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Assessing Parental Preferences Regarding a Plant-Based Game for Educating Children about More Sustainable and Healthier Diets

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Abstract: Environmental damage or health concerns related to diet are some alarming consequences of our behaviour in the near future. Consumers can make a difference depending on their eating behaviour and conscientiousness about minimizing environmental damage. One way to make children more aware of the environment and induce them to eat healthier food in the future might be educational games where they could learn the importance of the environment and the effect of the food they eat on their health status. In this study, we investigated parental behaviour when feeding their children and their willingness to pay for a game product with educational and eating functions. The sample consisted of 300 parents of children aged from 4 to 12. A hypothetical choice experiment has been used and a latent class model estimated the parents' preferences for a plant-based product game carrying two attributes, namely, the price and narrative context of the game The results indicated that parents were willing to pay more for a product with a storybook related to healthy eating habits or recycling than one with no storybook. Moreover, two dominant feeding styles in households were found: indulgent parents and uninvolved parents. This alternative approach is oriented toward educating people from the early stages of their lives, creating a favourable environment for the development of preferences for healthier food.

Keywords: healthy diet for children; food waste; feeding style; educational games; eating habits

Citation: Uldemolins, P.; de Magistris, T. Assessing Parental Preferences Regarding a Plant-Based Game for Educating Children about More Sustainable and Healthier Diets. *Sustainability* **2021**, *13*, 12970. https://doi.org/10.3390/su132312970

Academic Editors: José M. Gil, Giovanni Sogari and Irina Dolgopolova

Received: 29 September 2021
Accepted: 18 November 2021
Published: 23 November 2021

1. Introduction

At present, the prevalence of obesity worldwide has become a topic of great concern given its close relationship to the coronavirus pandemic and COVID-19 [1,2]. During the last few years, several policies and interventions have been developed to prevent and decrease the incidence of obesity's secondary effects, such as non-communicable diseases (NCDs). The World Health Organization Global Activity Plan for the Prevention and Control of NCDs 2013–2020 [3], the European Food and Nutrition Action Plan 2015–2020 [4], and the EU Action Plan on Childhood Obesity 2014–2020 [5] are examples of attempts to help citizens make more informed and healthy food choices.

Another major issue in this century that threatens the planet's stability is climate change caused by human intervention. Some authors have indicated that the lack of policy integration in the food system holds back progress on healthy diets and weakens efforts to fight climate change, biodiversity loss and low income [6]. The European Green Deal [7] reflects a commitment to address climate and environmental challenges from an integrative view and presents a roadmap of the key policies and measures of achievement.

One of these policies is the 'farm to fork' strategy [8]. This policy aims to promote sustainable food consumption and the transition to healthy and sustainable diets by using labelling, ensuring healthy food availability and affordability and providing educational programmes. Food waste reduction is also an important pillar of this policy.

Increased childhood obesity has been partly attributed to changes in the social environment where children make food choices and develop their eating habits [9]. The food system should make healthy diets available, affordable, appealing and aspirational for children (0–18 years) in the context of their lives in order to build a favourable environment for a child [10].

If the food environment is a key factor for improving diet and sustainability, what is a child or adult's favourable food environment? Because energy-dense foods activate brain areas in children associated with sensory processing and rewards [9], it is key to create a food environment free of temptation until the individual has self-control. The home food environment goes beyond home availability and accessibility of food; parental role modelling, parenting feeding style, and family food rules also shape it [11].

Considering the rising awareness of diet in health and environmental problems, society at large is engaged in working on plans for them. As these are long-term issues, it is interesting to examine how we educate our children because they will be the basis for future generations. At around the age of nine or ten, children begin to internalize the rules they have been given and adopt them as their own, even distinguishing that food can be healthy or unhealthy [12]. They become more independent in their choices, guided by their beliefs and models.

Children's dietary patterns are acquired within the context of the family. Therefore, examining parental factors and their relationship with children's dietary intake is important [13]. In the interest of food transition and sustainable diets, modifiable risk factors for childhood obesity reside in the family environment [14].

We present the case study of a food-product game intended to show children the importance of a healthy diet and caring for the environment. The product has a narrative context regarding the challenge of growing one's food and growth progress. As a result, one can eat the cultivated food after cooking it. This case study aims to illustrate available tools for developing a better food environment for children, as the evidence indicates that an environment supportive of a healthy diet may fight the marketing of unhealthy food. Hence, we investigated parents' feeding behaviour and willingness to pay for a game with a dietary educational scope. This paper contributes to the evaluation of how feeding behaviour drives parental preferences for educational plant-based products for their children. To our knowledge, no previous literature has addressed recycled plant-based products targeting children with a goal of promoting a healthier and more sustainable diet.

2. Theoretical Framework

2.1. Food Environment

In a broad framework, the food environment is any opportunity to obtain food. It refers to the availability, affordability, convenience, promotion and quality of food and the circumstances in which consumers interact with food systems [15]. The food environment is a complex concept with different dimensions: the community food environment (number, type, location, and accessibility of food sources); consumer food environment (portion sizes, food options, placement, price, and promotion of food); organizational food environment (access to food in workplaces or schools); and information food environment (marketing, media, and advertising) [16,17].

Beyond the food environment, sectors of influence include trade, markets, industry, media, governance, culture, religion and policy, where individuals do not directly interact [15]. In the current scenario influenced by these factors, consumers are encouraged to make more healthy and sustainable food choices.

Children's preferences are largely determined by foods familiar to them [18]. The home availability of fruit and vegetables has been positively associated with children's fruit and vegetable intake [11]. Therefore, as parents choose the food available in the household, they are partially responsible for shaping children's eating patterns. However, they also shape the social home food environment by implementing feeding styles, practices and mealtime routines and modelling food choices and eating behaviours [9].

Downs and Demmler [15] compiled distinct types of interventions intended to improve the food environment of children. For example, in schools, experiments have been implemented using the distribution of free fruit, nudges, rewards for healthy eating and portion size changes. Experimental designs using marketing, toys, incentives, or in-store interventions have been evaluated at the community level. A good example is the use of cartoon characters to attract children's attention to fruit and vegetable products [19]. Other authors have developed game-based scenarios by using technology such as app games to familiarize children with vegetable images and rewards, resulting in significant increases in their liking of vegetables [20]. The importance of taste exposure is also a key factor in increased vegetable consumption [21]. The implementation of school gardens has demonstrated significant results and meaningful increases in vegetable intake [22], while didactic intervention to reduce food waste in schools has suggested changes in the amount of waste subsequently observed on plates [23].

2.2. Feeding Style

Parenting style describes the different attitudes and methods that parents use to interact with children. In the feeding context, interaction refers to how parents interact with their children during all feeding situations [14]. Hughes [24] identified four feeding styles depending on the degree of demandingness and responsiveness of parents: authoritative, authoritarian, indulgent or uninvolved. Demandingness and responsiveness refer to parents' behavioural strategies in controlling what, how much, and when their children eat. Feeding practices include pressuring children to eat, using food as a reward, restricting access to select foods or food groups, modelling, and using food to pacify or for control [14].

Other parenting strategies to promote the intake of healthy foods have also been reported. These consist of explaining the benefits of vegetables to children, repeated exposure to certain foods, hiding vegetables and fruit in more palatable food, compelling children to eat by establishing clear and non-negotiable rules, or negotiating by reaching a compromise with the child [18]. These strategies align with the reported mechanisms in the literature for learning to eat vegetables [25].

Parental pressure to eat healthy food can result in food dislikes and reduced intake. Ventura and Birch [14] found that high levels of parental pressure were associated with low levels of child intake and higher child pickiness. Several studies have demonstrated that child-centred practices led to significantly higher consumption of fruit and vegetables [13]. Parental feeding style influences children's preferences for vegetables and high fat and sugar foods [26]. Children of authoritative parents were linked to healthier diets than children in households with authoritarian and permissive parenting styles [27,28].

3. Materials and Methods

3.1. Methodological Procedure and Data Collection

The study was conducted in Spain, obtaining a representative sample of the population. An online questionnaire carried out by a certified private company and a choice experiment method were designed to investigate consumer behaviour and obtain parents' preferences concerning educational plant-based games for children. In order to specify the sample size, a sample error of $\pm 5\%$ and a confidence level of 95% ($K = 2$) were considered when estimating the proportion ($p = q = 0.5$). The sample size was set at 300 individuals. Participants were parents of children ages 4 to 12. They were selected using the stratified random sampling method. Therefore, the population and our sample present the same proportion of individuals in terms of sex, age and province of residence.

We used the questionnaire to investigate the style of feeding children used by the families using the scale proposed by Hughes [24]. Parents' feeding styles were measured by demandingness and responsiveness dimensions, derived through seven child-centred items (responsiveness) and ten parent-centred items (demandingness). Internal reliability coefficients were calculated for each scale (Cronbach's $\alpha = 0.811$ for parent-centred items and Cronbach's $\alpha = 0.723$ for child-centred items). These two dimensions were subse-

quently used to categorize the four feeding styles: authoritarian, authoritative, indulgent, and uninvolved [24] (Figure 1). Authoritarian feeding is characterized by attempts to control the child's eating habits with little regard for the child's choices and preferences. Authoritative feeding represents a balance, where the child is encouraged to eat healthy foods but is also given some choices about eating options. Indulgent feeding is characterized by allowing the child to eat whatever he or she wants in whatever quantities and making few demands on children. Finally, uninvolved is characterized by little control and involvement with the child [24,29].

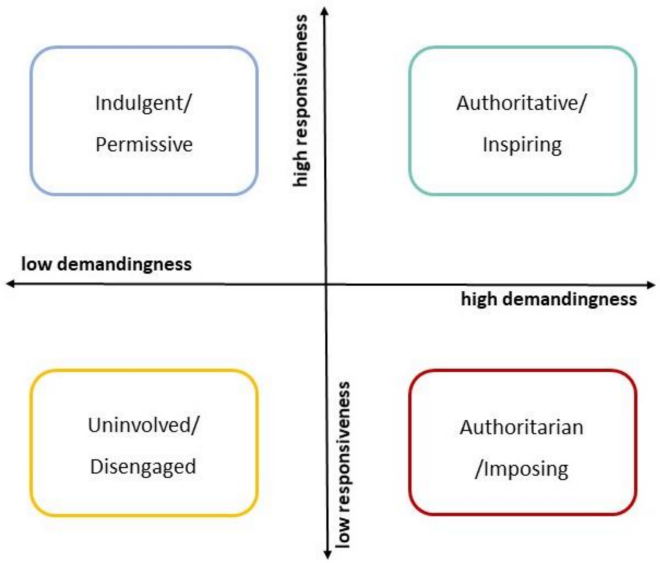

Figure 1. Feeding styles as measured by the level of demandingness and responsiveness.

A five-point Likert scale was used to investigate the level of agreement for each statement (1: strongly disagree; 2: disagree; 3: neutral; 4: agree; 5: strongly agree). Consumer preferences were elicited using a hypothetical discrete choice experiment approach (DCE), which is widely applied due to its ability to simulate real market situations and improve participant response rate [30].

In the DCE, participants were asked to make repeated choices between two fungi-pack games (and a 'none' alternative), including three narrative contexts: no storybook, an environment storybook and a healthy diet storybook. See Table 1. Having a narrative context is important in game-based approaches [31]. These two themes, environment and diet, may provide guidance in understanding purchasing decisions, whether there is a personal motivation behind that choice (i.e., parental concern for their own and their children's health), and whether there is a more altruistic incentive (i.e., concern for the environment) [32]. The alternatives were priced at three levels (EUR 5, EUR 7, and EUR 9) selected to encompass the average prices for educational products on the market. See Table 1. An example of choice tasks is presented in Appendix A.

An unlabelled design was used considering the selected attributes/levels; the total set of hypothetical products amounted to 81 ($3^2 \times 3^2$). An orthogonal fractional factorial design was applied [33–35] to reduce the number of choice options to nine. The choice options was designed following Street and Burgess [36]. The orthogonal main effect was calculated using NGENE software. Each choice question included a non-purchase (opt-out) alternative and two fungi-based educational products for children.

Table 1. Attribute levels.

Attribute	Attribute Level	Description
Storybook 	Healthy (BHealthy) 	The fungi pack includes a storybook for children explaining a healthy diet and which foods are healthy.
	Recycle (BRecycle) 	The fungi pack includes a storybook for children showing how to recycle and care for the environment.
	None	The fungi pack does not include a storybook.
Price (EUR)	5 7 9	Purchase price

Source: Elaborated by the authors.

3.2. Data Analysis

3.2.1. Feeding Style

Parents were classified into four feeding styles based on high and low scores on the dimensions of parental demandingness (parent-centred items) and parental responsiveness to their child (child-centred items) [24]. Scale scores were obtained by calculating the means of the items comprising each scale [37]. A median score was used to differentiate between low and high dimensions on demandingness and responsiveness. Parents with scores above the median were considered 'high', whereas those below the median were considered 'low' [24]. Classification into the four feeding styles was performed according to the following criteria related to both dimensions.

3.2.2. Discrete Choice Experiment (DCE)

The DCE data were analysed using a latent class model to address the issue of heterogeneity. The model is consistent with the Lancaster theory, in which consumers maximize utility [38] and the McFadden random utility theory [39], in which consumer preference depends on product attributes. The random utility theory assumes that utility (U_{nj}) is split into two components: one observed by the researcher (V_{njt}) and another unobserved (ε_{nj}), which is considered a random independently and identically distributed error term. The observed components are the attributes describing the product. The utility of an individual n, derived from a product alternative j in a purchase situation t, is expressed as follows:

$$U_{njt} = V_{njt} + \varepsilon_{njt}, \quad (1)$$

where $V_{njt} = \beta\, x$, x is a vector of variables representing product attributes and β is the estimated coefficient (i.e., vector of parameters) [40].

Latent class models were used to uncover possible preference patterns among the assumed respondent segments [35]. These models used maximum likelihood procedures to estimate the coefficients for each segment; therefore, consumers were assumed to choose the alternative providing the highest utility level from those available. Individuals in the sample were assigned to these segments as linked to the probability of class membership [40].

Parameter heterogeneity was modelled across a set of latent groups of classes; for instance, Class c is latent because the individual is not revealed to the analyst but assigned by the model. Given a fixed number of classes c, the LC model estimates specific parameters

for each class as well as an individual's probability of belonging to the different classes. In the LC model, the utility of individual n choosing alternative j on t choice occasion is:

$$U_{njt|c} = \beta_c X_{njt} + \varepsilon_{njt|c} \quad (2)$$

where β_c is the parameter vector of class c associated with the vector of explanatory variables, and X_{njt} and $\varepsilon_{njt|c}$ are error terms. Hence, the probability that an individual will select alternative j, conditional on being in segment c, can be expressed as follows:

$$Prob\,[y = j|c] = \frac{exp(\beta_c x_{jn})}{\sum_{j=1}^{j} \beta_c x_{jn}} \quad (3)$$

Thus, we assumed that the population consists of a finite number of groups of individuals. The groups or segments are heterogeneous with different β coefficients between groups and common β parameters within groups. Therefore, consumer preference is homogenous within groups and heterogeneous between groups [35].

In this specific case, the utility function was defined as follows:

$$U_{njt} = \text{ASC} + \beta_1 \text{BHealthy}_{njt} + \beta_2 \text{BRecycle}_{njt} + \beta_3 \text{Price} + \varepsilon_{njt}. \quad (4)$$

The variable ASC is a dummy indicating selection of the no-buy option. The constant ASC is expected to be negative and significant, indicating that consumers obtain lower utility from the no-buy option than the designed alternatives. The price (PRICE) represents the price levels for the educational product and is expected to negatively affect utility. Two dummy variables were created, as the "BOOK" attribute has three levels (BHealthy and BRecycle). Each of these variables takes the value +1 if the product carries the corresponding label, and zero otherwise. Based on the estimated coefficients from Equation (1), we calculated the mean marginal willingness to pay (WTP) values for each attribute by taking the ratio of the β parameter as estimated for the nonmonetary attributes to the price parameter, then multiplying by -1.

The latent class model was estimated using NLOGIT 5.0.

4. Results

Our sample consisted of 50% women and 50% men, with an average age of 41 years old. The majority of the sample had a low or middle income level (EUR < 1500/month (46.3%) or EUR 1500–3500/month (43%), respectively) and a secondary or university educational level (46.7% and 37.7%, respectively). The sociodemographic variables of gender, age, education, and income level are summarized in Table 2. The results reveal two dominant feeding styles in the sample: indulgent and uninvolved. Both are characterised by low demandingness, indicating that parents reported a low degree of encouraging or discouraging their children's eating behaviour. A quarter of the sample reported an authoritative feeding style, which is more desirable because it is characterized by the high involvement of parents in nurturing, reasoning, and guiding the eating behaviours of their children.

Table 2. Sociodemographic characteristics and feeding styles.

	Sample
Sample size	300
Gender	
Female	50%
Male	50%
Age	
25–34	26.0%
35–44	39.0%
45–54	35.0%

Table 2. *Cont.*

	Sample
Education level	
Basic education	2.0%
Secondary school and professional training	46.7%
University	37.7%
Master's and PhD	13.7%
Income level	
<EUR 900/month	4.0%
EUR 900–1500/month	33.7%
EUR 1501–2500/month	28.3%
EUR 2501–3500/month	6.7%
EUR 2501–4500/month	6.3%
EUR > 4500/month	2.3%
No answer	18.7%
Feeding style	
Authoritarian	3.33%
Authoritative	25%
Indulgent	34.33%
Uninvolved	37.33%

To select the optimal number of classes, we estimated models for one to five classes and calculated the different model fit information criteria presented in Table 3. The Akaike Information Criterion (AIC), the Bayesian Information Criterion (BIC) and the log-likelihood value can all be used to investigate fit relative to the selected number of optimal classes (Table 3). The lower the information criteria, the better the model fit. It is known that using BIC (AIC) tends to under-fit (over-fit) models, while evidence in previous studies [41,42] shows that AIC3 (with three weightings instead of two for parameter penalization) outperforms the other two, correcting for the over-fitting. Nevertheless, the model with three classes started to deteriorate, resulting in larger standard errors. According to previous research, this suggests discontinuing the estimation of models with higher number of segments [43].

Table 3. Information criteria to determine the optimal number of consumer segments.

Number of Segments	Number of Parameters (p)	Log Likelihood (LL)	BIC	BIC/N	AIC	AIC/N	3AIC	3AIC/N	P^{-2}
2	9	−1983.99	4039.10	1.50	3986.0	1.48	3994.99	1.48	0.33
3	14	−1841.69	3793.99	1.41	3711.4	1.38	3725.37	1.38	0.38
4	19	−1780.22	3710.56	1.37	3598.4	1.33	3617.44	1.34	0.40
5	24	−1738.75	3667.13	1.36	3525.5	1.31	3549.51	1.31	0.41

Note: Log likelihood evaluated at zero is −2481.

Table 4 lists the latent class estimates. After testing different numbers of classes, we selected two classes. Class 1 contains 71% of the sample, and Class 2 comprises 28% of the sample. The fungi pack without a book was considered the reference when running the model. As expected, the PRICE attribute was negative in both segments; thus, parents' utility decreases when the price increases. The alternative specific constant (no-buy option) is negative and statistically significant. Thus, parents may prefer to buy one of the fungi-pack alternatives rather than not purchasing any of them.

All estimated coefficients related to BOOK were positive, suggesting that parents perceived more utility from fungi packs with a storybook than fungi packs without a book. However, differences existed between groups; parents in Class 1 had more utility when buying the fungi pack with the storybook about healthy foods, whereas parents in Class 2 perceived more utility from the fungi pack with the recycling and environmental storybook. Parents were willing to pay EUR 5.30 for a fungi pack with a storybook for children that

explains a healthy diet, and EUR 4.43 for one that shows how to recycle and care for the environment.

Table 4. Latent class model estimates.

	Parameters	
	Class 1	**Class 2**
Attribute Variables	**Coefficients (Standard Errors)**	**Coefficients (Standard Errors)**
BHealthy	1.72972 *** (0.09492)	0.39512 ** (0.19940)
BRecycle	1.44678 *** (0.08851)	0.58035 *** (0.20277)
No-buy	−3.37060 *** (0.19063)	−2.96470 *** (0.38866)
Price	−0.32588 *** (0.02284)	−0.75296 *** (0.06635)
Size	71%	28%
Willingness to pay ($-\beta$ attribute/β price)		
BHealthy	€ 5.30	
BRecycle	€ 4.43	

Note: ***, ** Significance at 1%, 5% level, respectively. Source: Elaborated by the authors.

Table 5 presents the characterization of the two classes. No significant differences were found between groups when comparing their sociodemographic characteristics. However, parents in both classes presented significant differences in their feeding styles. Class 1 had a higher percentage of parents with the indulgent and uninvolved styles, characterized by a low level of demandingness (i.e., parents put low or no pressure on children to eat and restrict foods). Class 2 had the highest percentage of authoritative and authoritarian parents, characterized by a high level of demandingness.

Table 5. Characteristics of consumer segments.

Personal Characteristics	**Class 1 (%)**	**Class 2 (%)**	**Chi-Square**
Gender			0.159
Female	47.4	56.5	
Male	52.6	43.5	
Age			0.642
25–34 years	24.7	29.4	
35–44 years	39.1	38.8	
45–54 years	36.3	31.8	
Education			0.977
Basic education	9.8	10.6	
Secondary	59.5	58.8	
University Master's or PhD	30.7	30.6	
Income			0.931
EUR < 1500/month	46.9	44.9	
EUR 1500–3500/month	42.3	44.9	
EUR > 3500/month	10.9	10.1	
Feeding style			0.047 **
Authoritative	20.9	35.3	
Authoritarian	2.8	4.7	
Indulgent	36.7	28.2	
Uninvolved	39.5	31.8	

Note: ** Significance at 5% level. Source: Elaborated by the authors.

5. Discussion

The present study considers a game-based environment using a narrative context with two thematic options. The idea of including both topics was to investigate motivations

underlying the choice of the fungi pack. The storybook choice related to care for the environment demonstrates a more altruistic motivation, whereas the storybook choice on a healthy diet indicates a personal motivation (better health). The results reveal that the sample was willing to pay more for the product with the book on healthy eating habits. This result is in line with the findings by Chen et al. [44], where consumers were willing to pay more for fresh produce with an eco-label (food grown with fewer pesticides) than those produced with less effect on water quality, indicating that the motivation to gain a personal benefit (food safety) was stronger than the motivation to care for the environment. Other studies have found that for most parents the wellbeing of their children is one of their central drivers when shopping for them, and concluded that emotional messages might be more persuasive than rational ones [45].

Moreover, overall findings indicate that the preference for the educational fungi-pack product linked to environment and diet seems to be influenced by feeding style. This is worth noting, as parents educate their children and influence their future behaviour. Some authors linked factors such as the character of parents, household income, or parents' physical activity with children's eating behaviour [46]. Other have suggested that controlling children's environment by providing healthy foods and avoiding unhealthy foods in the home can facilitate the development of preferences for fruits and vegetables due to familiarity [47].

Vollmer [26] linked parental feeding style with children's preferences for vegetables and high fat and sugar foods. In addition, Hughes [24] identified four feeding styles depending on the degree of demandingness and responsiveness of parents: authoritative, authoritarian, indulgent, and uninvolved. The findings of this research reveal that the most repeated feeding styles among families are uninvolved, indulgent and authoritative. Although the authoritative style would be the preferable behaviour, it is not the predominant feeding style in the sample. This behaviour would be preferable since it encourages children to eat healthy foods while providing them with some options considering their eating preferences. According to the participant responses, a greater percentage of the sample exhibited an uninvolved feeding style. This behaviour refers to little control and low involvement with the child [24,29]. Parents can guide children to healthy food preferences by providing appropriate supportive feeding practices.

Segmentation reveals two groups of parents with differentiated utilities towards the fungi pack (a plant-based educational product). Group 2 contained a greater proportion of parents with a high level of demandingness (authoritative and authoritarian), and these individuals demonstrated a higher preference for the narrative context with the environmental topic. Most respondents were grouped in Segment 1, where the dominant feeding behaviours were characterized by a low level of demandingness (parents put low or no pressure on children to eat or restrict foods).

Providing good patterns and creating a favourable home food environment may become problematic for parents who feel that they need to learn about health and nutrition, lack techniques to convince their children to eat home-cooked food, or ignore time-saving cooking strategies [48]. Interventions based on game actions have positively influenced food familiarization using tasting lessons and cooking or playing activities [49]. Interventions in schools using school gardens have increased vegetable consumption and led to changes in household food behaviour in children [50]. Other studies have demonstrated that repeated exposure of children to vegetables through picture books increases their willingness to taste [51] and strengthens the liking and consumption of vegetables despite family or demographic influences [52]. Game context actions positively influence fruit and vegetable intake as well as behaviour and knowledge concerning healthy eating [31].

6. Conclusions

This paper presents a case study to examine how parents may educate their children on healthier and more sustainable diets through plant-based games. For this purpose, a fungi-pack product was presented, and personal characteristics, feeding style behaviour

and purchase choice were investigated in the sample. The results reveal that parents gain more utility by purchasing a fungi-pack alternative rather than not buying the product and that parents also prefer a narrative context.

Regions worldwide face different challenges in transitioning to healthier and sustainable diets. Low- and middle-income countries have a double burden characterized by the coexistence of undernutrition and overweight and obesity, which is more prevalent in high-income groups in urban areas [53]. The observed trend is worrying because a rapid transition is happening from underweight to overweight and obesity [53]; some authors have stated that the education sector is key in fighting against this rising problem [54]. Hence, one of the challenges of the future is to convince the governments of low- and middle-income countries to implement the most effective interventions regarding the environment and proper nutrition at school for children and adolescents. Challenges in high-income countries are more oriented toward how to provide information to consumers about environmental food effects and not just nutritional value. Several investigations have focused on studying the health influence of ultra-processed plant-based food substitutes for animal-sourced food, how to influence food choices in order to transition to a healthier diet through marketing mechanisms, and how to reformulate product ingredients [55]. This approach is oriented toward educating people from the early stages of their lives, creating a favourable environment for the development of preferences for healthier food.

The tool we propose here may also be applied in school interventions in order to reach a larger number of segments. This game could be used as a game project in pre-school and primary school levels, where children would grow mushrooms and then would take them home to cook with the family. The participation of families in this kind of intervention is crucial in order to complement and reinforce the new habits adopted by the children. As Ventura and Birch [14] suggested, shaping the eating environment from children to parents could encourage children to influence parents to change dietary habits and food choices. It is essential to engage society, and particularly vulnerable groups, in order to educate them about the ecological transition toward a healthier and more sustainable diet. Future challenges include how to upscale the results of the present study, how to validate them in real life, and how to maintain educational interventions in the long term. As a second challenge, we found that such a transition would be difficult to reach if sustainable behaviour is not generalised; for us it would be important to address how to alleviate the social and economic inequalities that are widening among individuals. Finally, marketing campaigns may facilitate or diminish efforts to shape this transition; rewards to children are still present in high-sugar and high-fat products, while this strategy has not been applied to fruits and vegetables. Could this fungi game be use as a tool to draw the attention to these healthier foods?

Author Contributions: Conceptualization, T.d.M. and P.U.; methodology, T.d.M. and P.U.; formal analysis, T.d.M. and P.U.; investigation, T.d.M. and P.U.; resources, T.d.M.; data curation, P.U.; writing—original draft preparation, P.U. and T.d.M.; supervision, T.d.M.; project administration, T.d.M.; funding acquisition, T.d.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to there is not direct interaction between researches and participants. When that happens the Ethics Committee of Centro de Investigación y Tecnología Agroalimentaria de Aragón states that it is not necessary to request the Ethics Committee approval. In this study the sample was recruited by an external agency certificated by ISO 26362:2009.

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

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

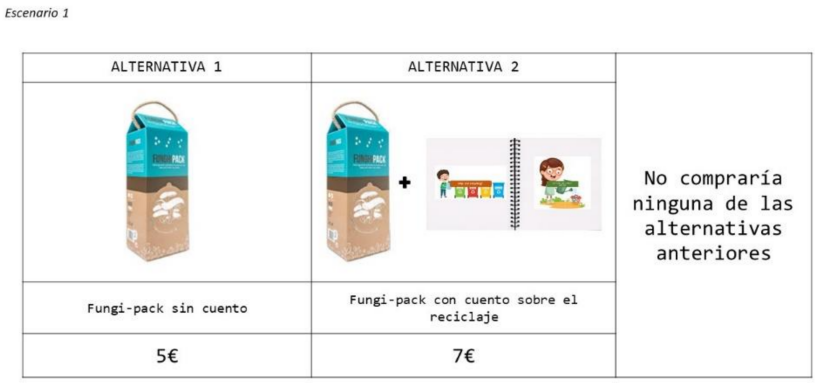

Figure A1. Choice experiment task example.

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