

Association between of Parental Socialization on Elementary Students' Physical Activity Levels in Murcia Region

Asociación entre la socialización parental y los niveles de actividad física de los alumnos de primaria en la Región de Murcia

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Abstract. In this quantitative study, we investigated how parenting styles affect the physical activity habits of Elementary School students in the Region of Murcia. Sedentarism is a growing problem in today's society, especially among children. Method. Two questionnaires were used under a quantitative approach, the IPAQ and the ESPA29, to collect data from 937 students from different educational centers in order to discover the reality in children's society and its relationship with physical activity. Results. Parental socialization styles affect the physical activity of students, and significant differences were found between democratic, neglectful, permissive, and authoritarian styles with physical activity. Conclusions. It is important to take into account parenting styles in promoting healthy physical activity habits in Elementary School students, and educational implications and new lines of research on this topic are suggested.

Keywords: Physical Activity; Parental Socialization Styles; Health; Education.

Resumen. En este estudio cuantitativo, investigamos cómo los estilos de crianza afectan los hábitos de actividad física de los estudiantes de primaria en la Región de Murcia. El sedentarismo es un problema creciente en la sociedad actual, especialmente entre los niños. Se utilizaron dos cuestionarios bajo un enfoque cuantitativo, el IPAQ y el ESPA29, para recopilar datos de 937 estudiantes de diferentes centros educativos con el fin de descubrir la realidad en la sociedad infantil y su relación con la actividad física. Los estilos de socialización parental afectan la actividad física de los estudiantes, y se encontraron diferencias significativas entre los estilos democrático, negligente, permisivo y autoritario en relación con la actividad física. Es importante tener en cuenta los estilos de crianza en la promoción de hábitos saludables de actividad física en los estudiantes de primaria, y se sugieren implicaciones educativas y nuevas líneas de investigación sobre este tema

Palabras clave: Actividad Física; Estilos de Socialización Parental; Salud; Educación.

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Introduction

In the last decade of research, it has been observed that studies on the issues existing in the child population in relation to parental education and physical activity have been increasing. As we can observe at the article of López-Serrano et al. (2020) where they try explaining the relationship between perceived family support for the kids who do physical activity. The population studied in this research is in Primary Education, being a group that is facing a crisis situation related to physical inactivity, as well as complicated family education. Azócar-Gallardo et al. (2022) show in your study that the pupil in Primary Education keeps physical inactivity to become a preoccupation situation for the health of children. Over the years, this problem has been growing and showing the prevalence of poor health. In addition, there has been an increase in student insecurity and abandonment both in terms of family education and in the practice of physical-sport activities, as the different studies show a decrease in physical activity. To the opposite, in the study of Molina-Elizalde et al. (2024) say that the family have an important role in the education of children and in the practice of physical activity, so they are the most important support to our children. In short, they are a generation that will have to face social, physiological, and psychological health problems throughout their personality development (Molina-Elizalde et al., 2024). Various studies have found that there are numerous

cases in childhood that suffer these personal and sports crises, how we can read in the study of López-Serrano et al. (2020). The purpose of this article is to contribute to the knowledge and offer solutions to the problem, supporting those who try to reverse the situation. Firstly, the article focuses on physical activity in school age. In this section, the problem of the limited physical activity performed by Primary Education students and the importance of maintaining regular levels of physical and sports activity are described. Secondly, it discusses parental education in school age, delving into the different styles of parental socialization received by Primary Education students. These styles are distinguished into four: negligent, permissive, democratic, and authoritarian.

Physical Activity in the Child Population

Sánchez (2018) shows in his study how the physical activity performed by Primary Education students is increasingly studied along with the styles of parental socialization received. As seen in the study by Mendo-Lázaro et al. (2017), school age is when physical, social, and psychological development occurs, where physical activity plays a crucial role. According to Cigarroa et al. (2016), at the end of the 20th century and the beginning of the 21st century, habits of physical inactivity have increased, relating to the rise in health problems, being a set of variables that distort the health of children and adults. The same author states that this is due to various causes; personal relationships,

motor functionality, metabolic, molecular, as well as hereditary factors. After a bibliographic study, it is considered how the practice of physical activity is necessary for the promotion of health in school age based on body satisfaction. Studies by Barrón-Luján et al. (2017) and Toselli & Spiga (2017) report a close relationship between physical activity and good health. Cocca et al. (2016) point out that adolescents have an insufficient level of physical-sport activity, which leads to health problems. Continuing in the same line of argument, González et al. (2016) show how university students who practice more physical activity develop better health, compared to those who do not practice physical activity. According to studies by Maureira et al., 2019; Pindus, et al., 2019), we are living in the last decades changes in habits and lifestyles in minors of school age, as they carry out sedentary routines without the minimum established physical exercise. Continuing with the drafted, Spanish adolescents perform less physical activity than recommended according to the study by Ramos et al. (2016).

According to Sevil et al. (2016), Physical Education is the most important and principal subject to promote an active lifestyle from educational centers, due to its idiosyncrasy it leads to educating and teaching healthy habits based on physical activity for health improvement. In addition, due to the current state of sedentarism, it can be seen in the study by Rosa et al. (2019) how Spain is considered one of the countries in Europe with the highest sedentarism, as well as a higher overweight among Primary Education students. There is evidence that low physical activity affects and causes significant deterioration in the physical functions of students (Pérez, 2014). According to Aguilera and Herrera (2013), physical inactivity can lead to spinal problems, anxiety, and depression. In addition, Lavielle-Sotomayor et al. (2014) cites obesity, coronary heart disease, and hypertension, among others, as diseases resulting from physical inactivity. Caamaño et al. (2015) adds tobacco, alcohol consumption, a disordered and hypercaloric diet, and emotional stress along with physical inactivity, as factors that aggravate the health situation. García et al. (2021) added to the research where they consider that health is related to the routine in physical activity, being associated with a lower presence of diseases such as musculoskeletal, for example.

The World Health Organization (WHO, 2014) considers that physical inactivity is one of the most important factors related to the risk of mortality in the world, placing physical inactivity as a prominent value when causing different respiratory, cardiac, and cancerous diseases, among others. Therefore, a routine with physical activity helps to maintain good health and physical and psychological well-being, according to Muros et al. (2017). Overweight and obesity is a state that is increasing among young people, showing the WHO (2017) that in 2016 there were 340 million school-aged children suffering from this nutritional state. In Spain, the ALADINO study (2015) specified that among 6 to 9-year-olds, 18.1% suffered from obesity and 23.2% from overweight. Kimiecik & Horn (2012) show

how overweight and obesity are related to the habits and routines of inactive lifestyles in students, and also demonstrate how an active lifestyle benefits physical, emotional, social, and psychological character, and that maintaining an active routine can sustain well-being throughout the stages of development and adulthood. Hyde et al. (2013) add to the research showing how personal well-being at any age is conditioned by physical activity. People who have a higher likelihood of physical or mental problems are those who engage in little physical activity, and their levels of satisfaction and emotional well-being are low compared to active people (Monshouwer et al., 2013). Samperio et al. (2016) add that physical activity, along with healthy habits, also contributes to having a positive body image. Educational centers are the first step in training so that students acquire basic knowledge in building a healthy lifestyle, with the use of healthy environments that show the importance of physical activity (Tornero-Quñones et al., 2015).

On one hand, Barrón et al. (2017) together with Toselli & Spiga (2017) show how physical activity and personal well-being in relation to health status were not decisive, however, in the study by Cocca et al. (2016) they refer to the scarce sports practice as a poor health status. Continuing along the same line of argument, González et al. (2016) show how young university students who do physical activity have a better perception of their health status, compared to those who do not do physical activity. On the other hand, Mendo-Lázaro et al. (2017) achieved similar results among Primary Education students, both those who did and did not engage in physical activity. The health status of Primary Education students, in the study by Sánchez-Urrea et al. (2021), is related to physical activity, with students who practice more sports having a better sense of well-being. In the research by Moral-García et al. (2020), benefits to health clearly related to the regular practice of physical activity are shown. According to Rosa-Guillamón et al. (2017), the adolescence stage is key to adopting healthy habits, as according to Aibar et al. (2015) it provides both physical and psychological benefits.

Parental Socialization

In the ongoing research, the aim is to analyze the relationship between educational practices and styles of parental socialization with the frequency and intensity of physical activity of Primary Education students. On one hand, Lecube et al. (2017) indicate that the adoption of healthy eating habits, parental behaviors, motivation, and competence of the educational community positively influence individual development. On the other hand, Franco-Arévalo et al. (2020) note that the intensity of physical activity increases in higher grade students, while the frequency decreases as they progress in school. For over a hundred years, the influence of parental upbringing on children's development in Primary Education has been researched, as parents' attitudes and behavior are considered crucial in a child's socioemotional process. One of the earliest studies dates back to the beginning of the 20th century when

Levy (1939) theorized in his book "Maternal Overprotection" about how either overprotective or dominant maternal behavior can affect a child's development. For decades, research has been conducted on the role of parents in their children's development. Symonds (1939) proposed that parental attitudes could be represented on a plane with "acceptance-rejection" and "domination-submission" coordinates. Baldwin (1948) described the effects of "democratic parents" and "controlling parents." However, Baumrind (1966, 1971, 1991) developed a more comprehensive and coherent vision of parental behaviors, identifying four styles of parental socialization based on two aspects of behavior: control and affection. These styles are authoritarian, permissive, negligent, and democratic, according to Baumrind's model, which is one of the most used today. According to García et al. (2019), there is a model that identifies parenting styles based on three dimensions: control, communication, and affective involvement. Within this model, three different parenting styles are identified. Continuing with the same author, firstly, the authoritarian style is characterized by being demanding, not very affective and communicative, and emphasizes order and obedience. Secondly, the democratic style is characterized by being demanding, affective, communicative, and emphasizes both clear standards and support. Lastly, the permissive style is more sensitive than demanding, and parents with this style allow the self-regulation of Primary Education students and do not emphasize authority as much. These parenting styles are important for understanding how parental attitudes influence a child's socioemotional development in Primary Education (García et al., 2019).

Lolín et al. (2020) detail the styles of parental socialization as democratic, which seeks rational control of the Primary Education student's behavior through open communication and explaining house rules; permissive, where parents accept and affirm the child's personality while trying to manage their impulses and actions without punishing them; authoritarian, which seeks to model and evaluate the child's behavior and attitudes according to socially desired standards, exercising high control and demanding maturity; and negligent, where there are low levels of involvement and demand, lack of structuring, control, and support in the student's behavior, delegating responsibilities to the school or relatives (Baumrind, 1971; Rollins & Thomas, 1979). According to research by Marlene-Malander (2016), De la luz Ortiz-Zavaleta and Moreno-Almazán (2016), and Pinquart (2016), there is a relationship between the parenting style used by parents with their children in Primary Education and their academic performance. Students who have parents who promote a democratic style perform better academically, as opposed to those who experience authoritarian, negligent, and permissive parental socialization styles, which are associated with worse academic and sports performance. Therefore, the increase in overweight and obesity at this school stage and its associated problems can be caused by various factors, including limited physical activity and, in this case, the styles of parental socialization analyzed

in this section in relation to the physical and mental problems of Primary Education students (De La Torre et al., 2016). Álvarez et al. (2017) demonstrated that habits of physical activity and behaviors related to healthy and active habits are learned at home and have a significant influence on the health status of Primary Education students, and that current socioeconomic changes have led entire families to have inadequate healthy habits. According to Lolín et al. (2020), today's society is characterized by high competitiveness where only the strongest, most strategic, or emotionally balanced can achieve success. This environment is especially concerning for Primary Education students, who face various risks such as learning criminal behaviors, peer pressure, bullying, and easy access to drugs and addictive substances, among others. Castejón and Navas (2011) explain that there are family factors that favor the onset of anxiety in Primary Education students, including parents' expectations, pressure for performance, excessive permissiveness, and shyness. Negative parenting characterized by lack of affection, family conflicts, overprotection, repulsion, lack of autonomy and control, excessive use of punishment, and lack of appropriate role models is also directly related to the development of anxiety problems in Primary Education students (Van der Sluis et al., 2015). In general, these family factors affect the emotional well-being of students and can hinder their academic and social performance. Poorly controlled and excessively controlled behavior are two types of problems that occur in Primary Education students, as stated by Torvisco (2019). The first includes aggression and hyperactivity, while the second includes anxiety and depression. Depending on how these problems are managed, they can lead to serious mental illnesses such as depression, alcohol use, abuse of psychotropic substances, and suicide. Currently, these problems are increasing worldwide, according to reports from the WHO (2015). It is important to consider the environment in which Primary Education students develop, as the type of parenting they receive has a direct influence on the development of anxiety and depression disorders. In fact, there are a number of parental practices that act as risk factors in the development of these problems, so it is crucial to pay attention to family dynamics and provide appropriate support to students to prevent these serious mental illnesses (Torvisco, 2019). On one hand, Osorio and González-Cámara (2016) have shown that a democratic style of education has positive effects on the behavior and emotions of Primary Education students. However, the permissive educational style has been related to internalization problems in children with difficulties in their school adaptation process (Mendez et al., 2014), as well as habits of physical inactivity of the students (Barton and Hirsch, 2016). On the other hand, the authoritarian educational style has been associated with externalization and internalization problems in Primary Education students (Rescorla et al., 2019), as well as a scarce affiliation with parental values. Laukkanen and Ojansuu (2014) found that feelings of insufficiency in the mother can lead her to use psychological control with Primary Education students,

typical of an authoritarian style, which can worsen the mental health and psychological well-being of children (Scharf et al., 2016). Finally, the negligent parental style can point to domestic violence and family breakdown, which can lead to mental health problems in parents (Crowell et al., 2010). In conclusion, the behavior of family members with Primary Education students can be responsible for the negative consequences they have on both the physical and psychological health of students (Aguilar-Yamuza, 2020). Background research on this topic indicates that the rigid discipline exerted by parents has significant effects on the problems presented by Primary Education students (Leathers et al., 2019; Porche et al., 2016). Additionally, internalizing behaviors also affect the performance of students at school and in their daily lives. Voltas et al. (2016) demonstrated that students suffering from depression and anxiety have a worse adaptation at home, school, in their physical activities, and in their relationships with peers. Wing et al. (2019) established that there is a relationship between parental socialization styles and the physical activity of children, which can be positive or negative depending on the educational style adopted by families. In line with this, Pelegrín et al. (2019) have confirmed in various scientific studies that there is a relationship between physical activity aimed at health and parental educational styles.

As can be observed, in the last decade there has been a significant increase in studies on the relationship between parental education and physical activity in the child population, especially in primary school age. Physical inactivity and poorly practiced family education are common problems in this population, leading to a higher prevalence of physical, social, and psychological health problems in children of this age. The lack of physical activity in children is a growing and alarming problem that requires attention. According to a study conducted by Sallis et al. (2016), primary school-age children are not engaging in enough physical and sports activity. This may be due to a lack of physical activity opportunities at school, home, and in the neighborhood, as well as increasing dependence on technology. Therefore, it is important to encourage regular physical activity in children to prevent childhood obesity and promote healthy habits in the future. Certainly, issues of physical inactivity and parental education are a growing concern in today's society, especially in relation to the child population. Additionally, following the systematic review by Sallis et al. (2016) on physical activity levels in children and adolescents worldwide, it concluded that only 20% of young people meet the World Health Organization (WHO) recommendations of 60 minutes daily of moderate to vigorous physical activity. Moreover, various studies have identified a relationship between the lack of physical activity and the increase in health problems in the child population. For example, a study by Janssen et al. (2016) found that children who do not meet physical activity recommendations have a higher risk of developing obesity, cardiovascular diseases, and mental health problems. Regarding the influence of parental education, a

study by Estévez-López et al. (2017) found a significant relationship between parental style and physical activity of school-age children. According to a study by Wing et al. (2016), parental socialization styles can have a positive or negative effect on children's participation in physical activity, depending on the educational style adopted by families. Parental education can be classified into four different styles: negligent, permissive, democratic, and authoritarian. According to a study by Barber et al. (2012), the negligent educational style is characterized by a lack of supervision and support, the permissive style by a lack of clear boundaries, the democratic style by open communication and support for the child's autonomy, and the authoritarian style by an imposition of norms and excessive control. The negligent and permissive styles are associated with less participation in physical activity, while the democratic and authoritarian styles are associated with greater participation in physical activity (Barber et al., 2012). Furthermore, in the study by Wing et al. (2016), parents who showed a democratic and authoritarian educational style had more physically active children, while parents with a negligent and permissive style had less physically active children.

Thus, the lack of physical activity and complicated parental education are common problems in the child population of school age in Primary Education. Studies show the importance of maintaining regular levels of physical activity and having a democratic or authoritarian educational style in parental education to encourage participation in physical activity. Consequently, it is important to develop strategies and programs to promote regular physical activity in children and improve parental education to support the health and well-being of children in their development.

Therefore, the scientific contribution of the present study is based on not only updating the knowledge about the association between parent socialization styles and physical activity levels of their children but also adding a new geographical context, so this study could be considered pioneer with this regard.

The main goal of this study is to analyse the relationship between parental socialization styles and physical activity during school age, and the hypothesis is that primary education students are influenced by the parental style they receive in the physical activity they engage in.

Methods

To explain the approach and design of this research, the work follows Hernández-Pina et al. (2015), who explain the steps taken during the development of the research and, following their considerations, the information provided is sufficiently broad and detailed for another researcher to base on it for a different context. In this case, the research is based on a positivist and quantitative approach (Thomas & Nelson, 2007), which implies the use of quantitative techniques to diagnose and solve a problem. The nature of the research design is non-experimental, meaning that it studies phenomena that have already occurred and where

variables cannot be controlled, that is, an ex-post facto design (Bisquerra, 2004). The study refers to a non-experimental quantitative research that aims to analyze and evaluate existing conditions, as well as examine relationships between different aspects without directly manipulating the variables worked with (Hernández et al., 2010). Furthermore, it is highlighted that this research focuses on a survey, which is a data collection technique in which a sample of participants is selected and questionnaires are applied (Hernández-Pina and Maquilón, 2010). These questionnaires contain questions that provide the necessary information to address the research problem (Hernández-Pina and Maquilón, 2010). Bevins (1999) points out that the objective of ex-post facto studies is to validate or refute the research hypothesis once the phenomenon has already occurred. That is, this type of study involves a "retrospective" search for the possible causes that have provoked the phenomenon. In this case, parental socialization styles and physical activity are investigated

Participants and Context

For the work of this study, the participation of 937 students, aged between 9 and 14 years ($9,80 \pm 0,76$), belonging to the fourth, fifth, and sixth grades of Primary Education, was counted on. The sample was selected from 12 schools, with 7 being public and the remaining 5 being private or semi-private and the inclusion criteria were: the age of the pupil had to be a range of 9 to 14 years old, they had to study in the fourth, fifth and sixth grades of Primary Education and they should study at a Primary Education school from the Region de Murcia. As exclusion criteria, those students who did not provide the parental consent did not eventually participated in the research.

The analysis of the statistical power of the sample revealed an 80% probability of detecting significant differences between groups with a confidence level of 95%, indicating that the sample had adequate statistical power for the study's objective. According to Hernández-Pina et al. (2015), a census sample was considered and invited to voluntarily participate in the research study. Table 1 can observe the sociodemographic characteristics of the participants.

Table 1.
Socio-demographic characteristics of the participant sample

Variable	Category	N (%)
Sex	Man	467 (49.84%)
	Woman	470 (50.16%)
Years	9	26 (2.77%)
	10	48 (5.12%)
	11	378 (40.35%)
	12	431 (46.01%)
	13	53 (5.65%)
	14	1 (0.10%)
Course	4.º	47 (5.02%)
	5.º	399 (42.58%)
	6.º	491 (52.40%)
Type of centre	Public	507 (54.10%)
	Concerted/Private	430 (45.90%)

The database was cleansed to verify and eliminate cases

with missing values based on the variables of interest. Despite this, no cases with missing values were found that would have affected the sample size. Once the characteristics of the participants and the context were presented, the section on Data Collection Instruments is developed.

Data Collection Instruments

- Parental socialization styles: the Parental Socialization Scale (ESPA 29) validated by Musitu and García (2001) was used, which consists of 29 items grouped into two factors (communication $-\alpha = .747$, and control $-\alpha = .718$) through situations of obedience and disobedience. The scale used is a Likert type with four response options, ranging from (1) *never*, (2) *occasionally*, (3) *many times* to (4) *always*, to measure the categories of perceived parental socialization styles: permissive, authoritarian, democratic, and negligent. This questionnaire has been previously used in studies by Martínez et al. (2019), García-Ponce and Gómez-Mármol (2021), and Huamán-Chura (2021).

- Physical activity: the 7-item short version of the IPAQ questionnaire, validated and translated into Spanish by Toloza and Gómez-Conesa (2007), was used, which has been used in previous studies with similar age samples. The questionnaire assesses the amount of physical activity performed weekly according to intensity (light, moderate, and intense), frequency (days a week), and duration. The response scale varies from 0 to 6 for the number of hours of physical activity per day and from 0 to 7 for the number of days a week in which physical activity is performed. The questionnaire includes questions like "During the last 7 days, on how many days did you do moderate physical activities such as carrying light weights or riding a bicycle at a regular speed? Do not include walking." This instrument has been used in previous research such as that of Martorell et al. (2020), Heredia and Cabriaes (2022), and Ramírez-Herrera et al. (2021).

Procedure

The different phases carried out in the development of the research are described. The first phase consisted of defining the research questions, objectives, and design. Subsequently, the ethics committee of the University of Murcia was consulted about the use of the questionnaires that would be used in the research and which had their prior ethical approval. Once the approval of the questionnaires was validated, all the Primary Education centers in the Region of Murcia were contacted by email to inform them about the theme of the study. After obtaining the approval of the educational centers for participation, a more detailed informed consent document describing the information of the study, including the questionnaires to be used and the subsequent analysis of the collected data was sent. An informed consent document for families was also provided to ensure the full participation of the students. The next phase of the procedure consists of administering the questionnaires by the teachers of each course, with the collaboration of the researcher in some cases. The questionnaires are filled out

in paper format during school hours, in an appropriate environment that guarantees privacy and concentration, without external pressures, and respecting the anonymity of the participants. It is ensured that all items of the questionnaire are answered and the duration of the administration ranges between 40 and 60 minutes.

This study has followed ethical principles included in the Helsinki Declaration, ensuring the anonymous treatment of data, the voluntarily participation and the gathering of parents' permission. Moreover, there was not neither any reward nor penalty in any subject marks. The University of Murcia Ethics Committee assessed its study design and approved it (4424/2023).

Data Analysis

The results of the research obtained after the administration of the questionnaires are presented, in which the statistical program SPSS 24.0 has been used. Additionally,

the descriptive statistics was calculated and the distribution of the data was analyzed using Kolmogorov-Smirnov tests and χ^2 for quantitative and qualitative variables, respectively. So as to determine the reliability of the administered tools, Cronbach's alpha was tested. To determine the association between variables, Kruskal Wallis H tests and Pearson's chi-square tests were used. Eta values to determine the effect size of the differences were also calculated. The analysis of the results is presented in relation to the proposed objective and hypotheses.

Results

Firstly, in order to analysis the association between parental socialization styles and the level of physical activity (both weekly and according to its intensity), Kruskal Wallis H formula was applied, as shown in Table 2.

Table 2.
Association between parental socialization styles and physical activity

METs	Total	Parental socialisation style				P	Eta
		Democratic	Authoritarian	Permissive	Negligent		
Light physical activity	1853.31 ± 1841.09	1895.14 ± 1873.16	1836.19 ± 1873.85	2089.24 ± 1892.99	1630.42 ± 1717.12	.034	.059
Moderate physical activity	1493.33 ± 1830.43	1629.71 ± 2067.94	1486.74 ± 1789.69	1451.03 ± 1648.05	1397.51 ± 1760.84	.853	.048
Intense physical activity	3598.47 ± 3833.92	3364.57 ± 3731.08	3413.05 ± 3463.21	3925.52 ± 3733.69	3729.76 ± 4311.39	.139	.088
Weekly physical activity	6945.11 ± 937.06	6889.43 ± 6109.20	6735.98 ± 5771.20	7465.79 ± 5634.69	6757.69 ± 6167.91	.130	.048

Regarding the table, it was observed that a significant association was found only between the parental style and light physical activity ($p = .034$). Specifically, the parental socialization styles were ordered from highest to lowest weekly METs as follows: permissive, democratic, authoritarian, and negligent.

In the subsequent table, the results of the Pearson Chi-square analysis are presented, examining the potential association between parental socialization styles and the healthy lifestyle among Primary Education students (Table 3).

Table 3.
Association between of Parental Socialization Styles and Lifestyle

Lifestyle		Parental socialisation style				Total	P
		Democratic	Authoritarian	Permissive	Negligent		
Lifestyle	Sedentary	93 (44%) *	67 (35%)	54 (31%)	80 (38%)	294	.014
	Normal	37 (18%)	54 (29%)	33 (19%)	46 (22%)	170	
	Active	80 (38%)	69 (36%)	87 (50%)	83 (40%)	319	
Total		210	190	174	209	783	

*Percentages have been calculated assuming the total of each parental socialization style group.

The above presented results revealed that democratic parental perceived style students tend to group in sedentary lifestyle as for the participants grouped into authoritarian and negligent perceived parental styles were equally distributed in sedentary and active lifestyles. Eventually, with regard to permissive group, they were mainly classified in active lifestyle.

Discussion

In conducting this research, which aimed to analyse the relationship between parental socialization styles and physical activity in school-aged children, findings suggest a potential influence of parental styles on the physical activity levels of primary school students. This observation tenta-

tively supports the initial hypothesis that posited a correlation between parental style and the physical activity of primary school students. The study indicated a trend where students with parents who exhibited a democratic style were inclined to have lower levels of physical activity. In contrast, those with parents characterized by authoritarian or negligent styles showed a varied distribution in their physical activity levels, ranging from low to high. Interestingly, students with permissive parents appeared to engage in higher levels of physical activity. These patterns, while not conclusively establishing causation, provide some support to the hypothesis proposed for the fourth specific objective of the study, underscoring the possible significance of parental style in influencing physical activity among primary school students. Ruiz-Ariza et al. (2019) found a cor-

relation between parental support and physical activity, indicating that the influence of parental socialization styles correlated with the practice of physical activity. These results were like those obtained in this research, showing a relationship between the physical activity of Physical Education students and the parental socialization styles they received. Trost & Loprinzi (2011) and Cueto-Martín et al. (2018), based on a literature review, reaffirmed that parental socialization styles directly influence physical activity practice in Primary Education students, consistent with the findings of this research. Therefore, the development of family interventions to increase behaviours characteristic of parental socialization styles that promote physical activity in the studied subject was suggested (De la Torre-Cruz et al., 2018). Verloigne et al. (2014) concluded that parental socialization styles were related to the practice of physical activity throughout the week. This was consistent with the findings of this research, showing that the light and weekly physical activity of Primary Education students was influenced by the parental socialization styles they received. Family influence was considered one of the major predictors of physical activity practice in Primary Education students, according to Morrissey et al. (2012), which also related to the results of this research. Pelegrín et al. (2019) found a correlation between the authoritarian parental style and adolescents not practicing physical activity. This result was consistent with Hennessy et al. (2010) and Jago et al. (2011), who showed that adolescents with authoritarian parental socialization styles did not practice physical activity. On one hand, those perceiving a negligent or authoritarian parental socialization style showed dispersion between high and low levels of physical activity. On the other hand, the democratic parenting style influenced a lower level of physical activity than all other parental socialization styles, while the permissive style correlated with the highest physical activity in Primary Education students. The WHO (2017) pointed out that the authoritarian parental style could have negative effects on children's education and their lack of physical activity practice both presently and in the future. In relation to this research, it was observed that the authoritarian parental style was found at both extremes, as it could be reflected in a high level of physical activity in the child, as well as in low practice, which is related to what was indicated by the WHO (2017). However, the results did not show a direct influence of parental socialization styles on children's physical activity, unlike what was observed in this research (Pelegrín et al., 2019). Pelegrín et al. (2019) found that, although it is not detailed whether parental style influences the continuity of physical activity practice in Primary Education students, once students participate in physical activity, their continuity is not influenced by parental socialization styles. In the discussion of this research, it was verified that the results obtained were supported by other studies and research, although different results were also found. In the context of the educational implications derived from the research conducted on the

cohort of Primary Education students, this section outlines practical applications. Notwithstanding the moderating role of socioeconomic status, it is recommended to implement initiatives within the educational setting that promote healthy eating habits. Among these initiatives, the proposal includes workshops and conferences involving students, their families, and the school's teaching staff. The primary aim is to encourage reflection and critical thinking about the importance of maintaining good health, encompassing regular physical activity and adherence to a suitable diet. In summary, it is advocated that youth should not be viewed merely as miniature adults, but rather as individuals in a formative stage geared towards effective social integration. In this process, both the educational community and families play an instrumental role. Consequently, the need for collaborative efforts among all stakeholders is proposed to achieve comprehensive and appropriate development of young individuals. This approach is grounded in a holistic view of society, acknowledging the distinctiveness and significance of the youth stage in the process of social formation and development. In addressing the limitations encountered in this research, several factors were considered that could have impacted the study's development and outcomes, and measures were taken to address these limitations. It is important to note that in any social scientific research, certain uncontrollable restrictions are commonly encountered, as Baños et al. (2021) have pointed out. Regarding the instruments used in the research, quantitative questionnaires were employed, though the absence of qualitative methodology was recognized. Sánchez et al. (2021) suggest that combining both methodologies in research can strengthen it and provide robustness to the interpretation of results, as the concurrence of findings obtained through both approaches increases the validity of the conclusions. However, the length of the questionnaires used in this study proved to be a limitation for the participation of educational centers. Specifically, the PSPP questionnaire was found to be dense and challenging to comprehend for primary school students. Díaz (2012) indicates that lengthy questionnaires with dense questions can complicate the collection of genuine information, increase the risk of non-response, and hinder achieving a high rate of fully completed questionnaires. The majority of the questionnaires were distributed and controlled by teachers, which was a limitation as the presence to resolve any doubts was not possible. To ensure coherent responses, the questionnaires were explained to those responsible for administering them. In the administration process, it was considered that the creation of four questionnaires could contribute to the non-response effect due to the mental fatigue that filling out several consecutive questionnaires can cause. Furthermore, the COVID-19 pandemic limited the participation of educational centers. It is mentioned that the quantitative approach used in the questionnaires hindered the precision of the study, suggesting the incorporation of qualitative techniques, such as interviews with teaching professionals related to the topic. Choi and Pak (2005) note that the non-response effect can

impact the coherence of responses in questionnaires. Bevins (1999) points out that the ex-post facto design has both advantages and disadvantages. Among the advantages, it stands out as useful for analyzing the cause of an effect/consequence in the study object, and it is more economical and less time-consuming than experimental research. However, among the disadvantages is that the researcher cannot manipulate the study variables or clearly define a relationship between the independent and dependent variables being examined.

The practical implications of the results were presented herein. It was proposed that the development of initiatives within the educational context that contribute to link adherence to a healthy routine is suggested. Within such initiatives, the implementation of workshops and conferences was proposed, promoted the participation of students themselves, their families, and the resto of the teaching staff of the institution was considered. The goal is to undertake a process of reflection and critical thinking regarding the importance of the regular practice of physical activity and sports and the adoption of a correct parental socialisation style.

Conclusions

The primary objective of this research was to analyze the relationship between parental socialization styles and physical activity in school-aged children. The findings indicate that parental socialization styles indeed exert an influence on the physical activity levels of students. Thus, the initial hypothesis suggesting that parental style impacts the physical activity of primary school students is substantiated by the research outcomes. This study concludes that parental socialization styles are a pivotal factor in the comprehensive development of students, correlating significantly with their physical activity. The data reveals that the physical activity of students in the sample is influenced by the parental socialization styles they experience. It has been verified that all parental styles affect the level of physical activity among students. From the conclusions drawn in the research, it can be asserted that the field of Physical Education in primary education centers bears the responsibility of promoting the formation of citizens who are healthy not only physically but also mentally, in an interdisciplinary manner throughout the educational process. Furthermore, it is imperative that families and the entire educational community collaborate in promoting and constructing values that enable comprehensive and healthy development during the primary education stage. According to Gutiérrez et al. (2019), Physical Education must consider various factors to contribute to the moral and ethical development of primary school students, including inclusion as a curricular design and an educational project of the center. Moreover, these authors advocate for the importance of educating in social values such as cooperation and equity, aiming to integrate students into the educational community. Peiró (2013) emphasizes the crucial need to understand the environment and daily routines of

primary school students to achieve satisfactory ethical and social development. Additionally, family participation in the school is fundamental for the personal and social growth of students, both in the school and family environments. Pedagogical literature, including the field of Physical Education, highlights that the family plays an essential role in forming healthy habits in the lives of primary education students.

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