PERFECTIONISM AND AFFECT AS DETERMINANTS OF SELF-PERCEIVED MOTOR COMPETENCE IN PRIMARY SCHOOL CHILDREN

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Abstract:

The aim of this study was to analyze the primary school students' perception of their motor competence in the area of Physical Education, with respect to the affective domain and improvement. The sample consisted of 428 primary school students aged between 8 and 12 years (M=10.43; SD=0.837) (Castilla La Mancha, Spain). Perceived motor competence (PMC) was measured by the Perception of Competence Questionnaire (POC); perfectionism was measured by the three subscales of the Child Perfectionism Questionnaire, and, finally, affectivity was assessed by the PANAS (Positive and Negative Affect Schedule) questionnaire. Positive correlations were obtained between all the dimensions of the PMC and self-improvement (p<.05). Significant gender differences were found in the PMC dimension Peers and Self-Experience, with higher scores in males (p<.05). Differences were also found in the PMC dimension Peers as a function of weight status, being lower in the overweight group (p<.05). Age was related to self-experience being higher the older one was (p<.05). A model was generated that explained 23.7% of PMC with the total dimension of self-improvement and weight status. Three distinct profiles, called high, medium and low self-improvement, were detected. These groups in turn showed an analogy in perceived motor competence, high, medium and low, the result also obtained in the regression analysis (p<.05). These results extend the relationship between perceived motor competence and self-improvement in primary school children and are potentially of interest to the fields of education and psychology.

Key words: perceived motor competence, perfectionism, affective domain, primary school, health

Introduction

According to global health experts, all kids of school age should practice at least 60 minutes of moderate to vigorous physical activity daily (≥ 5 days/week). However, a low perceived motor competence (PMC) can affect the adequate achievement of this objective (Gil-Madrona, Carrillo-López, Rosa-Guillamón, & García-Cantó, 2020a). Perceived motor competence refers to the belief that a person is able to successfully perform a given motor task, which is conditioned by personal experience, peers and teacher (Gil-Madrona, Cejudo, Martínez-González, & López-Sánchez, 2019). This perception of physical mastery based on motor competence and health behaviors can be understood in terms of a mechanism by which motor coordination can have an indirect impact on emotional outcomes through various domains of self-perception (Rigoli, Piek, & Kane, 2012).

During the last decades and due to a critique made of rationalist psychology, the emotional dimension of human beings has been revendicated in the scientific field. Thus, through various academic perspectives, the concept of emotion has been extended to the psychological, motor and sociocultural spheres (Johnson, 2019). This manuscript reflects that this situation has also been reflected in the context of pedagogical disciplines and in Physical Education as well, where an increase in the interest in investigating this subject in its different didactical contents can be acknowledged.

The investigation of emotions in the area of Physical Education is attributed to the need to understand the different meanings various psychological states can represent (Johnson & Sánchez, 2021). Emotional regulation has been described as the person's capacity to manage his or her emotions in a proper way, modifying their intensity and dura-

tion (Alcaraz-Muñoz, Alonso-Roque, & Yuste-Lucas, 2022). For this reason, emotional regulation is linked to psychological well-being. Likewise, motor practice is considered beneficial for health, although the results of previous research on its association with psychological and emotional well-being have not been conclusive (Fuentes-Sánchez, Jaén, González-Romero, Moliner-Urdiales, & Pastor 2017). According to the type of motor task or gender, differences and similarities have been identified, highlighting the role of competition and the relationship with a sporting requirement in each educational center. In this sense, it has been concluded that to promote the subjective well-being of students in Physical Education sports practices, it could be appropriate to apply alternative strategies for teaching sports, adaptive strategies and a task-oriented achievement climate.

Research into children's perfectionism is fundamental to understanding different variables that might affect students' development. A literature review reveals that an integrative definition understands perfectionism as a personality disposition characterized by efforts of impeccability and the establishment of high-performance standards, accompanied by a tendency to excessive critical self-evaluations (Aguilar-Durán & Castellanos-Lopez, 2016). It implies a set of very strict self-imposed demands about what the person believes he or she should become or do. This review indicates the relationship between psychological distress during childhood and adolescence and excessive perfectionism. Hence, the authors express the warning that perfectionism in elementary school children might seem innocuous and even desirable, but that it brings innumerable negative consequences for children's physical and emotional health if it is excessive (Cazalla-Luna & Molero, 2018).

In this sense, there are different implications for parents and teachers, who, together with counsellors and psychologists, should be cautious about pressuring schoolchildren; they should assess exactly what kind of perfectionism is present in children and help them to manage both dimensions of perfectionism (Méndez-Giménez, Cecchini-Estrada, & Fernández-Río, 2015a). When schoolchildren adopt self-demanding perfectionist behaviors, the advice should be to stick to them without being too self-critical in case they do not reach the desired personal standards. Likewise, students of the pure external pressure type should be helped to internalize their desire for perfection and evaluate themselves more realistically to assume standards more in line with their perceived motor competence.

Currently, it is of interest to analyze the relationship between self-perceived motor competence, perfectionism, and affective mastery in elementary school children. In the study by Pineda-Espejel, Morquecho-Sánchez, Fernández, and González-

Hernández (2019), the aim was to test a predictive model that analyzed the sequence: perfectionist concerns, fear of failure, and consequences of positive and negative affect in sports training sessions in children and adolescents as well as to analyze the mediating role of fear of failure. The results showed that the perception of pressure exerted by two primary sources of evaluation of athletes—parents and coach, predicted a negative affect only if the fear of failure had developed in the athlete during sports training sessions. A simultaneous study of the role of close associates is important since it may guide future interventions focused on maximizing the beneficial influence of parents and coaches. In conclusion, fear of failure is a subjective experience, which has environmental antecedents—interpersonal perfectionism, and affective consequences.

In this line, the competitive sports practice group mentioned above showed higher emotional competencies and greater psychological well-being compared to the group that did not practice sports, who showed lower scores on the anxiety and depression scales as well as on the negative affect scale, while they showed higher scores on the clarity of feelings and emotional repair scales (Fuentes-Sánchez, et al., 2017).

It has been observed that the relationship between perceived motor competence, perfectionism and affective dominance in elementary school children may be mediated by moderating variables such as gender, age, or weight status (Gil-Madrona, et al., 2020a). For example, in one study whose purpose was to analyze various types of emotions—positive or pleasant and negative or unpleasant—and their intensity in the extent to which they are felt by fifth and sixth grade Primary Education students in the area of Physical Education (Gil-Madrona, et al., 2019) and the comparison of emotional states according to gender, age and their body mass index (BMI), it was found that in the dimension of positive emotions, all the highest mean scores were achieved by the students without obesity/overweight issues. Regarding the negative emotions dimension, all the highest mean scores were found in students with obesity/overweight issues. The results showed significant differences according to BMI between the students with obesity/overweight problems and students without obesity/overweight problems in positive emotions (Gil-Madrona, Pascual-Francés, Jordá-Espi, Mujica-Johnson, & Fernández-Revelles, 2020b).

Based on these precedents, the general objective of this study was to evaluate the primary school children's perception of their motor competence in the area of Physical Education, with respect to the affective domain and improvement. This general objective was achieved through the following specific objectives:

I) To know the relationship between perceived motor competence, self-improvement, and affective competence.
II) To analyze self-improvement, affective competence, and perceived motor competence according to sex, age and weight status of 4th, 5th and 6th grade students.
III) To create a model that allows predicting the perception of perceived motor competence according to self-improvement, affective competence, age, gender, and weight status.
IV) To create typologies of primary school students in Physical Education characterized by perceived motor competence, self-improvement, and affective mastery.

Methods and materials

Participants

The final sample consisted of 428 students from nine public schools located in the region of Castilla-La Mancha, Spain. This region is in the southeast area of the country. The province chosen for developing this study was Albacete. The 428 participants were between 8 and 12 years of age (M= 10.43; SD = 0.837); 52.1% being boys (n= 223) and 47.6% girls (n= 205). The sample was non-probabilistic and intentional by accessibility.

Instruments

Perceived Motor Competence (PMC). The measurement instrument for the assessment of perceived competence (PMC) (Scrabis-Fletcher & Silverman, 2010), was used in the second version (M3F). Personal experience (eight items) reports on the student's perceived feelings of failure, likes and dislikes, and personal ability. Peers (three items) reports on social relationships with peers. Teacher (four items) reports on the students' view of their teacher's actions. Each item was evaluated according to a 5-point Likert scale, with 1 = strongly disagree to 5 = strongly agree.

Perfectionism. The three subscales of the Child Perfectionism Questionnaire (CPQ), adapted to PE, were used. Self-demand (eight items) reports the perfectionist attitude with which the child faces while executing his or her tasks (e.g., I try to be the best in everything I do.). External pressure (eight items) refers to the child's perception of his or her immediate environment as demanding perfect behaviors (e.g., My parents do not accept the mistakes I may make.). Self-evaluation (nine items) reports the valuation attitude that the child has toward him- or herself (e.g., If I am not the best at the things I do, I feel bad.). A 5-point Likert scale was used, with 1 = strongly disagree to 5 = strongly agree (Lozano, Cueto, Vázquez, & González, 2012).

Affectivity. We used the version of the PANAS (Positive and Negative Affect Schedule) vali-

dated in Spanish (Ortuño-Sierra, Bañuelos, Pérez de Albéniz, Molina, & Fonseca-Pedrero, 2019; Ortuño-Sierra, Santarén-Rosell, de Albéniz, & Fonseca-Pedrero, 2015) for use with children and adolescents (PANASN) in the context of PE. It is a 20-item self-report questionnaire measuring two dimensions: positive affect (e.g., I am interested in people or things.) and negative affect (e.g., I feel fear.), with 10 items for each subscale. A 5-point Likert scale was used, with 1 = strongly disagree to 5 = strongly agree.

Procedure

A descriptive methodology with a cross-sectional research design was used. Informed consent was requested from the educational centers and parents as well as the consent of the Physical Education teacher at the premises where the research was conducted. Anonymity and the exclusive use of the data for research purposes were guaranteed. An action protocol was elaborated saying which time should be respected while answering each instrument and the information to be given at each moment was marked. The instruments were completed during Physical Education classes, in January 2019, in the presence of the researcher who also informed the students of the objective of the research. The completion of the instruments took approximately 30 minutes.

Data analysis

Descriptive analysis (means, standard deviations, skewness and kurtosis) and bivariate correlation analysis were performed. The internal consistency of the variables from the three questionnaires was calculated using Cronbach's alpha coefficient. For the identification of different self-improvement and affective domain profiles, a hierarchical cluster analysis was performed with Ward's method using the three variables of the self-improvement questionnaire (self-evaluation, self-experience, and external pressure), and also the affective domain variables of the positive and negative PANAS questionnaire. By means of the subsequent k-means analysis with three clusters, the characterization of the three groups was obtained, contrasted by means of ANOVA in all the variables introduced in the cluster analyses.

Subsequently, a multivariate differential analysis (MANOVA) was performed with the three groups with the variables of perceived motor competence (personal experience, peers, and teacher). Univariate F tests were performed to analyze the significant differences in these variables, applying the Bonferroni *post-hoc* test in the cases of significant differences. The magnitude of the differences between the groups studied was obtained using the effect size. Cohen (1988) defines the effect size as

small (d= 0.2), medium (d= 0.5) or large (d= 0.8). All analyses were performed using the SPSS 24.0 statistical package.

Results

Descriptive analysis and bivariate correlation analysis

In order to answer the first study objective, i.e., to find out the relationship between PMC and self-perfection and affective competence, descriptive and correlational analyses were carried out.

Table 1 shows the results of the descriptive analysis and the correlations of the variables studied. Mean values, standard deviations, skewness, kurtosis and Pearson's 'R' are shown. Reliability is shown through Cronbach's alpha. The variables of perceived motor competence obtained significant correlations: personal experience with self-evaluation (r= 0.43), self-experience (r = 0.27), external pressure (r = 0.39), and positives r = (-0.14); peers with self-evaluation (r = 0.25), self-experience (r = 0.26), external pressure (r = 0.27), and negatives (r = -0.17); teacher with self-evaluation (r = 0.15), self-experience (r = 0.20), and external pressure (r = 0.18). Significant and positive correlations are therefore contemplated in the three factors of perceived motor competence with the three factors of self-

perfection; however, no correlations were found with the positive and negative aspects of affectivity.

To answer the second objective of this study, we analyzed the relationships between the variables and the sex, age and weight status of 4th, 5th and 6th grade primary school students.

Relationship between the variables and gender analysis

The relationship between gender and variables was analyzed. After this analysis, statistically significant differences were found in the variable *partner* (t=3.55;p<.001; d=0.34) with a higher mean in boys (M=9.25 ± 2.66) than in girls (M=8.38 ± 2.36) and also in the variable *personal experience* (t=4.14;p<.001; d=0.20) with a higher mean in boys (M=27.39 ± 5.66) than in girls (M=25.08 ± 5.87). No significant differences were found in the other variables.

Analysis of the relationship between the variables and groups (according to BMI average).

The relationship that the variables could have with respect to the group (overweight yes/no) was analyzed. Thanks to this analysis, statistically significant differences were only found in the

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

		M	SD	α	1	2	3	4	5	6	7	8
1	Self-evaluation	21.12	7.34	0.83		0.42**	0.51**	0.43**	0.25**	0.15**	-0.15**	0.20**
2	Self-experience	26.28	5.87	0.83			0.32**	0.27**	0.26**	0.20**	0.04	-0.06
3	External pressure	14.10	5.37	0.83				0.39**	0.27**	0.18**	-0.08	0.04
4	Personal experience	19.71	5.22	0.68					0.31**	0.40**	-0.14**	0.05
5	Peers	8.83	2.55	0.68						0.18**	-0.04	-0.17**
6	Teacher	11.97	3.37	0.68							0.00	0.04
7	Positives	24.14	2.93	0.6								-0.23**
8	Negatives	17.38	3.84	0.78								

Note. **p<.01; *p<.05; M = mean; SD = standard deviation; A = skewness; K = kurtosis; α = Cronbach's alpha value.

Table 2. Student's t-test for the variables according to gender

	Male (n=223)		Female (n=205)				
	M	SD	M	SD	t	p	d
Personal experience	19.65	5.24	19.79	5.21	-0.28	0.78	0.03
Peers	9.25	2.66	8.38	2.36	3.55	0.00	0.34
Teachers	12.06	3.45	11.87	3.28	0.60	0.55	0.06
Self-evaluation	20.95	7.51	21.30	7.16	-0.49	0.62	0.02
Self-experience	27.39	5.66	25.08	5.87	4.14	0.00	0.20
External pressure	14.14	5.20	14.06	5.56	0.15	0.88	0.01
Positives	24.26	2.90	24.01	2.96	0.88	0.38	0.09
Negative	17.11	3.64	17.68	4.03	-1.54	0.12	0.07

Note. M = mean; SD = standard deviation; t = Student's t-test; p = p-value; d= effect size Cohen.

companions' dimension (t= -2.3; p=.02; d= 0.25), "I feel greater in the normal weight group" (mean= 9.00 ± 2.53) than in the overweight group (mean= 8.36 ± 2.57). No statistically significant differences were found in the other dimensions.

Analysis of the relationship between the variables and participants' age

The correlations between age and the study variables were analyzed and only statistically significant relationships were found with the variable *self-experience* r= 0.231.

To address the third objective of our study, the multiple regression analysis was used to create a model to predict the perception of perceived motor competence as a function of improvement, affective competence, age, gender, and weight status.

Multiple regression analysis

Once the bivariate relationships were analyzed, a multiple linear regression model was created with the intention of estimating the Perceived Motor Competence (PMC) as a function of the variables of self-perfection, affective competence, and with the variables sex, age, and weight status. The self-perfectionist dimensions (self-evaluation, self-experience and external pressure) were grouped into a single variable. The variables sex and group were converted into dummy variables.

Non-significant variables (p>.05) were excluded from the final model. In all cases, the models meet the assumptions of acceptance, linearity between predictor and criterion variables, as well as homoscedasticity and normal distribution of the residuals.

The Durbin-Watson values obtained were adequate, being between 1.5 and 2.5 (Pardo & San Martín, 2010), thus fulfilling the assumption of independence of the residuals. The variance inflation and tolerance index values were adequate.

Table 5 shows the linear regression models generated. In the first model shown, all the variables are presented regardless of their significance. In the second model, only the significant variables are shown, which were self-improvement and the weight group as a dummy variable. In the third model, the weight group variable was excluded to see if it could be a modifying variable of self-perfectionism. It was found that it was not, that the beta coefficient of self-perfectionism was hardly affected by body weight. The resulting simple model with the variable self-perfectionism explained PMC by 22.8%, rising to 23.7% when weight status was included. Weight status does not play a moderating role between perfectionism and PMC since the beta coefficient is not affected by weight.

Finally, to address the fourth objective of this study, which aims at the creation of typologies of schoolchildren in Primary Physical Education characterized by perceived motor competence, self-improvement and affective mastery, the multivariate technique of cluster analysis and differential analysis was used.

Cluster analysis

The values of all the variables were standardized using Z-typing. No scores above three were found to indicate outliers in the sample. After sample purification and descriptive analyses, we proceeded to perform a cluster analysis with the

Table 3. Student's t-test for the variables according to participants' weight

	Overweight (n=112)		Normal weight (n= 316)				
	M	SD	M	SD	t	p	d
Self-experience	19.12	4.94	19.92	5.31	-1.41	0.16	0.15
Peers	8.36	2.57	9.00	2.53	-2.30	0.02	0.25
Teacher	11.78	3.52	12.04	3.31	-0.70	0.48	0.08
Self-evaluation	21.58	8.31	20.96	6.98	0.71	0.48	0.08
Personal experience	26.41	6.12	26.23	5.79	0.27	0.78	0.03
External pressure	13.86	5.38	14.19	5.38	-0.56	0.57	0.06
Positives	23.96	3.02	24.21	2.90	-0.80	0.43	0.09
Negatives	17.21	3.57	17.44	3.93	-0.53	0.59	0.06

Note. M = mean; SD = standard deviation; t = Student's t-test; p = p-value; d = effect size Cohen.

Table 4. Pearson's correlations between age and the study variables

		Self-evaluation	Self-experience	External pressure	Personal experience	Peers	Teacher	Positives	Negatives
AGE	r	0.004	0.231**	-0.082	0.032	-0.070	-0.077	0.011	0.018
	p	0.931	0.000	0.091	0.515	0.147	0.113	0.823	0.708

three dimensions of the self-perfection question-naire (self-evaluation, personal experience, and external pressure) and the two dimensions of the PANAS questionnaire (Positives, Negatives). The dendrogram suggested three different groups.

One profile with high self-perfectionism (n=153), the second profile with low self-perfectionism (n= 162), and the third group with a medium self-perfectionism profile (n= 108). The profile with "high self-enhancement" presented high values in self-evaluation, personal experience and external pressure, moderate values in positives and low values in negatives. The profile with low self-perfectionism presented the lowest

values in self-evaluation, personal experience, and external pressure, high in positives and low in negatives. And finally, the medium self-enhancement profile presented medium values in self-evaluation, personal experience and external pressure, and low values in positives and high values in negatives. Differences of 0.5 in Z-scores were used as a criterion to describe whether a group scored relatively high or low compared to the others (Wang & Biddle, 2001).

Differential analysis

To study different features of each profile obtained in terms of perceived motor competence

*Table 5. Linear regression analysis*

Variable criteria	r-cua	D-W	Predictor variables	Beta	t	p	T	FIV
PMC	0.249	1.982	(Constant)	37.109	6.301	0.000		
			Positives	-0.209	-1.675	0.095	0.940	1.064
			Negatives	-0.140	-1.468	0.143	0.937	1.068
			Self-perfectionism	0.275	11.213	0.000	0.977	1.023
			Sex	0.748	1.028	0.305	0.948	1.054
			Overweight	-1.968	-2.392	0.017	0.959	1.043
			Age	-0.565	-1.318	0.188	0.976	1.024
PMC	0.237	1.96	(Constant)	24.091	15.550	0.000		
			Self-perfectionism	0.275	11.300	0.000	1.000	1.000
			Overweight	-1.841	-2.277	0.023	1.000	1.000
PMC	0.228	1.936	(Constant)	23.657	15.312	0.000		
			Self-perfectionism	0.274	11.214	0.000	1.000	1.000

Table 6. Means, standard deviations, Z-scores for each cluster

	Cluster 1: Low perfectionism, n = 162 (37.8%)			Cluster 2: Medium perfectionsim, n = 108 (25.2%)			Cluster 3: High perfectionism, n = 153 (36,92%)				
	M	SD	Z	M	SD	Z	M	SD	Z	F	pot.
Self-evaluation	17.28	5.88	-0.52	21.27	6.69	0.02	24.96	7.11	0.52	54.79	0.21
Self-experience	23.60	5.46	-0.46	24.10	4.97	0.41	30.51	4.21	0.72	93.61	0.31
External pressure	11.15	3.44	-0.55	12.61	4.20	-0.28	18.15	5.24	0.75	111.02	0.34
Positives	26.09	2.00	0.66	21.12	2.37	-1.03	24.22	2.29	0.03	164.28	0.44
Negatives	16.69	3.18	-0.18	20.06	3.19	0.70	16.27	4.00	-0.29	42.50	0.17

Table 7. Multivariate analysis of PMC dimensions personal experience, peers and teacher according to clusters

	Cluster 1: Low perfectionism, n = 162 (37.8)		Cluster 2: Medium perfectionism, n = 108 (25.2%)		Cluster 3: High perfectionism, n = 153 (36.92%)			
Variables	M	SD	M	SD	M	DT	F	Power
Self-experience	16.20	3.58	19.96	4.44	23.15	4.78	105.89	0.33
Peers	8.02	2.35	8.57	2.37	9.84	2.54	23.36	0.10
Teacher	11.07	3.43	12.08	3.09	12.82	3.28	11.39	0.05
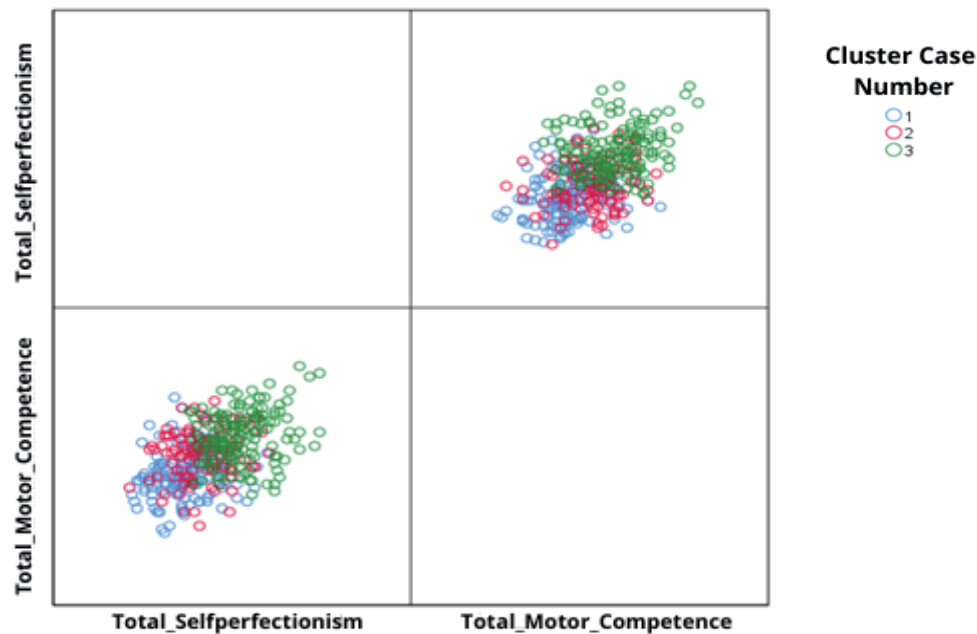
Note: "As can be seen in the point diagram, the three groups offered by the cluster analysis are clearly differentiated, the students with low self-perfectionism have a low PMC, those with average self-perfectionism also have a medium PMC and the same occurs with those with high self-perfectionism who have a high PMC".

Figure 1. Point diagram of perfectionism and perceived motor competence in the three clusters.

in its three dimensions (Table 7, peers and teachers), a multivariate analysis of variance (MANOVA) was performed. The clusters obtained were used as independent variables or factors, and the three dimensions of perceived motor competence were used as dependent variables (see Table 7).

The results obtained showed significant differences in the three dimensions of perceived motor competence, personal experience (F= 105.89, p<.001, p =.33), peers (F= 23.36, p<.001, p=.10) and teacher (F= 11.39, p<.01, p=.05), with the highest scores of the three dimensions found in the high self-improvement cluster, the lowest scores in the low self-improvement cluster, and the means in the medium self-improvement cluster.

Discussion and conclusions

The aim of this research was to establish if different dimensions of self-perfectionism and emotional competence are related to the perceived motor competence in Primary Education students. By relating all the variables, a model that explained the perceived motor competence was created. It was considered interesting to analyze different groups or types of students of Primary Education that can be established to address the relationships with perceived motor competence. In this sense, positive correlations were obtained between all the dimensions of perceived motor competence and self-improvement. It is worth noting the absence of a significant relationship between the dimensions of perceived motor competence and affective domain in Primary Education students.

These results may be due to the satisfaction or frustration generated by a motor task since they can determine the locus of causality or the type of motivation that a student has in his or her different contexts where he or she participates (e.g., an activity, a lesson, a curricular content, physical education lessons, lifestyle, etc.) where internal, external, and impersonal forms may appear. Within this motivation, a learner is intrinsically motivated when he or she voluntarily participates in an activity for the mere interest, pleasure and personal satisfaction obtained by practicing it (Méndez-Giménez, et al., 2015a). However, in this research, it is pointed out that the student can be extrinsically motivated whenever participation in an activity is determined by external rewards or agents. In this sense, a student can perform an activity because it is part of his or her lifestyle (integrated regulation), knows the benefits and the importance it has in the overall development of the person (identified regulation), wants to feel good and avoid feelings of guilt or anxiety (introjected regulation) or wants to get an external reward or avoid punishment by the school institution (external regulation).

Motivation is a dynamic process that accounts for the interaction and filtering of the information by the student and the effect it has on the student's behavior. The perception of competence, an embedded motivational theory, postulates that the influence of precious experience and the received information from external sources affects the student's behavior. Attitude is also a multifaceted construct that can be defined from different dimen-

sional viewpoints (Scrabis-Fletcher & Silverman, 2017). In this regard, some specific factors have been identified in this manuscript as determinants of student attitude, including teacher, curriculum, and context.

In turn, depending on the subjective well-being of the student in each motor task, a classification of positive and negative affect can be generated, where positive emotions are understood as favorable and negative emotions as unfavorable for such well-being (Redorta, et al., 2006); an aspect that would explain the absence of a relationship between the dimensions of perceived motor competence and the affective domain in elementary school students. For example, motor interaction and the sociocultural context where it takes place are aspects that determine the type of motor play, providing specific characteristics that differentiate it in the Physical Education class (Gil-Madrona, et al., 2020a). These characteristics of motor play can be a differentiating element in the affective domain. Specifically, this study, like ours in terms of methodology, concluded that the type of sociomotor games with sociocultural content allows students to develop social skills in a positive learning environment. Therefore, they suggest that the affective dimension has to be incorporated in the analysis of pedagogical practices in order to favor an integral education that considers the human being as a being who is sensitive to his or her environment and who is moved during the activities developed in the sessions.

Although both constructs are socio-cognitive in nature, they are not correlated as previously believed (Scrabis-Fletcher & Silverman, 2017). Low correlations between the models suggest that the two constructs should be measured independently of each other and that one should not be used to predict the other. Attitude and perceived motor competence are two distinct socio-cognitive constructs that share similar characteristics and factors, as reported here, function independently of each other.

Another of the findings obtained in this research was a model that explained the perceived motor competence in 23.7% with the total dimension of self-perfectionism and weight status. Three different profiles were detected and differentiated, called high self-perfectionism, medium self-perfectionism and low self-perfectionism; these groups in turn showed an analogy in perceived motor competence, high, medium and low, a result also obtained in the regression analysis.

One study points out that self-demand positively predicts achievement goals, while external pressure predicts, negatively, approach-mastery goals and, positively and directly, controlled motivation and demotivation (Méndez-Giménez, et al., 2015b). The latter was also mediated by approach-mastery goals. Likewise, approach goals positively predicted autonomous motivation and performance goals positively predicted controlled motivation. The expected patterns of achievement goals were confirmed, and the different implications of perfectionism were discussed too. However, another study, after analyzing the influence of the dimensions of anger expression and perfectionism on self-evaluation, the pillars on which personality is built, revealed how the different dimensions of maladaptive perfectionism were related to a lower self-evaluation; contrary to what was found with different dimensions of adaptative perfectionism (Villena, et al., 2016). The trait anger dimension correlates inversely with self-evaluation. In addition, the indicators of adaptive perfectionism—Organization and Personal Standards—are significantly associated with a higher perception of self-evaluation of the players; in contrast to what happens with those who present maladaptive perfectionist tendencies. In this regard, they point out that the evaluation of this type of variable in the educational environment allows the design of health prevention programs and/or stimulation of adaptive behaviors for team sports.

Luna et al. (2019) carried out research whose objective was to evaluate the impact of a pilot physical-sports education program on the subjective well-being of teenagers (health-related quality of life, positive and negative affect), emotional intelligence traits and social anxiety. This program was based on a pedagogical model of sports education within a framework of quality physical education, and it was approached from the perspective of social and emotional learning. The results of the research revealed that the physical-sports pilot program promoted significant improvements in a specific indicator of subjective well-being and emotional intelligence trait in the experimental group. These findings support the pedagogical efficiency of the program with respect to the program's objective. The findings also highlighted the feasibility and appropriateness of the program in terms of an innovative didactical proposal.

The results obtained in the other study (Johnson, 2019) show how students perceived negative and positive emotions regarding their subjective well-being before and after practicing sports activities. These emotions were mainly attributed to factors such as the level of preference for the task, the perceived motor competence, previous sports experiences, and classroom organization. The study also identified similarities and divergences according to the type of motor task, gender, and school. The teachers were also able to perceive positive and negative emotions for the subjective well-being of the students. In a broad sense, it is concluded that emotions around a sports didactical unit have been associated with psychological, didactical, motor, environmental, moral, ethical and cultural aspects

and have been identified according to the type of motor task, gender and educational center.

With respect to the findings obtained according to gender, differences were only found in the dimension of perceived motor competence of peers and also in personal experience, with higher scores in the males than in the females. These results show similarities to another study (Méndez-Giménez, et al., 2015a), which showed that girls had a lower perception of competence than boys. However, it is important to highlight that these differences depend on the motor task. That is, girls perceived a higher self-determined motivation, fun and cognitive attitude in acrosport and boys showed higher values in the motivational variables in the football contents compared to the acrosport contents. On the contrary, girls scored higher in the motivational variables in acrosport compared to the other two cooperative-oppositional collective sports contents. Therefore, this study proposes guidelines to reorient the teaching-learning process in these didactical units through the development and implementation of specific strategies that allow influencing the motivational processes according to gender.

In this sense, motor interaction is a key aspect which determines the type of socio-motor game, providing specific features that differentiate this kind of game from any other type of didactical resource used during physical education lessons (Espi, et al., 2019). The main results of this research indicate that during cooperation games a lower positive affect is perceived than in cooperation-opposition games. It is concluded that positive affection predominates in both socio-motor games, so it is an ideal content to build a great learning atmosphere. According to sex, it is concluded that women perceive more positive affect than men in the cooperation-opposition games and less in the non-opposition cooperation games. As for negative affection, in both games, men perceive it more than women. Another study (Méndez-Giménez, et al., 2018) found that males scored higher on approach-task, approach-other, and avoidance-other goals. Approach-task and approach-friendship goals were the main positive predictors of positive affect.

Regarding weight, the results obtained considering weight showed differences in the motor competence dimension perceived by the peers in relation to weight, being lower in the overweight group. On the other hand, age was only related to personal experience, being higher the older the age. Another study (Sanmartín, et al., 2018), that analyzed the relationship between affect and its different theoretical categories: positive and negative affect and the different dimensions of social functioning (school performance, family relationships, relationships with peers and household tasks), found that high levels on all dimensions of social functioning also reported significantly higher levels of positive affect than their peers who reported low levels; conversely, students who reported high levels of social functioning reported significantly lower levels of negative affect than their peers who reported low levels. Similarly, logistic regression analyses showed that an increase in positive affect increased the likelihood of high levels of social functioning and that an increase in negative affect decreased the likelihood of presenting high-level dimensions of social functioning, except for school performance.

In this sense, following the model of González-Arratia, et al., (2017), a direct and significant effect of the negative affect on the positive aspect and resilience is suggested but also a significant indirect effect of self-evaluation on resilience, which supports the main hypothesis. Further specification of the model in a diversified sample is required for the analysis of possible differences in gender and age.

It is important to highlight that the findings of this research must be interpreted carefully because of the methodological limitations derived from its transversal nature (it is not possible to establish causality relationships), the sample size as well as the application of self-reporting questionnaires, generating biases of evaluation.

However, despite these results are the result of external validity and are not generalizable, they can be used as indications to be taken into account in intervention and longitudinal programs to corroborate whether an intervention program aimed at improving perceived motor competence can improve perfectionism and affective mastery in primary school children; these being located in a transcendental period in the life cycle of the person, where the formation of the personality and the acquisition of healthy life habits begin.

Due to the obtained results, these are the main conclusions obtained from this research: there is a positive correlation between all dimensions of perceived motor competence and self-improvement; regarding their genre; male subjects obtained higher values of motor competence and self-improvement perceived by their mates and in personal experience. Considering the weight status, a lower perceived motor competence was found in the overweight group; the older the age, the higher the personal experience; and 23.7% of the perceived motor competence was explained by the total dimension of self-improvement and weight status. These results acquire importance since they extend the relationship between perceived motor competence and self-improvement in elementary school children, which is potentially of interest in the fields of education and psychology.

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