




## Article

# Do Grandparents Contribute to Their Grandchildren's Learning through Shared Leisure Activities?

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**Abstract:** Intergenerational leisure can be a tool to stimulate and reinforce the learning of primary school students. The aim of this study was to examine which leisure activities shared by grandparents and their grandchildren are carried out from the perception of intergenerational learning as one of the main reasons for joint practice, and its link with the grandparents' level of education. An ad hoc questionnaire was administered to 329 students aged 6 to 12 years in the north of Spain, and a descriptive study and inferential analysis of the data were carried out. The leisure activities that students highlight the most as experiences in which they perceive that by sharing them with their grandparents, they learn from them, are board games, artistic activities, caring for plants or gardens and reading. There are only significant differences in the learning perceived by primary school students depending on the level of education of their grandparents in caring for plants or vegetable gardens, as the grandparents of children aged 6 to 12 in the northern part of Spain are more able to teach their grandchildren to care for plants or vegetable gardens when their level of education is primary education. These four activities highlighted by the grandchildren as facilitators of knowledge are very interesting instruments to stimulate and reinforce the education of primary school students, so involving grandparents in their grandchildren's education and taking advantage of their knowledge and experience, as well as their ability to stimulate their grandchildren, is a good strategy to turn free time into valuable leisure time.

**Keywords:** intergenerational leisure; co-learning; grandparents; grandchildren; shared activities



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## 1. Introduction

Family dynamics must be considered beyond the relationship between parents and their children; it is necessary to include grandparents, as they are active agents who contribute effectively to family organisation and conciliation [1,2]. Although situations such as the global pandemic of COVID-19 have led to the deprivation of contact between grandparents and grandchildren and, therefore, a decrease in intergenerational learning opportunities [3], the relationships between grandfathers and grandmothers and their granddaughters and grandsons within the family benefit from various social phenomena that lead to greater availability of grandparents for the care and education of their grandchildren [4–6]. Thus, we find smaller families, with fewer children and fewer grandchildren, due to the falling birth rate, but with more grandparents who live for longer due to the significant increase in life expectancy and quality of life; a recent study shows that 42.9% of primary school children in northern Spain have two living grandmothers and two living grandfathers, 31.9% have three living grandparents and only 0.3% of children have no surviving grandparents at all [7]. This, along with other factors, such as the increase in single-parent families, multigenerational households or economic stress factors, extends the need for older people to be involved in the care and education of children [8].

Grandparents are direct agents in the education of their grandchildren because they are increasingly involved in their grandchildren's lives, dedicating their time, skills, knowledge and experience, as well as their affection and motivation, which significantly favours learning. In this sense, everyday life and the scientific literature verify that shared leisure experiences between grandchildren and their grandparents forge intergenerational learning that benefits families and society at large [9–11]. Intergenerational leisure can be a tool to stimulate and reinforce the education of primary school students, specifically in the contributions that leisure practices shared by both generations offer them, with areas that can benefit both [9,12]. Thus, they contribute to satisfying the need to teach and be taught; grandchildren advise grandparents in the execution of leisure experiences they have mastered, and grandparents instruct grandchildren in the execution of practices about which they have more knowledge.

Different leisure practices underpin intergenerational learning, including those related to digital leisure and mobile technology [13,14], physical leisure activities with sports and orienteering activities [15], playful leisure activities such as board games [16], cultural leisure experiences with arts and cultural activities [17,18] or initiatives enjoyed in the natural environment such as family or urban gardens [19–23].

Moreover, there are numerous benefits linked to these practices in terms of intergenerational learning for both age groups. On the one hand, they offer positive factors for the overall continuous developmental process in which children find themselves, derived from the transmission of social and emotional values, cultural capital and traditions [12,24,25]; moreover, grandchildren bring new ideas and information mainly linked to information and communication technologies [13]. In turn, these practices can provide both generations with a positive attitude towards learning and exploration [26], and a different approach to a variety of topics, and can contribute to a closer, more satisfying and meaningful family relationship [27,28]. Moreover, the intergenerational approach makes it possible to eliminate false stereotypes related to old age and offers to the youngest generation the possibility to know and cooperate with older people, and thus, construct a more cohesive, cooperative, solidary and democratic society without generational gaps through various spaces of coexistence, interaction, exchange and intergenerational dialogue, from open, equal, comprehensive and respectful relationships [29–31]. In addition, current studies highlight that the implementation of family intergenerational learning programmes elicits grandchildren's perception of lifelong learning and moral commitment to their grandparents [32]. In short, multigenerational education benefits grandparents and grandchildren, constituting a valuable and enriching opportunity where the two generations are not only an affective and emotional support, but also an educational model.

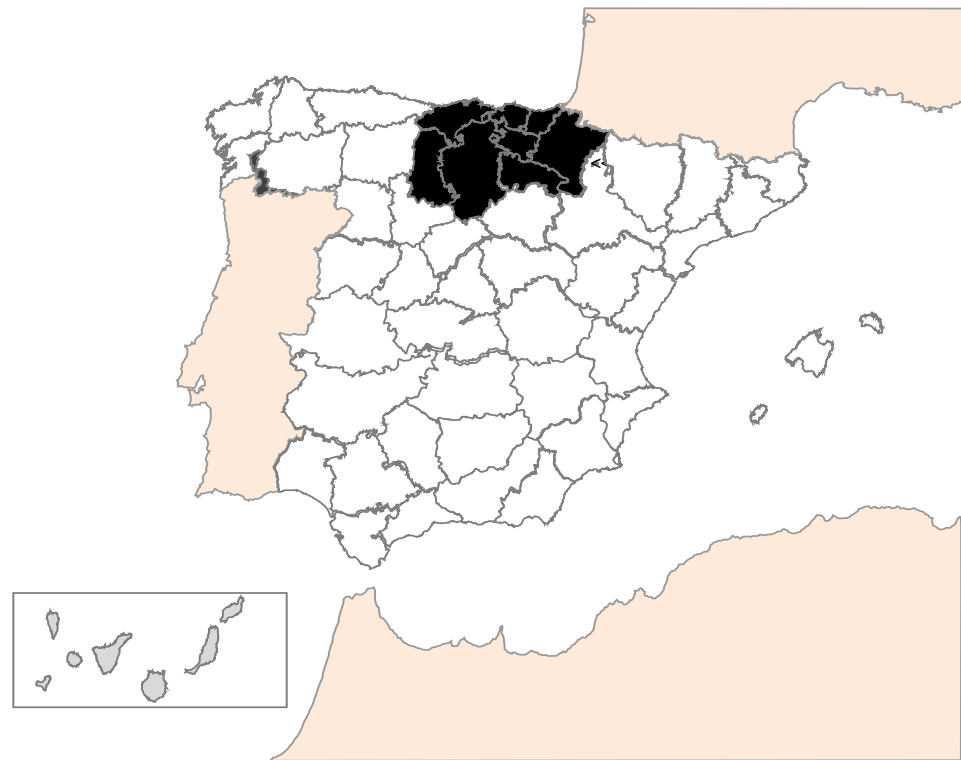
The level of education of grandparents can have an impact on shared activities and the learning they promote, as different studies have shown [33,34]. One example is cultural leisure practices that show a relationship with educational attainment. This is confirmed by the data obtained in the Survey of Cultural Habits and Practices in Spain carried out between 2021 and 2022 by the Ministry of Culture and Sport, which confirms that people with higher education (secondary education, CTE or university degrees) show a greater interest in museums, exhibitions, art galleries, monuments, archaeological sites and archives than people with a lower level of education, standing out with up to two points above those who only attained a primary education. It also shows that if parents have a higher level of education, the frequency of visits to museums with grandparents is also higher. Similarly, Zanasi and Sieben (2022) show that higher education is a good predictor of grandparents' involvement in their grandchildren's education, stimulated by the motivation to help their grandchildren develop as individuals, and find that, although grandparents are engaged in their grandchildren's education, grandmothers with higher education are more involved.

From these premises, the aim of the present study was to examine which leisure activities shared by grandparents and grandchildren were carried out from the perception that intergenerational learning was one of the main reasons for joint practice, as well as its link with the grandparents' level of education.

## 2. Materials and Methods

### 2.1. Population

The study population consisted of children aged 6–12 years living in the northern part of Spain and their grandparents. The Nilsen areas define the northern part of Spain with the provinces of Cantabria, Basque Country, La Rioja, Navarra, Burgos and Palencia (Figure 1) [35]. Due to the difficulties in defining the population of these children's grandparents, as significant variability can be found in the number of living grandparents for each of them, it was decided to take each child from 6 to 12 years old and all their living grandparents as a population unit.



**Figure 1.** Northern part of Spain: Cantabria, Basque Country, La Rioja, Navarra, Burgos, Palencia (provinces shaded in black).

The population size of this study was calculated by considering each child aged 6–12 years and their living grandparents as the population unit (Table 1).

**Table 1.** Target population. Population units of children (6–12 years old) enrolled in primary education in Northern Spain.

	Provinces	Number of Primary School Students Enrolled
NORTHERN PART OF SPAIN	Cantabria	33,608
	Basque Country	129,432
	La Rioja	19,366
	Navarra	40,468
	Burgos	19,774
	Palencia	7709
	TOTAL	250,357

Source: Ministries and Departments of Education of Cantabria, Basque Country, La Rioja, Navarra and Castilla León.

Statistical data published by the Ministry of Education and by the Departments of Education in each province defined the population size of this study as 250,357 primary school pupils aged 6–12 years.

## 2.2. Sample

The sample size of this study was set at 329 sampling units (student and their grandparent), which establishes an absolute error of 6% and a confidence level of 97% if the assumption of  $p = q = 0.5$  is considered.

The selection of the latest sampling units of students was performed through proportional sampling stratified by province and by cluster, selecting all the students from the chosen classes within randomly selected schools. To be part of the sample, informed and signed consent from parents or legal guardians for each student was an essential requirement. On the other hand, to conduct the survey of the children's grandparents, an independent sample was not selected. Consent forms for the study given by students to their parents and legal guardians included relevant information on the study, and parents and legal guardians were invited to provide the phone number of the child's grandfather or grandmother.

Among the randomly selected schools in the northern part of Spain, 401 grandparents with grandchildren studying in these schools were contacted and showed their willingness to collaborate in the study by answering a questionnaire. However, during data collection, an experimental dropout rate of 17.95% occurred when 72 grandparents could not be contacted after several telephone attempts. Therefore, the sample consisted of a total of 329 grandparents and their 329 grandchildren.

## 2.3. Instrument

As part of a more extensive questionnaire to collect relevant information on intergenerational family leisure, primary school students were asked whether each type of intergenerational family leisure activity is shared with their grandparents because they consider that their grandparents know a lot about that activity and teach them. Their grandfathers and grandmothers were also asked about their level of education.

A total of 3 variables are used in this study:

- a Type of shared leisure. This is a categorical variable that identifies the type of specific leisure activity shared with the grandparents within each of the defined leisure categories. The question posed to collect the data for this variable was "Do you share any activity [the 29 typologies studied are specified] with your grandparent?"
  - Watch TV
  - Listening to music
  - Surfing the Internet
  - Social media
  - Technological games
  - Parlour games
  - Board games
  - Motor games
  - Unopposed physical activity
  - Physical activity 1 vs. 1
  - Team physical activity
  - Travelling
  - Excursions
  - Fishing or hunting
  - Read
  - Cinema
  - Going to the theatre
  - Museums, galleries, and exhibitions
  - Going to concerts or festivals

- Attendance at sporting events
  - Doing an artistic activity
  - Eating out
  - Go to traditional festivals
  - Caring for animals
  - Shopping
  - Caring for plants or vegetable garden
  - Collect something
  - Associationism or volunteering
  - Other
- b Reason for the grandchild to share this leisure activity: because the grandparent teaches them. This is a dichotomous categorical variable (yes/no). The question through which this information was collected was “Do you share this activity with your grandmother/grandfather because she/he teaches you?”
- c Grandparent’s level of education. This is categorical variable that identifies the studies completed. The question asked to the grandparents to determine this information was “What is your level of education?”
- None
  - Primary education (GCSE or primary education)
  - Secondary education (GCE, vocational education and training)
  - Higher education (university)

#### 2.4. Procedure

This research was approved by the Ethics Committee of the University of La Rioja (Spain) at a session held on 17 December 2019 (code CE\_02\_2019).

Schools in the northern part of Spain received copies of an information document about the study, requesting consent from parents or legal guardians for the participation of their children, and asking for their help in recruiting grandmothers or grandfathers willing to take part in the study. The 8 provinces that make up the northern part of Spain were represented through 401 signed consent forms that included contact details for a grandmother or grandfather.

Each of the 401 telephone numbers of grandmothers or grandfathers received calls from one of the five pre-trained and coordinated researchers. After several attempts, 329 grandparents participated in the study by being interviewed. The answers given by the grandparents were recorded by the researchers in a database created ad hoc in the statistical package SPSS version 29. The recording time for the questions was around 30–45 min.

In addition, a granddaughter or grandson between 6 and 12 years of age of each grandparent interviewed was also surveyed in a guided and face-to-face manner at the school by the researchers themselves.

#### 2.5. Data Analysis

The statistical package SPSS version 29.0 was used to record and analyse the data collected.

Firstly, through the means, the leisure activities that the grandchildren most shared with their grandparents because they learned a lot from them were identified.

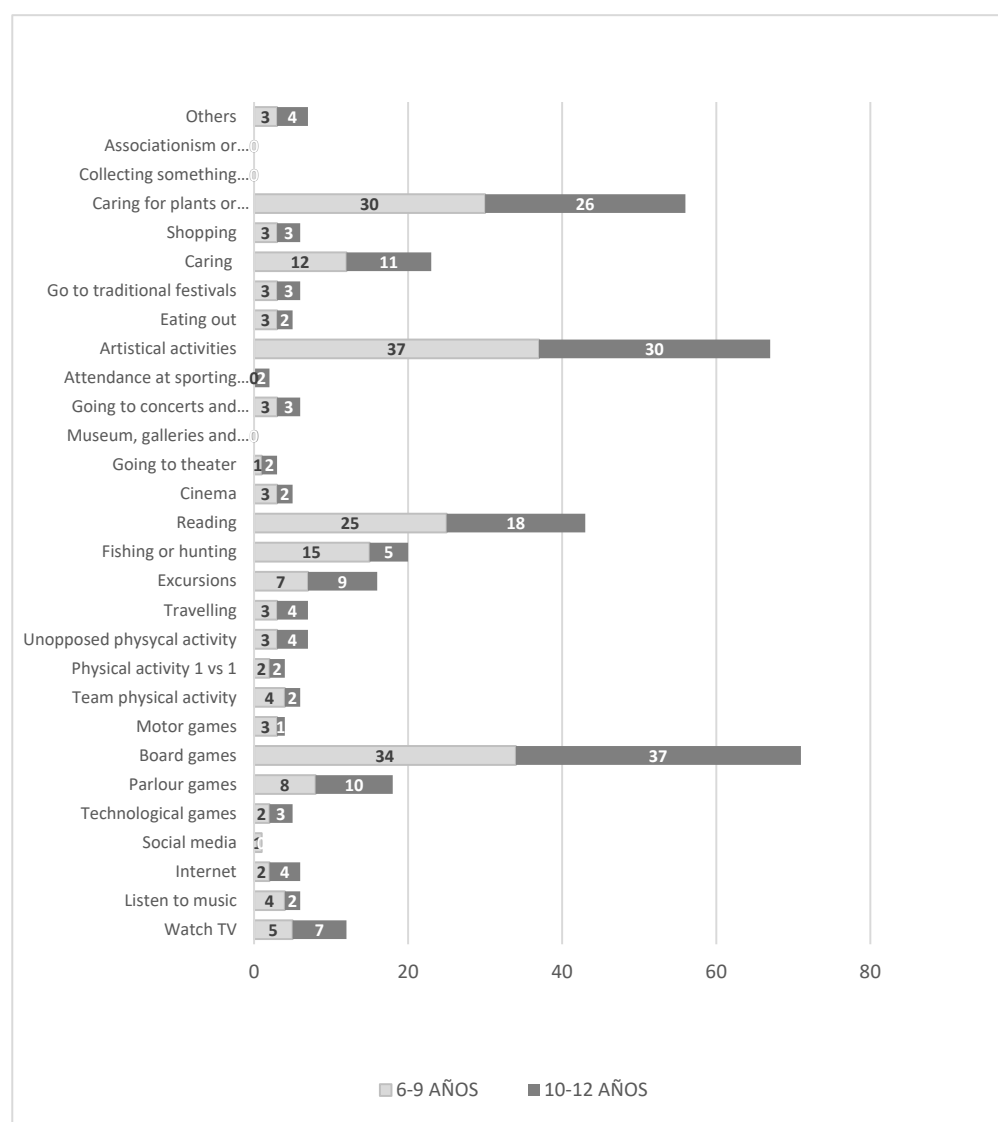
Subsequently, an inferential analysis was carried out, using Student’s *T*-test for paired samples, to identify whether educational level was a variable significantly associated with the perception that granddaughters and grandsons had of the learning they could acquire from their grandmothers or grandfathers when sharing leisure activities. The paired sample correlations analysis succeeded in identifying the types of activities in which the level of education of their grandparent was significant for the student’s perception as a referent agent of their learning through leisure.

The significance level set for this work was  $p < 0.05$ .

### 3. Results

#### 3.1. Leisure Activities in Which Primary School Students in the Northern Part of Spain Perceived That by Sharing Them with Their Grandparents, They Learnt from Them

Activities such as playing board games (71% of students), carrying out art activities (67% of students), taking care of plants or vegetable gardens (56% of students) and reading (43% of students) were the leisure activities most highlighted by primary school students in the northern part of Spain as activities in which they perceived that by sharing them with their grandparents, they learnt from them (Figure 2). One in thirty respondents goes to visit museums with their grandparents. However, none of them highlight engaging in this shared leisure activity because of what their grandparents can teach them.

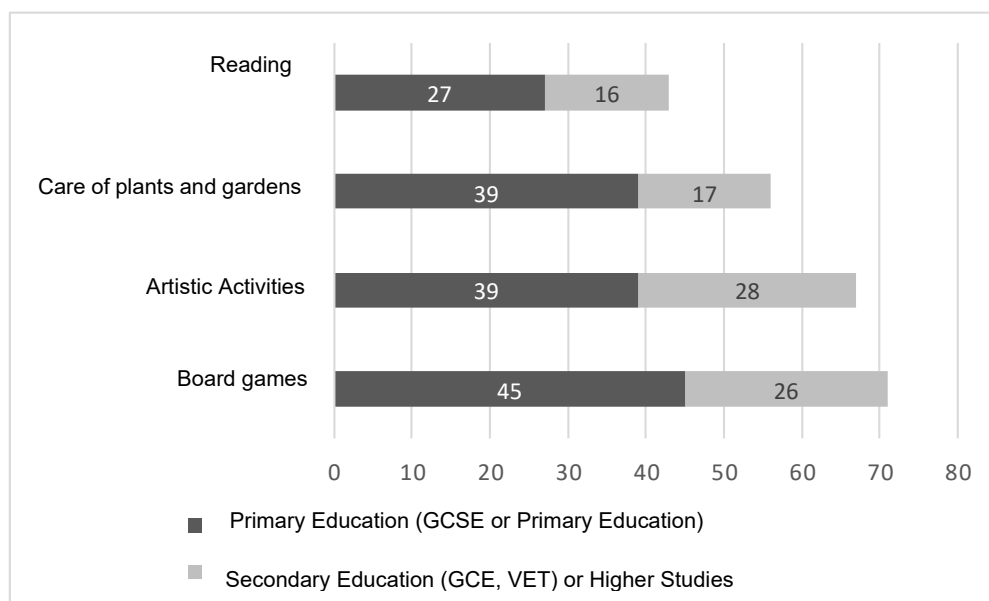


**Figure 2.** Number of students aged 6–12 who share different leisure activities with their grandparents because they learn from them. *NOTA:* the numbers reflect the absolute value of the children participating in the survey who share different leisure activities with their grandparents because they learn from them.

#### Learning from Grandparents Perceived by Primary School Students According to the Level of Education of Their Grandparents

In order to determine whether there were significant differences in the learning perceived by primary school students according to the level of education of their grandparents,

a Student’s *T*-test was run for paired samples in each of the four leisure activities indicated (Figure 3).



**Figure 3.** Number of students aged 6 to 12 who share reading, gardening, art activities and games with their grandmothers and grandfathers because they feel they learn from them. Inferential analysis based on grandparents’ educational level. *NOTA:* the numbers reflect the absolute value of the children participating in the survey who share reading, gardening, art activities and games with their grandmothers and grandfathers because they feel they learn from them.

In board games, children aged 6–12 years perceived the same learning from their grandparents when they had primary education (GCSE or primary education) as when they had secondary or higher education (GCE, VET or university degrees) (ME—primary education =  $0.23 \pm 0.423$ ; ME—secondary or higher education =  $0.21 \pm 0.364$ ;  $p < 0.083$ ) (Table 2).

**Table 2.** Board games. Grandchildren’s perceptions of grandparents’ teaching ability according to their level of education.

	Paired Sample Statistics				Paired Sample Correlations			Paired Samples Test		
	Mean	N	Standard Deviation	M for Standard Error	Correlation	P of a Factor	Two-Factor P	Mean	Standard Deviation	Two-Factor P
Primary Education (GCSE or Primary Education)	0.23	194	0.423	0.030	−0.069	0.170	0.340	0.216	0.449	<0.083
Secondary Education (GCE, VET) or Higher Studies	0.21	125	0.364	0.063						

In artistic activities, no significant differences were identified in the perception of primary school students regarding the teaching ability of their grandparents according to the level of education of the latter (ME—primary education =  $0.20 \pm 0.402$ ; ME—secondary or higher education =  $0.22 \pm 0.452$ ;  $p < 0.083$ ) (Table 3).

**Table 3.** Artistic activities. Grandchildren’s perceptions of grandparents’ teaching ability according to their level of education.

	Paired Sample Statistics				Paired Sample Correlations			Paired Samples Test		
	Mean	N	Standard Deviation	M for Standard Error	Correlation	P of a Factor	Two-Factor P	Mean	Standard Deviation	Two-Factor P
Primary Education (GCSE or Primary Education)	0.20	194	0.402	0.029	−0.194	0.140	−0.091	0.292	0.051	0.083
Secondary Education (GCE, VET) or Higher Studies	0.22	125	0.452	0.079						

The grandparents of children aged 6 to 12 were more likely to teach them how to take care of plants or vegetable gardens when their level of education was primary school (GCSE or primary education) than when they achieved secondary or higher education (GCE, VET or university degrees) (ME—primary education =  $0.20 \pm 0.398$ ; ME—secondary or higher education =  $0.14 \pm 0.350$ ;  $p < 0.000$ ) (Table 4).

**Table 4.** Care of plants and vegetable garden. Grandchildren’s perceptions of grandparents’ teaching ability according to their level of education.

	Paired Sample Statistics				Paired Sample Correlations			Paired Samples Test		
	Mean	N	Standard Deviation	M for Standard Error	Correlation	P of a Factor	Two-Factor P	Mean	Standard Deviation	Two-Factor P
Primary Education (GCSE or Primary Education)	0.20	194	0.398	0.029	−0.036	0.311	0.623	−0.191	0.407	<0.001
Secondary Education (GCE, VET) or Higher Studies	0.14	125	0.350	0.037						

In terms of shared reading between grandparents and grandchildren, no significant differences were identified in the perception of primary school students of their grandparents’ ability to teach according to the level of education of the latter (ME—Primary Studies =  $0.14 \pm 0.352$ ; ME—Secondary or Higher Studies =  $0.13 \pm 0.326$ ;  $p < 0.083$ ) (Table 5).

**Table 5.** Reading. Grandchildren’s perceptions of grandparents’ teaching ability according to their level of education.

	Paired Sample Statistics				Paired Sample Correlations			Paired Samples Test		
	Mean	N	Standard Deviation	M for Standard Error	Correlation	P of a Factor	Two-Factor P	Mean	Standard Deviation	Two-Factor P
Primary Education (GCSE or Primary Education)	0.14	194	0.352	0.025	0.042	0.281	0.562	0.109	0.582	0.083
Secondary Education (GCE, VET) or Higher Studies	0.13	125	0.326	0.034						

#### 4. Discussion

This study shows that learning between grandchildren and their grandparents is implemented through different shared leisure experiences, with board games, artistic activities, gardening and reading being the four activities in which students in primary education in the northern part of Spain perceive that one of the main reasons for practising them with their grandparents is that their grandparents teach them. The children experience, as an essential motivating factor for the practice of these recreational, cultural and environmental activities, the fact that their grandparents share their knowledge and experiences with



them. This finding is in line with previous studies that support these leisure contexts as an essential substrate for intergenerational learning [16,20,36–39].

These four activities are very interesting tools to stimulate and reinforce children's learning, to involve grandparents in their grandchildren's education and to take advantage of their knowledge and experience, as well as their ability to stimulate their grandchildren to turn free time into valuable leisure time that maximises the family's well-being and development. Moreover, this learning environment in families can lead to the joint organization of diverse experiences of cultural [17,18], recreational [16] or environmental leisure [19–23], thus fostering in children, from the stage of primary education, the acquisition and reinforcement of habits in the practice of leisure that are likely to endure throughout their lives, especially as the scientific literature evidences that it is in this period that the future traits of an individual are founded [40,41].

On the other hand, it was found that the level of education of grandparents does not have a clear impact on the learning of their grandchildren during the practice of these leisure activities. Children aged 6 to 12 in the northern part of Spain perceive that they learn the same from their grandparents when they have primary education as when they have secondary or higher education in all the actions analysed, except in the care of plants or vegetable gardens, where the students perceive that their grandfathers and grandmothers have more capacity to teach them in the practice of this environmental activity when they have primary education than when they have secondary or higher education. This finding is in line with the study by Di Gessa et al. (2022), which found that grandparents with lower levels of education were more involved in hands-on activities. It is therefore necessary to make this generation aware of the important role they play in the family, beyond the role of caregiver, increasing their self-esteem and their feeling of continuing to be highly useful, regardless of the level of education they have achieved, since it has been shown that those with less education are perceived, to a greater extent, by primary school students in the north of Spain, as references for learning about caring for nature and healthy and sustainable food. However, consideration must be given to the pressure they may feel to do their best in the care and education of infants, which can sometimes cause psychological stress, burnout, frustration and feelings of helplessness [42].

This reality also invites reflection from school institutions in order to include grandmothers and grandfathers as valuable agents in the educational community of the 21st century [43]. Older people spend a lot of time with their grandchildren and are increasingly involved in the educational community, so the school must rely on them to enhance learning. From this perspective, it is necessary to understand the interdependent relationships between the different generations that make up the family and schools [44]. Grandfathers and grandmothers should be considered active agents who contribute competently to family and educational organisation [1].

A limitation of this study is that social desirability may have conditioned the grandchildren's results in relation to leisure activities shared with their grandparents, as well as the motivation that leads them to carry them out [45].

This study highlights the context prior to the global COVID-19 pandemic. While normality is gradually returning, the particularity of the situation has brought with it different family habits [46–48] that may have affected shared leisure experiences [49,50]. For this reason, it is proposed that this study be extended in order to analyse the impact that the pandemic has had on intergenerational leisure, and thus establish keys for interdisciplinary pedagogical reflection that serve as a guide to construct lines of action adapted to the current situation, aimed at encouraging leisure activities that favour the healthy and integral development of grandsons and granddaughters with their grandfathers and grandmothers, and, consequently, personal, family and community well-being.

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A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; resources, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; data curation, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; writing—original draft preparation, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; writing—review and editing, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; visualization, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; supervision, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; project administration, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A.; funding acquisition, M.Á.V.S.E., A.P.d.L.E., R.A.A.R., M.S.d.J.O. and E.S.A. All authors have read and agreed to the published version of the manuscript.

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**Informed Consent Statement:** Informed consent was obtained from all subjects involved in this study.

**Data Availability Statement:** The publication of datasets may be linked to a publication and/or a project. Access will be restricted to project participants in order to protect sensitive third-party data collected during research.

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