

Impact of verbal and non-verbal communication in educational settings on perception of importance of physical education in adolescence

Impacto de la comunicación verbal y no verbal en el entorno educativo sobre la percepción de la importancia de la educación física en la adolescencia

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Abstract. Background: Physical Education (PE) is a fundamental subject in the school curriculum, which promotes the physical and social development of students by promoting healthy habits. Positive experiences in PE enables them to overcome challenges, learn to deal with frustration and develop a positive body image. These competences are fundamental for the development of personal well-being and social relations in children and adolescents. However, the perception of their importance may vary significantly among students, influenced by different factors, including classroom communication. Objectives: To analyse the influence of teachers' verbal and non-verbal communication in the classroom on pupils' perception of the importance of PE. Methods: Spearman's Rho correlation test was performed to analyse the relationship between the relevance assigned to PE and the Physical Education Communication Scale (ECEP) in 960 adolescents. And the predictive model with a linear regression analysis to identify the variables that could predict the importance of PE.; Results: A positive and significant correlation is found between verbal and non-verbal communication and the importance of PE ($\rho=0.215$, $p<0.001$; ($\rho=0.323$, $p<0.001$), the higher the perception of communication in PE classes, the greater the importance attributed to PE.; Model 1 explained 15% of the variance ($R^2 = 0.15$) in the importance of PE, showing that non-verbal communication, gender and age are significant variables. Conclusions: Understanding these relationships can contribute to improve teaching practices and promote a more valued and appreciated PE among adolescents, in order to develop not only physical skills but also positive attitudes and habits towards an active and healthy lifestyle.

Keywords: communication; physical education; school; emotional competencies; teacher role

Resumen. Antecedentes: La Educación Física (EF) es una asignatura fundamental en el currículo escolar, que promueve el desarrollo físico y social de los alumnos fomentando hábitos saludables. Las experiencias positivas en Educación Física les permiten superar retos, aprender a lidiar con la frustración y desarrollar una imagen corporal positiva. Estas competencias son fundamentales para el desarrollo del bienestar personal y las relaciones sociales en niños y adolescentes. Sin embargo, la percepción de su importancia puede variar significativamente entre los alumnos, influida por diferentes factores, entre ellos la comunicación en el aula. Objetivos: Analizar la influencia de la comunicación verbal y no verbal de los profesores en el aula sobre la percepción de los alumnos de la importancia de la educación física. Métodos: Se realizó la prueba de correlación Rho de Spearman para analizar la relación entre la relevancia asignada a la EF y la Escala de Comunicación en Educación Física (ECEP) en 960 adolescentes. Y el modelo predictivo con un análisis de regresión lineal para identificar las variables que podrían predecir la importancia de la EF.; Resultados: Se encuentra una correlación positiva y significativa entre la comunicación verbal y no verbal y la importancia de la EF ($\rho=0,215$, $p<0,001$; ($\rho=0,323$, $p<0,001$), cuanto mayor es la percepción de la comunicación en las clases de EF, mayor es la importancia atribuida a la EF.; El modelo 1 explicó el 15% de la varianza ($R^2 = 0,15$) en la importancia de la EF, mostrando que la comunicación no verbal, el género y la edad son variables significativas. Conclusiones: La comprensión de estas relaciones puede contribuir a mejorar las prácticas docentes y promover una EF más valorada y apreciada entre los adolescentes, con el fin de desarrollar no sólo habilidades físicas, sino también actitudes y hábitos positivos hacia un estilo de vida activo y saludable.

Palabras clave: comunicación; educación física; escuela; competencias emocionales; rol docente

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Introduction

Adolescence is a crucial stage in human development that is characterised by physical, emotional, cognitive and social changes (Steinberg, 2014). On the physical level, the body undergoes significant growth and hormonal changes that can affect physical development and self-image (Steinberg, 2014). On the cognitive level, adolescents begin to explore their identity, develop greater autonomy and handle a wider range of emotions, which can lead to conflicts with parents and authority figures (Erikson Erik H., 1950). Socially, relationships with peers become more important, and the peer group plays a crucial role in personality formation and decision-making (Yates & Youniss, 2010). Together, these changes are essential for an individual's holistic development and preparation for adulthood (Arnett, 2001; Lerner & Steinberg, 2009; Steinberg, 2014). The practice

of Physical Activity (PA) at this stage not only promotes physical health, but can also contribute to the formation of long-term healthy habits (van Sluijs et al., 2021). However, more than 80% of adolescents worldwide do not practice enough PA despite the multiple physical, psychological and emotional benefits of daily PA practice (Halladay et al., 2024). Physical education (PE) classes in primary and especially secondary schools have been identified as an ideal environment to promote PA and recreational activities that encourage healthy leisure habits (Hagger et al., 2010), with the PE teacher playing a fundamental role in the development of positive attitudes towards the practice of PA among students. In this sense, it is necessary to create a climate in the classroom that generates a series of experiences that promote competition, fun, self-awareness, internal motivation and transfer (Deci & Ryan, 2008). Physical education is a fundamental subject in the

school curriculum that promotes the physical and social development of pupils (Piaget & Inhelder, 1997). Furthermore, WHO (World Health Organization, 2018) highlights the importance of PA for health promotion and disease prevention. Several research studies (Pate et al., 2019; Telama et al., 2005) have shown that regular PA practice in childhood and adolescence contributes to better health in adulthood, highlighting the role of PE as a promoter of healthy habits. Other authors, such as Goodway and collaborators (Goodway et al., 2019), highlight that PE is crucial for the development of motor skills, which are fundamental not only for sport, but also for various activities of daily living. These skills enable children and adolescents to function successfully in different contexts (Goodway et al., 2019). Furthermore, PA also plays an important role in the development of emotional competencies in the child and adolescent population, as the practice of PA contributes to building self-confidence and self-esteem, as well as improving empathy and stress management (Biddle et al., 2018). Positive experiences of PA enable students to overcome challenges, learn to manage frustration and develop a positive body image (Bernate, 2021). These competences are fundamental to the development of personal well-being and social relationships in children and young people (Cherland, 2004).

However, students' perceptions of their importance can vary considerably and are influenced by a number of factors, including classroom communication. Verbal and non-verbal communication in PE plays a crucial role in the teaching-learning process, as it facilitates interaction between teachers and students, as well as the understanding of sport concepts and techniques (Celdrán Rodríguez et al., 2016). Verbal communication includes the use of words and specific technical language, while nonverbal communication encompasses gestures, facial expressions and postures that complement and reinforce the message (Celdrán Rodríguez et al., 2016). According to Gutiérrez and collaborators (2019), the effective combination of these types of communication improves students' motivation and performance in physical activities. For example, a coach can use a motivating and clear tone of voice when explaining a new game strategy (verbal communication), while using expressive gestures to indicate the correct movements (nonverbal communication) (Gutiérrez et al., 2019). Recent studies, such as Garduño Durán and collaborators (2023), highlight that attention to nonverbal communication can help create a more inclusive and participatory environment, favouring group cohesion and the development of social skills in students. On the other hand, it is also worth mentioning the social learning model proposed by Bandura (1997), also known as observational learning, argues that people learn not only through direct experience but also by observing the actions of others and the consequences of those actions. For example, by watching a partner perform a movement in a particular sport, a student may internalise that technique and try to imitate it, this is particularly relevant in sports and activities where technique plays a crucial role

(Bandura, 1997). Another example related to the consequences of observed actions is that if a student observes a peer receiving praise for a good PA performance, he or she is likely to be motivated to put more effort into his or her own skills in the hope of receiving similar reinforcement. This theory highlights how observation and social interaction are fundamental components of PE, influencing not only the learning of skills, but also the formation of attitudes and beliefs that can last a lifetime (Bandura, 1977). This highlights the importance of creating rich and collaborative learning environments in educational settings (Bandura, 1977).

In this sense, a study published by Rosales Paneque (2011) highlights how effective communication between educators and students can change attitudes towards PA, suggesting that the way PE is presented and discussed could directly influence its perception among adolescents. In addition to its function of promoting physical activity and health, PE has a significant impact on developing social skills and fostering values such as teamwork, respect and empathy (Martínez & Bujosa, 2014). On the other hand, there is also the publication by Ruiz-Dodobara (2005), which highlights the importance of communication in educational settings, stating that teachers who use motivational and supportive discourse can increase their students' self-efficacy, which in turn is linked to a higher valuation of PE and PA in general. This suggests that the communication methods used in the PE classroom not only determine students' active participation, but also their general perception of the importance of this area of knowledge (Martínez & Amezcua, 2022).

The present study aims to analyse the influence of verbal and non-verbal communication in physical education on the perception of its importance among students in the first cycle of compulsory secondary education (CSE) in a specific region of Spain. Through quantitative and qualitative research, we seek to identify the ways in which teachers communicate the aims and benefits of physical education, as well as students' reactions to and perceptions of this subject. The relevance of this analysis lies in the fact that understanding these relationships can contribute to improving teaching practices and promoting a more valued and appreciated physical education among young people, in order to develop not only physical skills but also positive attitudes towards an active and healthy lifestyle. It can be hypothesised that effective communication by teachers in the physical education classroom increases the positive perception of the importance of physical education among lower secondary students, which in turn promotes more positive attitudes towards an active and healthy lifestyle.

Materials y Methods

Participants

The sample of the present study was selected following a non-probability sampling method based on convenience sampling (Salkind, 1999). The sample consisted of a total of

960 CSE students from different schools. Of the total number of participants, 44.8% were boys and 55.2% girls. The distribution by grade was as follows: 53.1% in the first year of CSE, 45.3% in the second year of CSE and 1.6% in the third year of CSE. Regarding the location of the schools, 48% of the students attended schools in rural areas, while 52% came from urban schools. The mean age of the participants was 12.85 years ($SD = 0.69$), with an average weight of 48.36 kg ($SD = 9.88$), an average height of 1.58 metres ($SD = 0.18$), and an average body mass index (BMI) of 19.06 ($SD = 3.41$).

Inclusion criteria were: participants had to have duly signed parental informed consent and study the subject of PE in the first cycle of CSE.

Table 1.
Shows the socio-demographic characterisation of the sample.

Variable	Categories	N	%
Sex	Boy	430	44.8
	Girl	530	55.2
Grade	1° CSE	510	53.1
	2° CSE	435	45.3
	3° CSE	15	1.6
School location	Rural	347	48
	Urban	376	52
Variable		M	SD
Age		12.85	0.69
Weight		48.36	9.88
Hight		1.58	0.18
BMI (Body Mass Index)		19.06	3.41

Table 1. Characterisation of the sample (N=960).

N: number; %: percentage; SD: standard deviation; M: Mean.

Procedure

Using the directory of public schools in Extremadura, provided by the Ministry of Education and Employment of the Regional Government of Extremadura, contact details were collected for those schools offering Compulsory Secondary Education (12-16 years).

An e-mail was sent to the selected schools, addressed to the PE teachers, explaining the purpose of the study, including a model of the measurement instrument and the informed consent form for parents. Teachers interested in participating were asked to make an appointment, via email, so that a member of the research team could come to the school and administer the questionnaires to the PE students, provided that informed consent had been previously collected from the parents or guardians.

On the agreed date, a researcher went to the school and, after verifying that the parents or guardians of the participants present in the PE class had signed the informed consent form, handed a tablet to each student with a link to the questionnaire developed in Google Forms. First, the height and weight of the participants were assessed using the tanita stadiometer and the Tanita bioimpedance meter and each participant was given their results to include in the questions in the questionnaire. Each item was then read aloud by the researcher to ensure that all participants understood the instrument. A digital questionnaire was chosen to facilitate the storage of all responses in a single database, as well as to save time and resources. The average time to complete

the questionnaire was 10 minutes. All data were collected anonymously between January and May 2024.

Instruments

Sociodemographic questionnaire: In order to collect the sociodemographic data of the sample, a questionnaire was drawn up with three sociodemographic questions relating to the sex, grade, height, weight and age of the participants.

Biometric measurements: Height was measured using a stadiometer (Tanita Tantois, Tanita Corporation, Tokyo, Japan). The device was placed on a vertical surface so that the measuring scale was perpendicular to the ground. The participants stood with their shoulders level and arms relaxed along the body. Measurements were taken in centimetres, accurate to the nearest millimetre. Body weight was assessed using a bioimpedance meter (Tanita MC-780 MA, Tanita Corporation, Tokyo, Japan). The assessment was performed in 'standard mode' by entering the participant's age, sex and height. Body weight was recorded in kilograms, to the nearest 100 grams. From these two measurements, body mass index (BMI) was determined using the equation $BMI = \text{body weight} / \text{height}^2$.

Physical Education Communication Scale (ECEP). The ECEP questionnaire (Moreno Murcia et al., 2012) was used to assess the verbal and non-verbal communication used by PE teachers when transmitting information to students. This questionnaire, introduced by the sentence 'The teacher in PE classes...', consists of 9 items in total: four of them focus on the verbal communication factor (e.g. 'Explained briefly and concisely'), while the other five focus on non-verbal communication (e.g. 'Positioned correctly so that everyone can hear and see'). Participants responded to each item using a Likert scale from 1 (never) to 5 (always). According to the authors, Cronbach's alpha coefficient values for this instrument were 0.69 for verbal communication and 0.74 for non-verbal communication.

Scale for assessing the importance of Physical Education: In order to analyse the self-perception of the importance of PE, the instrument developed by Murcia and collaborators (Murcia et al., 2009) was used. The questionnaire consists of three items aimed at finding out the self-determined motivation and importance of physical education and the responses use a likert scale 1-4 with 1 being totally disagree and 4 being totally agree. Regarding the psychometric properties, the authors reported that this one-factor instrument should be considered reliable and reported a Cronbach's alpha value of 0.75.

Statistical analysis

For the analysis of the data, the statistical software SPSS in its version 24 available for Mac was used, ensuring the confidentiality of the information at all times. The Kolmogorov-Smirnov test was applied in order to verify whether the data followed a normal distribution. The results of this test showed that the assumption of normality was not met, which led to the use of Spearman's Rho correlation test to analyse the relationship between the relevance assigned to

PE and the Physical Education Communication Scale (ECEP). The correlation coefficients obtained were interpreted following the criteria of Mondragón Barrera (2014): a low correlation was classified between 0.01 and 0.10, moderate between 0.11 and 0.50, considerable between 0.51 and 0.75, very high between 0.76 and 0.90, and perfect between 0.91 and 1.00.

The internal consistency of the scales used was also evaluated by calculating Cronbach's alpha, interpreting the results according to the criteria established by Nunnally and Bernstein (1994): a value of less than 0.70 is considered low, from 0.71 to 0.90 is satisfactory, and above 0.91 indicates excellent consistency.

Finally, a linear regression analysis was carried out to identify the variables that could predict the importance of PE, taking into account factors such as non-verbal communication, gender and age of the students. This analysis made it possible to determine the relative impact of each of these variables on the perceived relevance of PE, providing a complete picture of the predictive model.

Results

Table 2 shows the correlations between the dimensions of the PE Communication Scale (verbal and non-verbal) and the PE Importance Scale, differentiated by gender. A positive and significant correlation is found between verbal communication and the importance of PE in the total sample ($\rho = 0.215$, $p < 0.001$), as well as for males ($\rho = 0.279$, $p < 0.001$) and females ($\rho = 0.204$, $p < 0.001$). Non-verbal communication also showed a positive and significant correlation in the total sample ($\rho = 0.323$, $p < 0.001$), being stronger in men ($\rho = 0.400$, $p = 0.001$) and in women ($\rho = 0.295$, $p < 0.001$).

Table 2.

Correlation between the dimensions of the ECEF and the evaluation of the importance of Physical Education.

Dimensions	Scale of importance of Physical Education	Scale of importance of Physical Education ρ (p)	
		Boy	Girl
Verbal Communication	0.215 (<0.001)	0.279 (<0.001)	0.204 (<0.001)
Non-verbal communication	0.323 (<0.001)	0.400 (0.001)	0.295 (<0.001)

Correlation is significant at $p < 0.001$.

A linear regression analysis was conducted to identify predictor variables for the importance attributed to PE among students. Model 1 explained 15% of the variance ($R^2 = 0.15$) in the importance of PE, showing that non-verbal communication, gender and age are significant variables. The regression equation derived from the model is as follows: Importance of PE = $1.412 + 0.219 \times \text{Non-verbal communication} - 0.248 \times \text{Sex} + 0.134 \times \text{Age}$.

As for the individual variables, non-verbal communication proved to be a significant positive predictor ($\beta = 0.219$, $SE = 0.029$, $t = 7.565$, $p < 0.001$), indicating that a higher perception of non-verbal communication in PE

classes is associated with a higher importance attributed to this subject.

On the other hand, gender showed a significant negative effect ($\beta = -0.248$, $SE = 0.032$, $t = -7.766$, $p < 0.001$), suggesting that, on average, girls tend to attach less importance to PE compared to boys.

Finally, age was also a significant positive predictor ($\beta = 0.134$, $SE = 0.024$, $t = 5.570$, $p < 0.001$), implying that as students advance in age, they tend to value the importance of PE more.

Table 4.

Prediction model for the importance of physical education.

Variable	Model 1 ($R^2 = 0.15$)				
	β	β standardised	SE	t	p
Non verbal Communication	0.219	0.254	0.029	7.565	<0.001
Sex	-0.248	-0.223	0.032	-7.766	<0.001
Age	0.134	0.131	0.024	5.570	<0.001
Constant	1.412		0.310	4.546	<0.001

Finally, the reliability results were satisfactory for the verbal communication dimension (0.753), for non-verbal communication (0.800) and for the importance of Physical Education scale (0.729), in agreement with Nunnally and Bernstein (1994).

Discussion

The aim of the present study is to analyse the influence of both verbal and non-verbal communication in the PE classroom on the perception of its importance among students in the first cycle of CSE in a specific region of Spain. The main results obtained indicate that both verbal and non-verbal communication show a positive and significant correlation with the importance of PE, this relationship being more accentuated in non-verbal communication. With respect to the importance attributed to PE lessons, the variables of non-verbal communication, gender and age showed significant results, with boys being more important than girls.

With regard to verbal communication, as mentioned above, a positive and significant relationship was found in both men and women. In this regard, it is worth mentioning the publication by Charlina and collaborators (2024) which highlights that the promotion of verbal communication was shown to improve the skills of adolescents in sports games, showing a positive correlation as well as the study presented. Attention-grabbing and motivational verbal instructions can trigger better physiological responses, such as increased heart rate and blood flow, which in turn can improve students' fitness and performance (Charlina et al., 2024). Another study, published by Tasita and collaborators (2024), indicates that the use of good verbal communication can encourage students' active participation in learning and improve communication between teachers and students in PE learning, also coinciding with the results obtained in this research. Verbal encouragement given by a

coach or teacher not only helps to understand instructions, but also increases students' motivation (Tasita et al., 2024). Pacholek and Zemková (2022) concluded that verbal communication encouragement is effective for sports skills tests, and external motivation has a positive impact on the results of physical fitness tests, emphasising the role of verbal communication. The results of the mentioned publications show agreement with the results obtained in this research, this is because it has been shown in all of them that verbal communication improves the relationship between teacher and student, as well as the participation of all of them in the subject of PE, also increasing motivation (Charlina et al., 2024; Pacholek & Zemková, 2022).

As for non-verbal communication, this study shows an even more significant relationship compared to verbal communication. As in this publication, several authors agree that non-verbal communication will make sport activity more effective, as it emphasises verbal language, allows the expression of feelings and emotions, substitutes words, guides the way in which the verbal message should be interpreted, contradicts verbal communication, regulates communication and facial expression, achieving better results in terms of satisfaction with the subject of PE than verbal communication (Argyle, 2013; Macias et al., 2019). Moreover, PE practice is influenced by non-verbal communication, which plays a crucial role in interpersonal relationships and in the learning process (Macias et al., 2019). This form of communication impacts on the qualities and attitudes that facilitate the acquisition of sport skills, promoting an empathetic attitude between the teacher and their students, fostering values such as solidarity and companionship, and contributing to better sporting results, compared to verbal communication (Macias et al., 2019). In this sense, it is worth highlighting the research by Herguedas and collaborators (Herguedas et al., 2020) that obtains a significant benefit in the smile, which offers a disposition towards immediate, positive and friendly interaction, facilitates the communicative farewell by offering the last image of interaction, expressing the will to close the communicative process but not the relationship. There is also the sincere or serene look towards each student, when this connection is achieved, it reflects the possibility and availability to establish a dialogue and the friendly attitude for the exchange, activating the cortical system of gratification which leads to an increase in motivation (Cestero, 2014). It is important to pay attention to the gestures that regulate the flow of conversation, as well as the smile and gaze used with each student, rather than addressing only the group in general (Roldán Jiménez et al., 2013). Finally, it is worth highlighting the publication by Blázquez Sanchez (2013) who considers it essential not to neglect these communication protocols, since students perceive what the teacher expresses not only through words, but also through their body language as a whole, giving more importance to non-verbal communication than to verbal communication.

With regard to the importance that students attribute to the subject of PE, as detected in this study, gender and age

are also significant variables in other studies. In this sense, we find the publication by Ballesta and Vernetta (2022), which detected a reduction in the ratings of satisfaction and importance towards the subject, with an increase in boredom as the course progresses, especially on reaching the baccalaureate, which may be due to the optional nature of the subject. Another option may be the lack of PA in extra-curricular timetables and the lack of time as students advance in age, leading to less motivation for PA and therefore for PE (Lluna-Ruiz et al., 2020; Moreno Murcia et al., 2008). With respect to gender, the study by Ballesta and Vernetta (2022) also found greater adherence and greater appreciation of the subject by boys, with girls being less interested in the pursuit of performance, coinciding with the results obtained in this research. Ballesta and Vernetta (2022) concluded that having a high degree of satisfaction with the subject leads to it being assigned greater importance and that the greater the one factor, the greater the other. In addition, it was also shown that those students who do a sport or PA outside the classroom are more satisfied with the subject (Ferriz Morell et al., 2015). On the other hand, we also find the study by Lluna-Ruiz and collaborators (2020) which highlights that with respect to age, students in the first cycle feel more supported by their parents, followed by their siblings and the PE teacher. In contrast, for students in the second cycle, this influence varies and they are more dependent on their brothers and sisters rather than other social agents (Lluna-Ruiz et al., 2020). Other research suggests that girls tend to show more positive attitudes towards school in general than boys, while boys are more likely to have a more favourable attitude towards PE lessons (Ramos-Jiménez et al., 2010).

The family seems to play a key role in influencing PA practice in children and adolescents (Ornelas et al., 2007). However, it is important to recognise that each family context may have different mechanisms that affect PA habits (Soubhi et al., 2004). Among the various agents influencing students, parents seem to be the most significant in promoting their children's participation in PA, especially in the youth population (Hohepa et al., 2007). Expectations are a key aspect (Eccles & Harold, 1991); thus, family members' perceptions of their children's abilities are an important predictor of children's self-efficacy. This highlights the relevance of their role in this context (Eccles & Harold, 1991).

This research has demonstrated the relevance of verbal and non-verbal communication in the perception of importance in the subject of PE in lower secondary school students. Therefore, all interventions and programmes proposed in the school context should consider these findings in order to improve this component. In this sense, using attention-grabbing and motivating verbal instructions, offering a smile, inviting a willingness towards immediate, positive and friendly interaction as well as a look towards each student, reflecting the possibility and availability to establish a dialogue, also offering individuality and adapting to the characteristics of the group, promotes an increase in the importance of the subject of PE on the part of the students,

achieving at the same time a greater motivation to practise PE. Interventions should also pay special attention to other factors, such as weight, gender and age, as they have an important influence on the perception of the importance of PE.

Regarding the limitations of the study, it is important to take into account that more girls than boys participate, so it is necessary to keep in mind that the results may vary significantly depending on gender. It would be interesting to carry out the same or a similar intervention with adolescents belonging to the second cycle of CSE, in order to observe differences and similarities that arise and to be able to carry out interventions that improve both verbal and non-verbal communication, as well as the importance assigned to the subject of PE, depending on the context in which it is carried out. It is worth mentioning that the results of this study should be interpreted with caution.

Conclusions

The finds indicate that both verbal and non-verbal communication in PE classes are significantly related to students' perception of the importance of this subject, with this relationship being more pronounced in males for non-verbal communication. Based on the results of the present study, it may seem interesting to investigate how this communication affects or varies according to the age of the students, in order to be able, in this way, to investigate the aforementioned variables further according to the group in which we find ourselves and thus increase the perception of importance towards the subject of PE by male and female students.

Author Contributions

Conceptualization, María José García-Guillén and Carmen Galán-Arroyo; Data curation, Jorge Rojo-Ramos; Formal analysis, Antonio Castillo-Paredes; Investigation, María José García-Guillén, Antonio Castillo-Paredes and Carmen Galán-Arroyo; Methodology, Jorge Rojo-Ramos and Antonio Castillo-Paredes; Software, Jorge Rojo-Ramos; Supervision, Carmen Galán-Arroyo; Visualization, Antonio Castillo-Paredes and Carmen Galán-Arroyo; Writing – original draft, Jorge Rojo-Ramos, María José García-Guillén, Antonio Castillo-Paredes and Carmen Galán-Arroyo; Writing – review & editing, Jorge Rojo-Ramos, María José García-Guillén, Antonio Castillo-Paredes and Carmen Galán-Arroyo. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

The use of these data did not require approval from an accredited ethics committee, as they are not covered by data protection principles, i.e., they are non-identifiable,

anonymous data collected through an anonymous survey. In addition, based on Regulation (EU) 2016/679 of the European Parliament and of the Council on 27 April 2016 on the protection of individuals concerning the processing of personal data and on the free movement of such data (which entered into force on 25 May 2016 and has been compulsory since 25 May 2018), data protection principles do not need to be applied to anonymous information (i.e., information related to an identifiable natural person, nor to data of a subject that is not, or is no longer, identifiable). Consequently, the Regulation does not affect the processing of our information. Even for statistical or research purposes, its use does not require the approval of an accredited ethics committee.

Data Availability Statement

The datasets are available through the corresponding author upon reasonable request.

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Conflicts of Interest

The authors declare no conflicts of interest.

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