mental. Por conseguinte, este estudo visa lançar luz sobre até que ponto a inteligência emocional e o auto-conceito podem ser úteis para reduzir comportamentos violentos nos desportistas espanhóis. Foi realizado um estudo transversal sobre uma amostra constituída por 457 estudantes universitários ($23,86 \pm 12,24$), que estavam a estudar diferentes graus na Universidade de Granada. Os instrumentos utilizados foram um questionário demográfico, a versão espanhola do Formulário de Auto-Conceito 5, a versão espanhola da Escala de Violência Escolar, e a versão espanhola do Inventário de Auto-Relatórios Schutte (SSRI). Os resultados revelam que quase toda a amostra praticava regularmente actividade física; além disso, a dimensão mais elevada foi a gestão auto-mocional no que diz respeito à inteligência emocional, Pura Agressão Relacional no que diz respeito ao tipo de violência, e académica no que diz respeito ao auto-conceito. Finalmente, houve uma correlação negativa entre a inteligência emocional geral e todos os tipos de violência, bem como entre todos os tipos de violência e o auto-conceito académico.

Palavras-chave: Prática da actividade física, Violência, Autoconceito, Inteligência Emocional

INTRODUCCIÓN

(Nowadays, violence is deeply included worldwide (Krug et al., 2002), and addressing this detrimental construct becomes essential to enhance individuals' well-being (Arseneault, 2018; Fung, 2019). Thus, the awareness of its moderators is indispensable to save up costs to society (Fry et al., 2018; Fung, 2019). In this line, Emotional intelligence, which enables individuals to understand and manage their and others' emotions (Tziner et al., 2020), is closely linked to adolescents' development and welfare -especially when worked through school-based programmes, ye it seems to be gender-differences, with females presenting a higher emotional intelligence (Furqani, 2020). Likewise, self-concept has a pivotal role in individuals' well-being, which may help people to control their anxiety and cope with harmful situations (Bayrak et al., 2018).

Emotional intelligence and disruptive behaviours seem to be linked. In fact, Morales-Rodríguez (2017) stated that people with high emotional intelligence tend to have low levels of aggressive behaviours, and Furqani (2020) reported a moderating effect of emotional intelligence on disruptive behaviours such as sexual abuse or suicidal behaviour. Delving into

this negative association, Estévez et al. (2019) reported a worse emotional intelligence in victims of aggression, as opposed to aggressors, who only show low levels of emotional regulation; these findings are in line with Cañas et al. (2019), who found that whilst cybervictims tend to pay more attention to their emotions, non-cybervictims have greater emotional clarity and regulation. To conclude, a high emotional intelligence provides victims the capability to deal with aggressions (Nel, 2019), even reducing the possibilities of suicide (Rey et al., 2019)

Additionally, self-concept is positively associated with emotional intelligence (Alviz et al., 2020; Cañas et al., 2020; Furqani, 2020), especially as for the physical and social self-concepts (Guerrero-Baona et al., 2019), and in terms of gendered self-concept -in which emotional attention is mostly predicted by feminine self-concept whilst emotional clarity and repair by both- (Martínez-Marín et al., 2020)-.

Moreover, violence is negatively correlated to self-concept, since the first has negative consequences on individuals' welfare (Cañas et al., 2020; Estévez et al., 2019). As a matter of fact, vicims' self-concept is more damaged as for all the dimensions (Estévez et al.,

2019; González-García, 2016; Muñoz-Ruiz, 2016; Wang et al., 2018) whilst aggressors' physical self-concept seems to be reinforced -which is the most damaged dimension concerning victims-, as opposed to the social dimension of traditional aggressors (Estévez et al., 2019). Further, Blakely-McClure & Ostrov (2016) stated that relational aggression detracts academic self-concept but increases the physical one, yet higher levels of self-concept may lead to decrease that type of aggression.

There is a scarce of articles about how these three constructs are associated. For instance, Cañas et al. (2019) discovered that cyberbullying was negatively correlated to self-concept -especially the dimensions of family and academic- and to emotional intelligence -especially to emotional regulation and emotional comprehension. Further, Cañas et al. (2020) found the moderating effect that emotional intelligence has in the harmful relationship between victimisation and self-concept.

Following on from the foregoing, this article aims at shedding light on the extent to which emotional intelligence and self-concept may be helpful to reduce aggressive behaviours in Spanish university students.

MATERIAL Y MÉTODOS

Subjects and Design

The present study had a descriptive, comparative and cross-sectional design. The sample comprised of 270 (59.1%) males and 187 (40.9%) females, aged 13-25 (23.86 ± 12.24).

Instruments and Variables

Demographic questionnaire, it was an ad hoc questionnaire in which the data collected involved gender (male or female), age, and practice of physical activity (Do you practice more than 3 hours of physical activity per week?) (yes or no).

Self-concept Form 5, which has created by Garcia & Musitu (1999) yet it was used an adaptation for sportspeople done by Zurita et al. (2016). It measures self-concept by using a five-level Likert scale (1 = never and 5 = always), and comprises items grouped in five dimensions: academic self-concept (A-SC: items 1, 6, 11, 16, 21, 26), social self-concept (S-SC: items (2, 7, 12, 17, 22, 27), emotional self-concept (E-SC: items 3, 8, 13, 18, 23, 28), and physical self-

concept (P-SC: items 5, 10, 15, 20, 25, 30). The Cronbach's alpha value of this questionnaire in this study was 0.850.

School Violence Scale, which was designed by Little et al. (2003) yet it was used the Spanish version done by Musitu et al. (2007). This questionnaire measures two types of violence by using a four-level Likert scale (1 = Never and 4 = Always), namely over/direct aggression and relational/indirect aggression; for this aim, the questionnaire comprises 25 items. The interval reliability of this test in this study was $\alpha=0.933$.

Schutte Self-Report Inventory (SSRI), which was created by Schutte et al. (1998) although it was used the Spanish adaptation done by Garcia-Coll et al. (2013). This adaptation comprises 30 items because items 5, 28 and 33 were removed due to a negative formulation. Hence, the questionnaire measures five dimensions of emotional intelligence by using a five-level Likert scale (1 = totally disagree and 5 = totally agree), namely Emotion Perception (items 2, 3, 9, 11, 13, 20 and 29), Self-emotional Management (items 8, 14, 17, 18, 21, 24, 27 and 30), Heteroemotional Management (items 1, 4, 5, 7, 10, 12, 15, 23, 25 and 28), Emotion Utilisation (items 6, 16, 19 and 26) and General Emotional Intelligence (sum of all items). The following internal reliabilities were estimated: Emotion Perception $\alpha=0.735$, Self-Emotional management $\alpha=0.763$, Self-emotional Management $\alpha=0.819$, Emotion Utilisation $\alpha=0.752$, and General Emotional Intelligence $\alpha=0.929$.

Procedure

Participants were contacted via social network, and asked for their consent, assuring anonymity and voluntariness of participation, and a data treatment only for scientific purposes. Then, a link was sent which took them to a Google Forms document, previously created by the Department of Didactics of Musical, Plastic and Corporal expression of the University of Granada, with all the aforementioned instruments. Lastly, this research fulfils the Research Ethics Committee of the University of Granada, coded 1230/CEIH/2020, as well as the Declaration of Helsinki.

Data Analysis

The data were processed with IBM SPSS Statics on its version 25.0. Normality and homogeneity variance were estimated performing the Kolmogorov-Smirnov

test. Additionally, while a study of frequencies and means was carried out for the descriptive analysis, T-Student tables and Pearson's correlational tests were performed for the correlational study, the latter estimating statically differences by Pearson's chi-square ($p \leq 0,05$). Lastly, the magnitude of difference in effect size (ES) was obtained with Cohen's standardized d-index (Cohen, 1992), interpreted as null (0.0-0.19), small (0.20-0.49), medium (0.50-0.79), and large (≥ 0.80).

RESULTADOS

In table 1 the 457 participants were distributed in groups according to gender (59.1% male and 40.9% female), and the practice of physical activity (91.5%

practised any physical activity three hours a week whereas 8.5% did not). With regards to emotional intelligence, its highest-rated dimension was self-emotional management (M = 4.25), followed by General Emotional Intelligence (M = 4.09), as opposed to Heteroemotional management and emotional utilization (both with M = 4.04). Further, regarding the type of violence, pure relational aggression was the highest-rated dimension (M = 1.61), followed by pure over aggression and instrumental over aggression (both with M = 1.27), as opposed to reactive over aggression (M = 1.08). Concerning self-concept, whilst the highest-rated dimension was the academic one (M = 4.01), the lowest-rated one was the emotional dimension (M = 2.36)

Table 1.
Descriptive study of the sample

Gender	Male	59.1% (n=270)		ROA	M= 1.08 SD=0.343		A-SC	M= 4.01 SD=0.547	
	Female	40.9% (n=187)		POA	M= 1.27 SD=0.418		SC	S-SC	M= 3.17 SD= 0.355
EI	EP	M=4.07 SD= 0.576	TV	IOA	M= 1.27 SD=0.392		E-SC	M= 2.36 SD=0.763	
	SEM	M= 4.25 SD= 0.508		PRA	M= 1.61 SD=0.537		P-SC	M= 3.57 SD=0.620	
	HEM	M= 4.04 SD= 0.590		RRA	M= 1.24 SD=0.400		PA	Yes	91.5% (n=418)
	EU	M= 4.04 SD= 0.595		IRA	M= 1.22 SD=0.390			No	8.5% (n=39)
	GEI	M= 4.09 SD= 0.522							

Note 1: Emotional Intelligence (EI); Emotional Perception (EP); Self-emotional Management (SEM); Heteroemotional Management (HEM); Emotion Utilization (EU); General Emotional Intelligence (GEI); Physical Activity (PA); Type of Violence (TV); Reactive Over Aggression (AMR); Pure Over Aggression (AMP); Instrumental Over Aggression (AMI); Pure Relational Aggression (ARP); Reactive Relational Aggression (ARR); Instrumental Relational Aggression (ARI); Self-Concept (SC); Academic Self-Concept (A-SC); Social Self-Concept (S-SC); Emotional Self-Concept (E-SC); Physical Self-Concept (P-SC); Physical Activity (PA).

Table 2 shows a correlational study between the practice of physical activity and self-concept, violence and emotional intelligence. With regards to emotional intelligence, there were statistically significant differences. Hence, people who practised physical activity reported higher ratings in emotional perception, self-emotional perception and general emotional intelligence (M = 4.10 ± 0,564; d= 0,095; M = 4.27 ± 0,507; d= 0,084; M = 4.11 ± 0,521; d= 0,087) than people who did not (M = 3.79 ± 0,643; d=

0,095; M = 4.04 ± 0,084; M = 3.92 ± 0,087). In addition, people physically active reported higher ratings in academic and physical self-concept (M = 4.04 ± 0,529; d= 0,089; M = 3.60 ± 0,615; d= 0,102) than people who did not practise physical activity (M = 3.65 ± 0,616; d= 0,089; M = 3.25 ± 0,588; d=0,102); however, physically active people's emotional self-concept was lower (M = 2.33 ± 0,761; d=0,126) than people who did not practise physical activity (M = 2.69 ± 0,714; d= 0,126).

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Table 2.
Relational study between physical activity, emotional intelligence, self-concept and violence

Physical Activity		Levene Test				t-Test		ES (d)	95% CI
		M	SD	F	Sig	t	Sig		
EP	Yes	4.10	0.564	1.113	0.292	-3.193	0.002*	0.095	[-0.493; -0.117]
	No	3.79	0.643						
SEM	Yes	4.27	0.507	0.667	0.414	-2.668	0.008*	0.084	[-0.392; -0.059]
	No	4.04	0.477						
HEM	Yes	4.05	0.591	0.040	0.842	-1.006	0.315	0.098	[-0.293; 0.094]
	No	3.95	0.579						
EU	Yes	4.01	0.592	1.249	0.264	-1.226	0.221	0.099	[-0.317; 0.073]
	No	3.89	0.627						
GEI	Yes	4.11	0.521	0.097	0.756	-2.143	0.033*	0.087	[-0.358; -0.015]
	No	3.92	0.514						
Physical Activity		Levene Test				t-Test		ES (d)	95% CI
		M	SD	F	Sig	t	Sig		
A-SC	Yes	4.04	0.529	1.737	0.188	-4.339	0.000*	0.089	[-0.567; -0.213]
	No	3.65	0.616						
S-SC	Yes	3.16	0.347	0.587	0.444	1.826	0.069	0.059	[-0.008; 0.225]
	No	3.27	0.427						
E-SC	Yes	2.33	0.761	0.060	0.807	2.839	0.005*	0.126	[0.110; 0.609]
	No	2.69	0.714						
P-SC	Yes	3.60	0.615	0.214	0.644	-3.460	0.001*	0.102	[-0.556; -0.153]
	No	3.25	0.588						
Physical Activity		Levene Test				t-Test		ES (d)	95% CI
		M	SD	F	Sig	t	Sig		
ROA	Yes	1.09	0.357	3.219	0.073	-0.900	0.368	0.057	[-0.165; 0.061]
	No	1.03	0.107						
POA	Yes	1.28	0.430	2.840	0.093	-1.144	0.253	0.070	[-0.217; 0.057]
	No	1.20	0.255						
IOA	Yes	1.27	0.402	2.458	0.118	-0.489	0.625	0.065	[-0.161; 0.097]
	No	1.24	0.260						
PRA	Yes	1.61	0.538	0.328	0.567	1.129	0.260	0.089	[-0.075; 0.278]
	No	1.71	0.524						
RRA	Yes	1.23	0.410	0.818	0.366	-1.010	0.313	0.067	[-0.199; 0.064]
	No	1.18	0.273						
IRA	Yes	1.22	0.401	1.547	0.214	-0.293	0.770	0.065	[-0.147; 0.109]
	No	1.20	0.242						

Note 1: Emotional Perception (EP); Self-emotional Management (SEM); Heteroemotional Management (HEM); Emotion Utilization (EU); General Emotional Intelligence (GEI); Academic Self-Concept (A-SC); Social Self-Concept (S-SC); Emotional Self-Concept (E-SC); Physical Self-Concept (P-SC); Reactive Over Aggression (ROA); Pure Over Aggression (POA); Instrumental Over Aggression (IOA); Pure Relational Aggression (PRA); Reactive Relational Aggression (RRA); Instrumental Relational Aggression (IRA). **Note 2:** * statistically significant differences (p<0.05)

Table 3 shows a correlational analysis between violence and emotional intelligence. General emotional intelligence is negatively associated with all types of violence (ROA, $r=0.159^{**}$; POA, $r=0.169^{**}$; IOA, $r=-0.215^{**}$; PRA, $r=-0.185^{**}$; RRA, $r=-0.154^{**}$; IRA, $r=-0.200^{**}$), and with all the emotional dimensions ($r<0.000$). Additionally, all the

types of violence are positively associated with each other ($r>0.500$), as well as with all the dimensions of emotional intelligence ($r>0.500$).

Table 3.
Pearson's correlation between violence and emotional intelligence

	EP	SEM	HEM	EU	GEI	ROA	POA	IOA	PRA	RRA	IRA
EP	1										
SEM	.828**	1									
HEM	.829**	.820**	1								
EU	.713**	.736**	.680**	1							
GEI	.929**	.930**	.943**	.813**	1						
ROA	-.153**	-.196**	-.115*	-.120*	-.159**	1					
POA	-.175**	-.173**	-.141**	-.132**	-.169**	.679**	1				
IOA	-.216**	-.214**	-.200**	-.142**	-.215**	.756**	.687**	1			
PRA	-.214**	-.173**	-.159**	-.134**	-.185**	.502**	.618**	.658**	1		
RRA	-.168**	-.176**	-.126**	-.082	-.154**	.754**	.646**	.766**	.614**	1	
IRA	-.217**	-.202**	-.173**	-.110*	-.200**	.772**	.772**	.778**	.590**	.774**	1

Note 1: ** Significant correlation at 0,01; *Significative correlation at 0,05. **Note 2:** Emotional Perception (EP); Self-emotional Management (SEM); Heteroemotional Management (HEM); Emotion Utilization (EU); General Emotional Intelligence (GEI); Reactive Over Aggression (ROA); Pure Over Aggression (POA); Instrumental Over Aggression (IOA); Pure Relational Aggression (PRA); Reactive Relational Aggression (RRA); Instrumental Relational Aggression (IRA).

Lastly, in table 4 there is a correlational study between violence and self-concept. There existed a high association among all the types of violence ($r > 0.500$). Further, academic self-concept was negatively correlated to all types of violence. On the other hand,

while emotional self-concept was positively correlated to all types of violence ($r > 0.500$), it was negatively associated with academic self-concept ($r = -0.383^{**}$) and physical self-concept ($r = -0.410^{**}$).

Table 4.
Pearson's correlation between violence and self-concept

	ROA	POA	IOA	PRA	RRA	IRA	A-SC	S-SC	E-SC	P-SC
ROA	1									
POA	.679**	1								
IOA	.756**	.687**	1							
PRA	.502**	.618**	.658**	1						
RRA	.754**	.646**	.766**	.614**	1					
IRA	.772**	.772**	.778**	.590**	.774**	1				
A-SC	-.118*	-.036	-.202**	-.149**	-.120*	-.145**	1			
S-SC	.043	-.012	-.068	-.077	-.010	-.049	.264**	1		
E-SC	.131**	.029	.164**	.082	.146**	.143**	-.383**	.106*	1	
P-SC	-.028	.044	-.153**	-.096*	-.061	-.068	.661**	.208**	-.410**	1

Note 1: ** Significant correlation at 0,01; *Significative correlation at 0,05. **Note 2:** Academic Self-Concept (A-SC); Social Self-Concept (S-SC); Emotional Self-Concept (E-SC); Physical Self-Concept (P-SC); Reactive Over Aggression (ROA); Pure Over Aggression (POA); Instrumental Over Aggression (IOA); Pure Relational Aggression (PRA); Reactive Relational Aggression (RRA); Instrumental Relational Aggression (IRA).

DISCUSIÓN

The descriptive analysis shows that whilst self-emotional management was the highest-rated dimension of emotional intelligence by sportspeople, heteroemotional management and emotion utilization were the lowest-rated ones. This result is similar to

those obtained by Kopp et al. (2021) and Sesar et al. (2021), who stated that athletes' management of emotions plays a pivotal role in achieving sports success. Likewise, sportspeople's pure relational aggression was the highest-rated type of violence as opposed to Sanchez-Alcaraz et al. (2019), who affirmed that physical activity decreases all the types

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of violence. With regards to self-concept, physically active people's academic self-concept was the highest-rated dimension, which is similar to Gedda-Muñoz et al. (2019), who stated that physical activity impacts positively on all dimensions of self-concept, especially on the academic one. Lastly, it needs to be highlighted that the vast majority of participants practised physical activity for more than three hours a week, which is by far different from Kowalska et al. (2021), who affirmed that restrictions due to COVID-19 jeopardised the time of physical activity practice due to schedule limitations.

Furthermore, relational analysis suggests that people who practised physical activity more than three hours a week showed higher emotional perception, self-emotional management, and general emotional intelligence; these results are very similar to Wang et al. (2020) and San Román-Mata et al. (2020) since, as Ubago-Jiménez et al. (2019) stated, sports practice enables people in their decision-making process, and also helps them to manage disruptive behaviours. As for relationship between the practice of physical activity and self-concept, practitioners reported higher levels of both academic and physical self-concept, yet non-practitioners showed higher scores in emotional self-concept. The research conducted by Lee (2021) concluded that the emotional dimension was adversely affected by the several restrictions due to the COVID-19 pandemic, leading to an increase of disruptive behaviours, although Murray et al. (2021) and Lindell-Postigo et al. (2020) reported similar results to this study since the practice of physical activity seems to positively impact on students' self-concept.

Furthermore, there existed a negative association between the different areas of emotional intelligence and all types of violence, these results being similar to Estevez-Casellas et al. (2021); Estevez et al. (2019) justified this because people with low emotional control skills tend to express violent behaviours more frequently than those who affirmed to adequately control their emotions. Likewise, there was a high correlation between all types of violence, as well as between all the dimensions of emotional intelligence, these results being similar to Wang et al. (2020) and Bermejo-Martins et al. (2021).

With regards to the correlational study between violence and self-concept, there was a negative correlation between academic self-concept and all

types of violence, which was explained by Sánchez-Zafra et al. (2019) because students who show low academic standards are more likely to behave aggressively towards than those who achieve good grades. Nonetheless, emotional self-concept had a low correlation with all types of violence and a negative one with both academic and physical self-concept, very similar to the research conducted by Keller et al. (2021); Lazarides and Raufelder (2019) observed that the emotional self-concept is affected by the academic and physical area, affirming that an individual who does not achieve their goals tend to express disruptive emotions that negatively impact on their emotional control.

CONCLUSIONES

The descriptive analysis shows self-emotional management is the highest-rated dimension of emotional intelligence. In addition, while the most common type of violence is pure relational aggression, the academic self-concept is the highest-rated dimension of self-concept. It is also observed that most of the sample is physically active.

The relational analysis indicates that a higher level of physical activity has a positive impact on all areas of emotional intelligence. Furthermore, it also suggests that there is a positive association between the practice of physical activity and all the dimensions of self-concept but the social and emotional ones, in which non-practitioners showed higher results. As for the types of violence, the analysis indicates that that physically active people have higher scores in all the types of aggression but the pure relational aggression, which is higher scored by non-practitioners.

Lastly, the correlational analysis suggests that both emotional intelligence and academic self-concept are negatively associated with all types of violence, whereas both academic and physical self-concept are negatively correlated to emotional self-concept. To concluded, there were also found high correlations between all types of violence and emotional aspects.

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