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Digital Leisure and Perceived Family Functioning in Youth of Upper Secondary Education

Ocio digital y funcionamiento familiar percibido en estudiantes de postobligatoria

Dr. M-Angeles Valdemoros-San-Emeterio
Tenured Lecturer of the Department of Science of Education in the University of La Rioja (Spain) (maria-de-los-angeles.valdemoros@unirioja.es) (http://orcid.org/0000-0002-7389-4039)

Dr. Eva Sanz-Arazuri
Associate Professor of the Department of Sciences of Education in the University of La Rioja (Spain) (eva.sanz@unirioja.es) (http://orcid.org/0000-0003-3035-8751)

Dr. Ana Ponce-de-León-Elizondo
Full Professor of the Department of Sciences of Education in the University of La Rioja (Spain) (ana.ponce@unirioja.es) (http://orcid.org/0000-0003-4622-8062)

Abstract
The “Network Society” is identified by accelerated changes that occur between real and virtual worlds. The progress of digital devices has generated a new model of leisure that it has conditioned family interactions. The aim of this research was to identify the relationship between digital leisure experiences and perceived family functioning in post-compulsory secondary education Spanish students. The sample was composed of 1,764 Spanish young people 15-18 years old; all of them were post-compulsory secondary education students. Students’ digital leisure activities were measured by an opening question by which they indicated the three most important leisure activities for them, and family functioning was measured by the answers from the Spanish adaptation for FACES IV questionnaire (Family Adaptability and Cohesion Scale). A descriptive analysis about digital leisure activities of young people was used. The family functioning coefficient of each subject was determined and, finally, the relationship between students’ family functioning perceived and students’ digital leisure practices assessed by a factorial analysis of variance (ANOVA). Young people give importance to digital leisure activities, highlighting social network participation, playing videogames and browsing the Internet. Cohesion, flexibility and family functioning are healthier when children don´t point to any digital activity into their preferred leisure practices. The results suggest that new research should be conducted to confirm whether this negative association between family functioning and digital leisure is causal or due to other factors.

Resumen
La «Sociedad Red» se identifica con acelerados cambios que se suceden entre el mundo real y el virtual. El progreso de dispositivos digitales ha generado un nuevo modelo de ocio que ha condicionado las interacciones familiares. El objetivo fue valorar la relación entre el funcionamiento familiar percibido por estudiantes españoles de educación secundaria postobligatoria y su práctica de ocio digital. La muestra ascendió a 1.764 estudiantes, entre 15 y 18 años de edad. El ocio digital se midió a partir de una pregunta abierta en la que debían señalar las tres actividades de ocio más importantes, y el funcionamiento familiar se valoró mediante la versión española del FACES IV (Escala de cohesión y adaptación familiar). Se realizó un análisis descriptivo

sobre las actividades de ocio digital de los jóvenes. Se determinó el coeficiente del funcionamiento familiar de cada sujeto y, mediante análisis de varianza (ANOVA) de un factor, se valoró la relación entre el funcionamiento familiar percibido por los estudiantes y las actividades de ocio digital practicadas por los mismos. Los jóvenes otorgan importancia a las actividades digitales de ocio, destacando la participación en redes sociales, jugar a videojuegos y navegar por Internet. La cohesión, la flexibilidad y el funcionamiento familiar gozan de mejor salud cuando los hijos no apuntan actividades digitales entre sus prácticas preferentes de ocio. Los resultados sugieren nuevas investigaciones que comprueben si esta asociación negativa entre funcionamiento familiar y ocio digital es causal o se debe a otros factores.

Keywords / Palabras clave

Leisure, youth, secondary education, leisure habits, parents, digital society, family, learning environment.
Ocio, jóvenes, educación secundaria, hábitos de ocio, padres, sociedad digital, familia, ambiente de aprendizaje.

1. Introduction

The term "Network Society" refers to rapid changes that occur both in the real world and in the virtual world (Valdemoros, Ponce de León, Sanz, & Caride, 2014) and which have become increasingly important for the new forms of leisure. Leisure is a value in itself, related to intention, satisfaction, and freedom (Cuenca & Goytia, 2012). It is also the stronghold of human development (Cuenca, Aguilar, & Ortega, 2010), because leisure time has gone from being an interesting opportunity to becoming established as a right, valued by youth to a greater or lesser extent (Aristegui & Silvestre, 2012). The advance of cheaper digital devices that are also easier to use, along with the generalized use of broadband Internet, have led to a new model of leisure, which has transformed traditional activities and generated new ones, resulting in an experience of leisure that can now be carried out either in the natural or the virtual world (García, López, & Samper, 2012).

Since the beginning of the XXI century, two new concepts have emerged: digital natives − modern youths who were born "connected" to the digital world − and digital immigrants − people who were born in the natural world, but were forced to migrate to the digital world (Prensky, 2001 a, b). The scientific literature shows that digital natives invest a lot of time in polishing their skills (Cox, Clough, & Marlow, 2008); they actively seek information online and are exposed to multiple communication channels regardless of the risk because change does not intimidate them. This leads them to enjoy the technologies in their leisure time (Buse, 2009). However, an intergenerational gap is observed with the digital immigrants, who assign different meanings to the binomial leisure-digital technologies, as well as to their activities (Selwyn, 2004).

Digital leisure consists of all the leisure opportunities involving digital technologies, for instance, consoles, mobile phones, the Internet, computers, and many digital devices from the technological industry (iPad, tablets, MP3, or e-books, among others) that have innovated the experience of leisure by adding connectivity, interactivity, hyper-textuality, anonymity, convenience, ubiquity, etc. (Viñals, Abad, & Aguilar, 2014). The meaning assigned by youth to many digital activities is not only that of entertainment but, also, of the construction of their personal and social identity (Morduchowicz, 2012; Schroeder, 2010) because through such activities, they can pursue in their leisure time some hobbies or quirks that go unnoticed in natural world (Orchard & Fullwood, 2010), they can interact selectively (Johnson, 2009; Patterson, 2012), and increase their cultural competencies and their potential for communication (Lepicnik & Samec, 2013). These issues syntonize with the uses and gratifications theory (Katz, Blumler, & Gurevitch, 1971), given that the consumption of digital leisure is geared to the instrumental use of the media, in which a mediatic emitter interacts with a receptor, which implies gratification linked to fun, interpersonal relations, personal identity, or access to information.

García-Continente, Pérez-Giménez, Espelt, and Nebot (2013) assert that technologies have been established as an essential referent for youth's leisure time, as well as an area for youth consumption. Access to the Information Technologies, and specifically, to the Internet, is generalized in this collective, (Gomes-Franco & Sendín-Gutiérrez, 2014; Muñoz, Ortega & al., 2014), just like the use of social networks (Colás, González, & de Pablos, 2013; Zheng & Cheok, 2011) and video games (Muñoz & al., 2014; Gros, 2009; Sánchez, Alfageme & Serrano, 2010). A report from the "Instituto de la Juventud de España" (Institute of Youth of Spain; INJUVE, 2012) notes that, among young people, computer use is parallel to the increase of Internet connection (93% access the Internet daily and 87% several times a day) and that Internet users highlight seeking information or documentation (82.0%), participating in social networks (79.6%), and using email (76.3%) as their three main activities. García, López de Ayala, and Catalina (2013) confirm that the priority digital leisure habits of Spanish youth are participating in social networks, visiting websites where they share videos, and surfing the Internet.

The rapid progress in the access to and use of technologies in the family has generated an intergenerational digital divide, and parents are concerned to see their children spending hours in front of the computer or connected to their friends by mobile phone, or playing with their console rather than interacting in person with other people. This concern, sometimes caused by parents' lack of information and training in the digital world, may disturb the family dynamics (Fernández-Montalvo, Peñalva, & Irazabal, 2015).

Recent studies have also shown that digital devices have led to qualitative changes in family functioning, the creation of new interaction scenarios, and even the rearrangement of the relational patterns of the contemporary family (Carvalho, Francisco, & Revals, 2015).

In order to understand the family functioning, we propose the Circumplex Model of Marital and Family Systems (Olson, 2000; Olson, Sprenkle, & Russell, 1979), as it has had an enormous academic impact in the last few years because it integrates various recurrent concepts in family therapy. This model emphasizes the need to appraise family functioning by conjointly examining two essential constructs: cohesion and flexibility (Martínez-Pampliega, Iraurgi, & Sanz, 2011). Cohesion is considered as the emotional reciprocity among family members, linked to family ties, family involvement, mutual respect, or the establishment of "internal boundaries" in intergenerational relationships. Flexibility is the ability to adequately cope with the changes and adjustments required in a particular situation, learning from the different experiences that emerge, and which can lead to consequences in the processes of leadership, negotiation, discipline, roles, or rules (Olson, 2011).

Family functioning will be unhealthy if group dependence is excessive, if there is lack of communication and/or inflexible or too flexible communication, creating an unbalanced system that cannot meet the demands of our changing society (Smith, Freeman, & Zabriskie, 2009).

Examining in depth the binomial of digital leisure-family functioning, some authors (Jago, Edwards, Urbanski, & Sebire, 2013) have noted a relationship between family functioning and children's digital leisure, showing that not only can family functioning affect children's digital leisure, but also that children's digital activity and the associated devices can affect family functioning.

On the one hand, the family can determine how to consume digital devices for the children's benefit (Ballesta & Cerezo, 2011). Studies with non-Spanish populations, like that of Atkin, Corder & al. (2015), reported that, when adolescents perceive a healthy family functioning, they dedicate less time to digital leisure such as playing video games or surfing the Internet. Specifically, Carlson, Fulton & al. (2010) and Sorbring (2014) confirmed that family flexibility protects children from misusing the technologies.

On the other hand, some investigations have found discrepant results about the facilitating or inhibiting power of digital devices and activities on family functioning. Some have confirmed that digital activity, such as the use of video games, mobiles, or surfing the Internet, encourages family cohesion (Oliva, Hidalgo & al., 2012) by strengthening family boundaries and contributing to the development of a collective identity through shared family projects (Mesch, 2006a). However, Mesch confirmed

that frequent Internet use has also been negatively associated with shared family time and positively with family conflicts, which can negatively affect family cohesion.

Discrepant results have also been found concerning communication. Some investigations report that digital activity enables building a channel through which family members communicate and share experiences, allowing them to synchronize their agendas, coordinate their leisure time and social interaction (Kennedy & Wellman, 2007; Fernández-Montalvo & al., 2015; Jupp & Bentlley, 2001; Mesch, 2006a, b). However, other authors claim that the Internet use does not contribute to improving family relations (Lenhart, Raine, & Lewis, 2001) because it reduces the time spent on shared activities and leads to social isolation (Nie, Hillygus, & Erbing, 2002; Subrahmanyam & al., 2000), as well as limiting face-to-face family relationships. It can also lead to the abuse of parental control of their children through the use of mobile phones or to the children's use of mobiles as a tool to escape from parental control. These situations can produce stress in all the members of the family system (Verza & Wagner, 2010). Authors like Gomes-Franco and Sendín-Gutiérrez (2014) or Godinho, Araújo, Barro, and Ramos (2014) even noted that impaired family functioning can cause youth to spend more time connected to the Internet, as a substitute for their family interactions or to protest against them.

More recent studies conclude that, given that digital devices will continue to increase their role in our social time, more research is needed to understand their impact on the health of family functioning (Wang, Chu, Viswanath, Wan, Lam, & Chan, 2015). The lack of national studies and the divergent results of prior research lead us to attempt to answer some questions: What percentage of young Spaniards from the upper educational stage consider digital leisure to be important? What digital leisure activities are the most relevant for students? How do Spanish adolescents between 15 and 18 years of age perceive their family functioning? Is there an association between digital consumption and the perception of their family's functioning as measured through family cohesion and flexibility?

In order to answer these questions, the goal of the present study is to evaluate the relationship between family functioning as perceived by Spanish students of Upper Secondary Education and their practice of digital leisure, in order to establish whether children's consumption of digital leisure facilitates or hinders family interactions. On the basis of these findings, lines of action could be established for family education in digital leisure.

2. Material and method

2.1. Population and sample

The target population of this study comprised students of Upper Secondary Education in Spain, aged between 15 and 18 years. The sample size, which included 1,764 students, was calculated for a 95% confidence level and a 2.3% margin of error, from the data provided by the Ministry of Education, Culture and Sport of the academic year 2010-2011.

Simple random sampling was performed, retaining the proportional affixation in each of the Autonomous Communities and in each instructional cycle of the General Education System (67% high school students, 32.7% students from the middle instructional cycle, and 10.3% students from basic vocational training).

The final sample units were selected through clusters during the academic year 2013-2014, choosing random schools in each Autonomous Community, with two conditions: we selected one rural school from each Autonomous Community and a proportion of one private-concerted center for every three public schools. The questionnaires were applied in a single session in each of the selected schools to the number of students required to cover the sample quota. This field work was carried out during the months of March and June of 2014.

Before applying the instruments, we requested permission from the General Director of Education of each Autonomous Community and from the directors of the schools, and we provided details of

the investigation. Two trained researchers went personally to each school to apply the instruments, in order to follow a standardized protocol.
Of the sample, 50.1% were female (n=885) and 49.9% were male (n=879). Their mean age was 17.60 years (SD=1.60), and 89.6% were of Spanish nationality (n=1,581).

2.2. Variables and instruments

We employed two instruments to collect information of the 5 variables that make up this study. The two variables concerning digital leisure were recorded through Item 21 of a much broader and more complex questionnaire that collected data for a piece of coordinated national research of which this work formed a part. That instrument was validated through a pilot test conducted in 8 Autonomous Communities and valued by 14 experts from 7 Spanish universities, who approved the final application. Its reliability was also tested.
These digital leisure variables were:

- "The Importance of Digital Leisure Activities", which aims to identify whether digital activities are a priority in the leisure of Spanish students of Upper Secondary Education. It consists of four categories:
  - Digital activities are not among the three main leisure activities
  - One digital activity is one of the three important leisure activities
  - Two digital activities are part of the three important leisure activities
  - Three digital activities are the three main leisure activities.
- "The Type of Digital Leisure Activity", which classifies digital activities into eight topics:
  - Seeking specific information on the Internet
  - Surfing the Internet without a specific goal
  - Writing my own blog or Website
  - Sharing information (videos, photos, presentations etc.)
  - Participating in chats, discussion forums, or virtual communities
  - Social networks (Facebook, Tuenti, Twitter, etc.)
  - Playing video games
  - Online gambling.
- Family Functioning was analyzed through three variables defined by Olson (2008). These data were obtained from the students' responses to the Spanish adaptation of the FACES IV questionnaire (Rivero, Martínez-Pampliega, & Olson, 2010), which collects information about the cohesion and flexibility perceived within the family. Participants rated their level of agreement/disagreement with each of the 42 items of the instrument on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).
- The variables of family functioning were:
- "Family Cohesion Ratio", which records the level of balance or imbalance perceived in family cohesion, by means of Items 1, 7, 13, 19, 25, 31, 37; 3, 9, 15, 21 27, 33, 39; 4, 10, 16, 22, 28, 34, and 40.
- "Family Flexibility Ratio", which indicates the level of balance or imbalance perceived in family flexibility by means of Items 2, 8, 14, 20, 26, 32, 38; 5, 11, 17, 23, 29, 35, 41; 6, 12, 18, 24, 30, 36, and 42.
- "Family functioning", assessed through the family functioning coefficient, indicates the level of functionality or dysfunctionality perceived in the family system. It is the result of the mean of the balance/imbalance between family cohesion and flexibility.

These three variables are numerical, with values below 1 indicating imbalance and values greater than 1 indicating balance. Imbalanced cohesion refers to an excess of either attachment or disengagement, whereas balanced family cohesion is considered healthy. Imbalanced flexibility could be

due either to excessive rigidity or chaos, whereas balanced family flexibility is considered healthy. The value of the three variables was calculated according to the directions of Olson (2008).

2.3. Data analysis

The data were analyzed in three phases. In the first phase, we conducted a descriptive analysis of adolescents' digital leisure activities. In the second phase, the Family Functioning Coefficient of each subject was determined, following the guidelines of Olson (2008). In the third phase, using one-factor analysis of variance (ANOVA), we assessed the relationship between family functioning perceived by the students and their digital leisure activities. Before performing the ANOVA, we tested the homoscedasticity or homogeneity of the variances, as well as the normality of the variables, to determine whether the required assumptions were met. Finally, we performed contrasts through multiple post-hoc comparisons; in those cases in which Levene's statistic had equal variances, we employed Tukey's HSD test; if the variances were not equal, we used the Games-Howell test. The level of significance used in all cases was $p<.05$.

3. Results

Almost 30% of the Spanish students of Upper Secondary Education reported one digital activity among their three most important leisure practices.

The three most mentioned digital activities were participating in social networks (13.8%), playing video games (12.3%), and surfing the Internet (3.5%). The practice of activities such as seeking information on the Internet (3.5%), participating in chats (0.8%), sharing information (0.6%), online gambling (0.4%), and writing their own blog (0.3%) was considerably lower.

Focusing on family functioning perceived by Spanish students of Upper Secondary Education, the data show very positive values, with means above 1 both in cohesion (Cohesion Ratio=2.21) and flexibility (Flexibility Ratio=1.75), as well as in family functioning (Family Functioning Coefficient=2). This shows that Spanish adolescents perceive their families as being very balanced on cohesion, with emotional ties that are not excessively binding, and as having healthy flexibility with some discipline, without rigidity or chaos, and hence, a fairly balanced family functioning.

Examining more closely the relationship between adolescents' digital leisure and family functioning, these results confirm that family cohesion is healthier when young people do not place any digital activities among their favorite leisure practices versus when they report one or two digital leisure activities among their favorite activities. As shown in Table 1, family cohesion is healthier when young people practice one digital leisure activity than when they perform two ($X_{0\ \text{digital activity}}=2.39\pm1.11$; $\dot{X}_{1\ \text{digital activity}}=2.23\pm1.07$; vs $X_{2\ \text{digital activity}}=2.14\pm1.04$; $F(3, 1646)=9.351$, $p<.001$)

Table 1: Multiple comparisons by Games-Howell: Analysis of the Family Cohesion Ratio based on digital leisure

(I) Digital leisure	(J) Digital leisure	Difference of means (I-J)	Standard error	p
.00	1.00	.19406*	.06045	.008
	2.00	.72392*	.11300	.000
	3.00	.49852	.20623	.133
1.00	.00	-.19406*	.06045	.008
	2.00	.52986*	.11954	.000
	3.00	.30446	.20989	.496
2.00	.00	-.72392*	.11300	.000
	1.00	-.52986*	.11954	.000
	3.00	-.22540	.23058	.764

3.00	.00	-.49852	.20623	.133
	1.00	-.30446	.20989	.496
	2.00	.22540	.23058	.764

p < .005.

Family flexibility, defined by the quality and expression of leadership and family organization, the relationship among roles, as well as the rules and negotiations in family interactions, is also healthier in families whose children do not indicate any digital leisure activity among their three priority activities versus those who indicated one digital activity ($X_{0\ digital\ activity}$=1.87±0.76 vs $X_{1\ digital\ activity}$=1.75±0.73; F(3, 1633)=3.763, p<.005) (table 2).

Table 2: Multiple comparisons by Games-Howell: Analysis of the Family Flexibility Ratio based on digital leisure

(I) Digital leisure	(J) Digital leisure	Difference of means (I-J)	Standard error	p
.00	1.00	.12430*	.04282	.020
	2.00	.23003	.11762	.205
	3.00	.09007	.24052	.982
1.00	.00	-.12430*	.04282	.020
	2.00	.10573	.12114	.819
	3.00	-.03423	.24226	.999
2.00	.00	-.23003	.11762	.205
	1.00	-.10573	.12114	.819
	3.00	-.13996	.26587	.953
3.,00	.00	-.09007	.24052	.982
	1.00	.03423	.24226	.999
	2.00	.13996	.26587	.953

p < .005.

Lastly, we confirmed that family functioning is also healthier when youngsters do not report any digital activities among their priority leisure practices versus when they indicate one or two digital leisure activities among their favorites. Moreover, family functioning is healthier among those who practice one digital leisure activity compared to those who perform two digital activities ($X_{0\ digital\ activity}$=2.13±0.84; $X_{1\ digital\ activity}$ =1.94±0.80; $X_{2\ digital\ activities}$=1.87±0.82;F(3, 1608)=8.154, p<.001) (table 3).

Table 3: Multiple comparisons by Games-Howell: Analysis of the Family Functioning Ratio based on digital leisure

(I) Digital leisure	(J) Digital leisure	Difference of means (I-J)	Standard error	p
.00	1.00	.16462*	.04705	.003
	2.00	.48386*	.09926	.000
	3.00	.29558	.21333	.537
1.00	.00	-.16462*	.04705	.003
	2.00	.31925*	.10395	.017
	3.00	-.13096	.21555	.927
2.00	.00	-.48386*	.09926	.000
	1.00	-.31925*	.10395	.017
	3.00	-.18828	.23259	.849
3.00	.00	-.29558	.21333	.537
	1.00	-.13096	.21555	.927
	2.00	.18828	.23259	.849

p < .005.

4. Discussion

This study reveals that Spanish students of Upper Secondary Education grant value to digital activities in their leisure time, although the importance varies according to the type of practice. In particular, in accordance with other studies and authors, the target participants of this study underscore as priority activities their participation in social networks (Colás, González & de Pablos, 2013; García, López de Ayala & Catalina, 2013; INJUVE, 2012; Zheng & Cheok, 2011), playing video games (Muñoz & al., 2014; Gros, 2009), and surfing the Internet (García & al., 2013; Gomes-Franco & Sendín-Gutiérrez, 2014; Muñoz & al., 2014), whereas other digital activities, like participating in chats, sharing information over the network, online gambling, or writing their own blog are less important to them.

Regarding family functioning perceived by the analyzed young Spaniards, we observed balanced family cohesion, revealing affective links without excessive dependence, healthy flexibility without rigidity or chaos and, consequently, a sufficiently balanced and serene family functioning.

In relation to the link between children's digital leisure and family functioning, this research makes some interesting contributions. For example, family cohesion is healthier when young people do not indicate any digital activities among their predominant leisure practices than when they report one or two digital leisure practices among their favorites. Moreover, family functioning is healthier if the adolescents perform a single digital leisure activity than if they perform two activities. This reveals that lower digital consumption in children is linked to families with stronger emotional ties among family members, possible emotional reciprocity, family engagement, mutual respect between parents and children, as well as the establishment of "internal boundaries" and alliances in intergenerational relationships. These results are consistent with the conclusions of Mesch (2006a) but they contradict the findings of other studies (Kennedy & Wellman, 2007; Fernández-Montalvo & al., 2015; Oliva, Hidalgo & al., 2012) that confirmed important benefits of digital devices for the cohesion of family systems.

We obtained similar findings regarding family flexibility. Spanish students of post-compulsory secondary education who do not place any digital leisure practices among their three priority activities are related to families with healthier flexibility as compared to families whose children indicated one digital leisure activity among their three preferred activities. This shows that families with healthy flexibility can adequately cope with changes, adapt to and learn from different experiences and situations, which can often lead to practical consequences for those involved in the processes of leadership, negotiation, discipline, roles, or rules. These results are more in accordance with authors like Verza and Wagner (2010), who confirmed that the use of digital devices can limit face-to-face relations within the family and increase stressful family situations.

These findings associate children's digital leisure with family functioning; we emphasize that this concept includes cohesion and flexibility. In contrast to the findings of other authors (Kennedy & Wellman, 2007; Fernández-Montalvo & al., 2015; Jupp & Bentlley, 2001), this research confirms that family functioning is healthier when the children do not place digital activities among their favorite leisure practices. In fact, family functioning is more complete when children practice one digital leisure activity than when they practice two. These issues confirm that optimal internal family functioning is related to children's lower practice of digital leisure. This leads to considering that children's greater practice of digital activities fosters unhealthier functioning, translating into a system that is either inflexible or too flexible, with greater dependence among its members and little capacity to cope with the demands of the “Network Society” (Smith & al., 2009). All this hinders positive juvenile and family leisure in which to enjoy interesting, attractive, and enriching experiences that are significantly related to satisfaction with family life (Agate, Zabriskie, Agate & Poff, 2009; Hornberger, Zabriskie & Freeman, 2010; Smith & al., 2009).

The conclusions obtained in this research lead us to consider that the new entertainment experiences related to the digital world require an adaptation of the family educational project. Families should receive guidance and education so they can naturally incorporate technology into their daily

life (Bringué, Sádaba & Sanjurjo, 2013). In this regard, it is encouraging to find research that confirms that families express great interest in the use and incorporation of digital media, as well as in receiving training in the use of these devices (Ballesta & Cerezo, 2011).

One of the limitations of this research is the lack of data on shared experiences of digital leisure within the family and their relation to family functioning, in order to confirm our findings of the relationship between family functioning and children's digital leisure. Future research should investigate shared digital activities within the family and determine their potential to improve family cohesion and flexibility and, hence, to make internal family functioning healthier.

We highlight that the present work identifies an association between digital leisure and the family functioning of young students of Upper Secondary Education but it fails to determine the possible causality or direction of the relationship. Future studies should focus on resolving this issue, which would provide important insights for intervention to improve digital use, conciliating it with a high quality family life.

Supports

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References

Agate, J.R., Zabriskie, R.B., Agate, S.T., & Poff, R. (2009). Family Leisure Satisfaction and Satisfaction with Family Life. Journal of Leisure Research, 41(2), 205-223.

Aristegui, I., & Silvestre, M. (2012). El ocio como valor en la sociedad actual. Arbor, 188, 283-291. https://doi.org/10.3989/arbor.2012.754n2001

Atkin, A.J., Corder, K., Goodyer, I., Bamber, D., Ekelund, U., Brage… Van-Sluijs, E.M.F. (2015). Perceived Family Functioning and Friendship Quality: Cross-sectional Associations with Physical Activity and Sedentary Behaviours. International Journal of Behavioral Nutrition and Physical Activity, 12, 23. https://doi.org/10.1186/s12966-015-0180-x

Ballesta, J., & Cerezo, M.C. (2011). Familia y escuela ante la incorporación de las tecnologías de la información y la comunicación. Educación XX1, 14(2), 133-156. http://dx.doi.org/10.5944/educxx1.14.2.248

Bringué, X., Sádaba, C., & Sanjurjo, E. (2013). Menores y ocio digital en el siglo XXI. Análisis exploratorio de perfiles de usuarios de videojuegos en España. Bordón, 65(1), 147-166.

Buse, C.E. (2009). When You Retire, Does Everything Become Leisure? Information and Communication Technology Use and the Work/leisure Boundary in Retirement. New Media & Society, 11(7), 1.143-1.161. https://doi.org/10.1177/1461444809342052

Carlson, A., Fulton, E., & al. (2010). Influence of Limit-Setting and Participation in Physical Activity on Youth Screen Time. Pediatrics, 126(1), e86-e96. https://doi.org/10.1542/peds.2009-3374

Carvalho, J., Francisco, R., & Revals, A.P. (2015). Family Functioning and Information and Communication Technologies: How do They Relate? A Literature Review. Computers in Human Behavior, 45, 99-108. https://doi.org/10.1016/j.chb.2014.11.037

Cox, A.M., Clough, P.D., & Marlow, J. (2008). Flickr: A First Look at User Behaviour in the Context of Photography as Serious Leisure. Information Research, 13 (1). (http://goo.gl/fF24qk) (2016-03-30)

Cuenca, M., Aguilar, E., & Ortega, C. (2010). Ocio para innovar. Bilbao: Universidad de Deusto, Documentos de Estudios de Ocio, 42.

Cuenca, M., & Goytia, A. (2012). Ocio experiencial: antecedentes y características. Arbor, 188, 265-281. https://doi.org/10.3989/arbor.2012.754n2001

Fernández-Montalvo, J., Peñalva, A., & Irazabal, I. (2015). Hábitos de uso y conductas de riesgo en Internet en la preadolescencia [Internet Use Habits and Risk Behaviours in Preadolescence]. Comunicar, 44, 113-120. https://doi.org/10.3916/C44-2015-12

García, A., López-de-Ayala. M.C., & Catalina, B. (2013). Hábitos de uso en Internet y en las redes sociales de los adolescentes españoles. Comunicar, 41, 195-204. https://doi.org/10.3916/C41-2013-19

García, E., López, J., & Samper, A. (2012). Retos y tendencias del ocio digital: transformación de dimensiones, experiencias y modelos empresariales. Arbor, 188(754), 395-407. https://doi.org/10.3989/arbor.2012.754n2011

García-Continente, X., Pérez-Giménez, A., Espelt, A., & Nebot Adell, M. (2013). Factors Associated with Media Use Among Adolescents: a Multilevel Approach. European Journal of Public Health, 24(1), 5-10. https://doi.org/10.1093/eurpub/ckt013

Godinho, J., Araújo, J., Barrio, H., & Ramos, E. (2014). Characteristics Associated with Media Use in Early Adolescence. Cadernos de Saúde Pública, 30(3), 587-598. https://doi.org/10.1590/0102-311X00100313

Gros, B. (2009). Certezas e interrogantes acerca del uso de los videojuegos para el aprendizaje. Comunicación, 7(1), 251-264.

Hornberger, L.B., Zabriskie, R.B., & Freeman, P. (2010). Contributions of Family Leisure to Family Functioning Among Single-Parent Families. Leisure Sciences, 32(2), 143-161. https://doi.org/10.1080/01490400903547153

Instituto de la Juventud de España (2012). Jóvenes y TIC. Madrid: INJUVE. (http://goo.gl/n5BIFa) (2015-03-02).

Jago, R., Edwards, M.J., Urbanski, C.R., & Sebire, S.J. (2013). General and Specific Approaches to Media Parenting: A Systematic Review of Current Measures, Associations with Screen-Viewing, and Measurement Implications. Childhood Obesity, 9(1), 51-72. https://doi.org/10.1089/chi.2013.0031

Johnson, N.F. (2009). Cyber-relations in the Field of Home Computer Use for Leisure: Bourdieu and teenage technological experts. E-Learning, 6(2), 187-197. https://doi.org/10.2304/elea.2009.6.2.187

Jupp, B., & Bentley, T. (2001). Surfing Alone? E-commerce and social capital (pp. 97-118). In J. Wilsdon (Ed.), Digital Futures: Living in a Dot-com World. London: Earthscan.

Katz, E., Blumler, J., & Gurevitch, M. (1974). Uses and Gratifications Research. In The Public Opinion Quarterly, 37(4), 509-523.

Kennedy, T.L.M., & Wellman, B. (2007). The Networked Household. Information, Communication & Society, 10(5), 645-670.

Lenhart, A., Rainie, L., & Lewis, O. (2001). Teenage Life Online: The Rise of the Instant Message Generation and the Internet's Impact on Friendships and Family Relationships. Washington DC: Pew Internet & American Life Project.

Lepicnik, J., & Samec, P. (2013). Uso de tecnologías en el entorno familiar en niños de cuatro años de Eslovenia [Communication Technology in the Home Environment of Four-year-old Children (Slovenia)]. Comunicar, 40(XX), 119-126. https://doi.org/10.3916/C40-2013-03-02

Martínez-Pampliega, A., Iraurgi, I., & Sanz, M. (2011). Validez estructural del FACES-20Esp: Versión española de 20 ítems de la Escala de Evaluación de la Cohesión y Adaptabilidad Familiar. Revista iberoamericana de Diagnóstico y Evaluación Psicológica, 29(1), 147-165.

Mesch, G.S. (2006a). Family Relations and the Internet: Exploring a Family Boundaries Approach. The Journal of Family Communication, 6(2), 119-138. https://doi.org/10.1207/s15327698jfc0602_2

Mesch, G.S. (2006b). Family Characteristics and Intergenerational Conflicts over the Internet. Information, Communication and Society, 9(4), 473-495. https://doi.org/10.1080/13691180600858705

Morduchowicz, R. (2012). Los adolescentes y las redes sociales: la construcción de la identidad juvenil en internet. Buenos Aires: Fondo de Cultura Económica.

Muñoz, R., Ortega, R., Batalla, C., López, M.R., Manresa, J.M., & Torán, P. (2014). Acceso y uso de nuevas tecnologías entre los jóvenes de educación secundaria, implicaciones en salud. Estudio JOITIC. Atención primaria, 46(2), 77-88. https://doi.org/10.1016/j.aprim.2013.06.001

Nie, N.H., Hillygus, D.S., & Erbring, L. (2002). Internet Use, Interpersonal Relations, and Sociability. In B. Wellman, & C. Haythornthwaite (Eds.), The Internet in Everyday Life (pp. 215-243). Malden, MA: Blackwell.

Oliva, A., Hidalgo, M.V., & al. (2012). Uso y riesgo de adicciones a las nuevas tecnologías entre adolescentes y jóvenes andaluces. Alicante: AguaClara.

Olson, D.H. (2000). Circumplex Model of Marital and Family Systems. Journal of Family Therapy, 22(2), 144-167. https://doi.org/10.1111/1467-6427.00144
Olson, D.H. (2008). FACES. IV Manual. Minneapolis (MN): Life Innovations.
Olson, D.H. (2011). FACES. IV and the Circumplex Model: Validation Study. Journal of Marital and Family Therapy, 37(1), 64-80. https://doi.org/10.1111/j.1752-0606.2009.00175.x
Olson, D.H., Sprenkle, D.H., & Russell, C. (1979). Circumplex Model of Marital and Family Systems. I. Cohesion and Adaptability Dimensions, Family Types, and Clinical Applications. Family Process, 18, 3-28. https://doi.org/10.1111/j.1545-5300.1979.00003.x
Orchard, L.J., & Fullwood, C. (2010). Current Perspectives on Personality and Internet Use. Social Science Computer Review, 28(2), 155-169. https://doi.org/10.1177/0894439309335115
Patterson, A. (2012). Social-networkers of the World, Unite and Take Over: A Meta-introspective Perspective on the Facebook Brand. Journal of Business Research, 65, 527-534. https://doi.org/10.1016/j.jbusres.2011.02.032
Prensky, M. (2001a). Digital Natives, Digital Immigrants. (http://goo.gl/20sMqV) (2015-03-06).
Prensky, M. (2001b). Digital Natives, Digital Immigrants, Part II: Do They Really Think Differently? (http://goo.gl/3DgSwJ) (2015-03-06).
Rivero, N., Martínez-Pampliega, A., & Olson, D. (2010). Spanish Adaptation of the FACES IV Questionnaire. Psychometric Characteristics. The Family Journal, 18, 288-296.
Sánchez, P.A., Alfageme, M.B., & Serrano, F.J. (2010). Aspectos sociales de los videojuegos. Revista Latinoamericana de Tecnología Educativa, 9(1), 29-41.
Schroeder, R. (2010). Mobile Phones and the Inexorable Advance of Multimodal Connectedness. New Media & Society, 12(1), 75-90. https://doi.org/10.1177/1461444809355114
Selwyn, N. (2004). Reconsidering Political and Popular Understandings of the Digital Divide. New Media Society, 6(3), 341-362. https://doi.org/10.1177/1461444804042519
Smith, K.M., Freeman, P.A., & Zabriskie, R. (2009). An Examination of Family Communication within the Core and Balance Model of Family Leisure Functioning. Family Relations, 58(1), 79-90. https://doi.org/10.1111/j.1741-3729.2008.00536.x
Sorbring, E. (2014). Parents' Concerns about Their Teenage Children's Internet Use. Journal of Family Issues, 35(1), 75-96. https://doi.org/10.1177/0192513X12467754
Subrahmanyam, K., Kraut, R.E., Greenfield, P.M., & Gross, E.F. (2000). The Impact of Home Computer use on Children's Activities and Development. The Future of Children, 10, 123-144.
Valdemoros, M.A., Ponce-de-León A., Sanz, E., & Caride, J.A. (2014). La influencia de la familia en el ocio físico-deportivo juvenil: nuevas perspectivas para la reflexión y la acción. Arbor, 190(770): 192. https://doi.org/10.3989/arbor.2014.770n6013
Verza, F., & Wagner, A. (2010). Uso del teléfono móvil, juventud y familia: Un panorama de la realidad brasileña. Psychological Intervention, 19(1), 57-71.
Viñals, A., Abad, M., & Aguilar, E. (2014). Jóvenes conectados: una aproximación al ocio digital de los jóvenes españoles. Communication & Papers, 4(3), 52-68.
Wang, M.P., Chu, J.T., Viswanath, K., Wan, A., Lam, T.H., & Chan, S.S. (2015). Using Information and Communication Technologies for Family Communication and Its Association with Family Well-Being in Hong Kong: Family Project. Journal of Medical Internet Research, 17(8), 207. https://doi.org/10.2196/jmir.4722
Zheng, R., & Cheok, A. (2011). Singaporean Adoles-cents´ Perceptions of on-line Social Communication: An Exploratory Factor Analysis. Journal Educational Computing Research, 45(2), 203-221.