Sleep Patterns and Sleep Disruptions in Preschoolers Midst the COVID-19 Pandemic Lockdown in Greece

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Abstract

The COVID- 19 pandemic and the restrictions to minify contagion, affected globally the entire population. The prolonged home confinement during the COVID-19 outbreak changed dramatically the family life taking into consideration school closures, online education, continuous need for self-protection, restrictions of social interactions and work schedule alterations. Designed to examine the impact of COVID-19 lockdown on preschoolers' sleep this study documented sleep patterns during the COVID-19 lockdown and explored the effects of screen time and diet. Parents of 146 children provided survey data on their children's night-time sleep habits, dietary habits and screen time usage. Children's sleep problems were measured with the Children Sleep Habits Questionnaire. Descriptive and qualitative analyses showed that most parents (54.1%) reported that children's sleep patterns changed during the imposed home confinement. Children with more sleep problems were more likely to have increased screen exposure. The present study provides evidence on the negative impact of the COVID-19 pandemic on the sleep behavior of Greek preschoolers. Focused action is probably needed to safeguard and promote children's overall physical and mental health outcomes during the pandemic and afterwards during the crisis recovery period.

Highlights

- Preschoolers' sleep behavior has been highly influenced by the imposed lockdowns
- Prolonged screen exposure is associated with increased sleep difficulties
- Reasons for screen exposure were mainly related to education, entertainment, communication, familiarity with technology, and gaming

Introduction

When the coronavirus disease 2019 (COVID-19) pandemic reached Greece in February 2020, a national state of emergency was declared. Authorities responded swiftly with aggressive testing and containment measures, often resulting in local or national lockdowns, national school closures and social distancing measures (Parlapani et al., 2020). These lockdown policies, needed to be periodically re-instated to control COVID-19 recurrences during the following year, and Greeks were encouraged to shelter at home and to maintain parents' work and children's learning and play indoors. Online working and learning have been widely promoted to replace face-to-face activities until May 2021. These unprecedented changes interrupted family life, professional and academic routines, while both recreational and social relationships have been reduced.

The ongoing COVID-19 pandemic and the associated social restrictions through the pandemic lockdown period had an impact on mental health in the entire population (Hao et al., 2020; Sønderskov et al., 2020; Wang, Pen et al., 2020), while in earlier pandemics, such as severe acute respiratory syndrome pandemic (SARS-CoV-1 in 2003), studies showed the emerge of psychological distress along the pandemic or shortly thereafter (Peng et al., 2010). The emerging literature on COVID-19 crisis suggests that children

may also experience increased emotional arousal, increased appetite and sleep disturbances as a result of the pandemic and the restrictive measures (Bruni et al., 2021; Liu et al., 2020). The enormous disruption to preschooler's everyday routines may have had a significant impact on their health and development.

Poor sleep quality is associated with heightened stress and anxiety related to COVID-19 pandemic (Liu et al., 2020; Wang, Zhang et al., 2020). In addition, the significant disruptions to family lifestyles during home confinement, including prolonged screen exposure and nighttime exposure to screens' bright light -which may suppress melatonin production-, displacing physical and outdoor activities and peer interaction, may also further exacerbate sleep disturbances (Lissak, 2018; Liu et al., 2020; Nagata et al., 2020). The reduction in active outdoor play and higher-intensity physical activity are directly associated with decreased physical activity levels and more sedentary time, as well as mental health deterioration (Herrington & Brussoni, 2015) and poor sleep in preschoolers (Belmon et al., 2019; Janssen et al., 2020).

The increases in overall screen time may result from activities that include entertainment, online education or/and self-directed learning and may also be an unavoidable reality among families where parents are working remotely. Although excessive screen time may be associated with higher health risks such as poor sleep, sedentary time as well as snacking, or even cardiovascular disease including obesity, high blood pressure, and insulin resistance (Lissak, 2018; Nagata et al., 2020), given the current measurements during COVID-19 pandemic, rises in screen time may be inevitable and even beneficial to foster positive youth development, socialization and education (Nagata et al., 2020). Most remote learning is conducted via screens, while toddlers need social interaction with trusted caregivers to develop their language, motor, cognitive, and social- emotional skills (Chassiakos et al., 2016). Children may also use social media, online activities and virtual games to stay socially connected with relatives, friends and peers while practicing social distancing. In addition, many parents use video chat (e.g. Viber, Skype, FaceTime, Zoom) as an interactive media platform that facilitates social connection with relatives.

It might be expected that eating habits would potentially improve during lockdown, since families staying at home may consume healthier dietary meals and less fast-food, but in contrast, recent studies, suggest the increase of stress- driven eating behaviors and poor eating habits due to the lack of emotional support from family and friends (Philippe et al., 2021; Lopez- Bueno et al., 2020). Higher diet quality, lower body mass index and higher levels of physical activity have been associated with longer sleep duration (Khan et al., 2015).

Most studies exploring COVID-19 effects on mental health and wellbeing have focused on older children and young people, while less attention has been paid on how national lockdowns and restrictive measures have affected the sleep of younger (preschool) children, who require greater parental supervision to manage their activities and habits during lockdown (Clark et al. 2020). In this study, parents of preschoolers (aged two- to six- year- old) shared their children's experiences of the spring lockdown in 2021. This study aimed to provide important insights into the impact of the pandemic and confinement measures on sleep routines of preschool children in Greece.

Methods

Participants and procedure

This cross-sectional study based on a conventional sample was conducted using the online survey portal “Google Forms”. The study took place during the second wave of the COVID-19 pandemic in Greece, from April 10th to April 13th, 2021; four months after the country entered the second national lockdown. Only parents or primary caregivers of young children were invited to join the study. Participation was completely anonymous and voluntary. Inclusion criteria were: i) consent to participate, ii) being parent/primary caretaker of a toddler or preschooler, iii) aged over 18 years, and iv) fluent in Greek. A total of 146 respondents fulfilling inclusion criteria entered the study.

Ethical approval was granted before the initiation of the study from the *removed for blind review* (105/339/19.02.21) and the Ethics Board of the Research Committee of *removed for blind review* (6.401/6/23.03.2021). Informed consent prior to survey enrollment was a prerequisite for study inclusion. Confidentiality was assured and participants were able to withdraw consent or discontinue participation at any time. The entire study was performed in accordance with the Declaration of Helsinki.

Measures

A set of questions was included to assess parents’ and children’s demographic characteristics. Respondents were asked to provide information about their gender, family status, income, and area of residence as well as information regarding their child’s age and gender.

Open-ended questions were also included to assess the potential impact of the COVID-19 pandemic, targeting changes in children’s behavior in relation to sleep routine, screen exposure, physical activity and diet.

Screen time

Question matrixes were used to assess respondents’ and child's screen time use (television, computer, smartphone/tablet, gaming console). Response options were as follows: a. not at all, b. half hour, c. 1 hour, d.2 hours, e. more than 2 hours. Apart from the above, participants were asked to complete the Greek versions of the following scales:

Children’s Sleep Habits Questionnaire (CSHQ; Owens et al., 2000; Mavroudi et al., 2018).

The CSHQ is a 33-item parent questionnaire assessing occurrence of sleep problems (example item “*Child falls asleep within 20 minutes after going to bed*”) covering bedtime resistance (6 items), sleep onset delay (1 item), sleep duration (3 items), sleep anxiety (4 items), night wakings (4 items), parasomnias (7 items), sleep disordered breathing (3 items) and daytime sleepiness (8 items). Its items are rated on a 3-point scale: "usually" (5 to 7 times per week, scored as 3 points), "sometimes" (2 to 4

times per week, scored as 2 points) or "rarely" (0 to 1 time per week, scored as 1 point). Some items are present in more than one subscale, therefore the total sleep disturbance score derives from summing the 33 items and not the subscales' sub-scores. Total score greater than 41 points is used as cut-off for the identification of sleep problems. In this study, CSHQ demonstrated an overall Cronbach's alpha of .77.

Mediterranean Diet Quality Index for children and adolescents (KIDMED index; Kontogianni et al., 2008; Serra-Majem et al., 2004).

The KIDMED evaluates adherence to the Mediterranean diet. It consists of 16 dichotomous yes/no questions (example item "*Has fresh or cooked vegetables regularly once a day?*") including 4 questions with negative connotation related to consumption of fast food, baked goods, sweets and skipping breakfast. The questionnaire can be either self-administered or conducted by interview. KIDMED total scores are interpreted as follows: 0–3 = poor adherence; 4–7 = average adherence; 8–12 = good adherence to the Mediterranean diet. The internal consistency for this study was .78.

Data analysis

Little's MCAR test was used to proper handling of missing values. Data are presented as means (standard deviations, SD) or absolute and relative prevalence (n [%]). Chi squared analysis, student t-tests and paired t-tests were used to clarify the statistically significant differences between the main variables. A Hierarchical linear regression for the trends between screen exposure, dietary habits and sleep problems was analyzed. All tests were two-tailed, with a significance level of $p < 0.05$. Statistical analyses were performed by the Statistical Package for Social Sciences (SPSS) version 26.

Thematic analysis was conducted on data consisting of the answers on the open questions provided in the survey. Qualitative data were coded and analyzed to show emerging themes. Data coding was performed inductively based on the key concepts revealed from the data to determine common viewpoints and experiences among participants. The development and confirmation of the thematic coding structure involved two researchers who discussed and decided the emerged themes. Themes of changes in sleep patterns, screen exposure, eating habits and their justification were analyzed and discussed.

Results

Participants

Data were collected from 146 parents, 130 mothers (89%) and 16 fathers (11%) who provided information on time spent online, sleep patterns and eating habits of 146 children [81 boys (55.5%) and 65 girls (44.5%), Mean age = 3.93; SD = 1.6, age range: 1–9 years old]. The highest percentage of missing data was 11%. Little's MCAR test indicated that data were missing completely at random (Little's MCAR test: Chi-Square = 104.043, df = 85, sig. = .079).

The majority of the respondents (91%) was married, highly educated (41% postgraduate studies) and employed (97%). Most of the participants reported a family yearly income of more than 20,000 Euros (47%). Additional demographic data are presented in Table 1. Chi-squared analysis showed a non-significant association between gender and sociodemographic characteristics.

Table 1

Parents' Sociodemographic Characteristics

Gender (parents)	*Count*	*%*
Female	130	89.0
Male	16	11.0
Total	146	100.0
Marital status		
Married/ Living together	133	91.1
Divorced/ Separated	7	4.8
Single	1	.7
In relationship	2	1.4
Total	143	97.9
Missing	3	2.1
Educational level		
Lyceum	27	18.5
2 year graduate school	5	3.4
Technological Education	20	13.7
University	32	21.9
Postgraduate studies	61	41.8
Total	145	99.3
Missing	1	.7
Income		
<5.000	6	4.1
5.000-10.000	25	17.1
10.000-20.000	45	30.8
>20.000	68	46.6
Total	144	98.6
Missing	2	1.4
Residence		
Big city	118	80.8

Small city	12	8.2
Village	15	10.3
Total	145	99.3
Missing	1	.7

Parents were asked about changes in their working schedule and monthly income as a result of COVID-19-related measures. The majority of the respondents had to shift on remote working (34.9%), while their income remained stable for a subtotal of 58.2%, decreased for a 31.5% and increased for a 9.6%.

Screen exposure

Reasons for screen exposure were mainly related to education (46.6%), followed by entertainment (16.5%), communication (11.6%), familiarity with technology (8.9%) and gaming (4.8%). Overall, the majority of children (61.0%) followed online education for about 3 hours per day (M = 14.40 hours per week, SD = 6.15 range 5–30). Children's online learning was mainly delivered and guided by teachers, or by parents themselves (Table 2). Three children (2.1%) received online special sessions as they were diagnosed with special learning disabilities.

Table 2

Reasons for screen exposure

	Count	%
Education	68	46.6
Entertainment	24	16.5
Communication	17	11.6
Technology familiarity	13	8.9
Gaming	7	4.8
Total	129	88.4
Missing	17	11.6
Total	146	100.0

Correlational analysis revealed positive correlations between Parental Screen Exposure time and Preschoolers' Screen Exposure Time. The highest correlation was found among the variables estimating television screen time ($r = .494$, $p < .001$). More detailed results are presented in Table 3 and Figs. 1–4.

Table 3

Correlations between Parental Screen Exposure time and Preschoolers' Screen Exposure Time

		1	2	3	4	5	6	7	8
Parent Television Screen Time	r	1							
	Sig.								
	N	143							
Parent Smartphone/tablet Screen Time	r	,315**	1						
	Sig.	,000							
	N	136	139						
Parent Computer Screen Time	r	-,001	,161	1					
	Sig.	,989	,073						
	N	129	125	131					
Parent Gaming Screen Time	r	,077	-,008	,130	1				
	Sig.	,408	,934	,161					
	N	117	117	117	118				
Child Television Screen Time	r	,494**	,322**	,074	,009	1			
	Sig.	,000	,000	,414	,927				
	N	135	132	124	114	137			
Child Smartphone/tablet Screen Time	r	,272**	,184*	,173	,115	,152	1		
	Sig.	,002	,036	,057	,224	,088			
	N	130	130	122	114	127	132		
Child Computer Screen Time	r	,050	,031	,414**	,365**	,031	,187*	1	
	Sig.	,584	,741	,000	,000	,736	,045		
	N	120	119	121	111	117	115	123	
Child Gaming Screen Time	r	,121	,151	,005	,466**	,070	,365**	,312**	1
	Sig.	,200	,108	,962	,000	,454	,000	,001	
	N	115	114	112	111	116	113	111	117

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Qualitative data on screen exposure

Children's average daily time spent on screens was increased during the quarantine according to the parents (84.5%, n = 123). Only 4 parents (2.8%) reported that their children spent less time watching screens whereas 18 parents (12.4%) reported no changes. Parent's comments on increased screen use during the pandemic were mainly associated with the sudden changes to their lifestyle due to the restriction measures. Specifically, parents mentioned that the use of screen devices during the stay-at-home period facilitated as a calming tool (32 answers) in order to reduce tension and/or whining, as a way to keep children busy (30 answers) or a distraction method (18 answers) so that they were able to work, do housework or help older children with homework, and also as a reward system (11 answers) to keep peace and quiet in the house or to manage children's daily routine.

Eating habits

The majority of children showed average (45.9%) or good (43.8%) adherence with the Mediterranean diet (MD) while only a 3.4% showed poor adherence. The prevalence rate of the three categories of adherence was similar between males and females [$x^2(2) = -2.33$, $p = .31$] and the mean score as measured by the KIDMED index was equally high (Females: $n = 62$, $M = 7.24$, SD = 1.90; Males: $n = 74$, $M = 7.19$, SD = 2.01) with no statistically significant difference [$t(134) = -251$, $p = .80$] (Table 4).

Table 4

Adherence with Mediterranean Diet

KIDMED	Count	%
Poor adherence	5	3.4
Average adherence	67	45.9
Good adherence	64	43.8
Total	136	93.2
Missing	10	6.8
Total	146	100.0

Qualitative data on eating habits

Despite the satisfactory levels of adherence with MD, a subtotal of 54 parents (37%) reported at least one change in children's dietary habits during the lockdown versus before. Specifically, they reported an increase on snacking craving for sweets, chocolates and pastries (30 answers), greater appetite or more meals during the day (13 answers), adoption of healthier dietary patterns including more home-cooked

food (3 answers), inability to follow their regular eating schedule (4 answers) as well as presence of picking eating (3 answers).

Sleep Behaviour

Mean bedtime was 21.30 p.m. (range mean 19.00–24.00) on a daily night and 22.00 p.m. (range 19.00-24.30) on a weekend night. Wake-up time was 8.30 a.m. (range 6.30–11.30) on a daily basis and 9.00 a.m. (range 6.30–12.30) on weekends. Mean sleep duration was 10.30 hours (range 8–15 hours). Gender comparison revealed statistically significant differences in the subscales Night wakings ($t(134) = 1.50$, $p = .044$) and Parasomnias [$t(134) = 2.40$, $p = .003$) with females scoring significantly higher than males. Mean CSHQ total score was 57.40 (SD = 9.53), indicative of problematic sleep using the proposed cutoff score of 41 (Owens et al., 2000). CSHQ scores are summarized in Table 5.

Table 5
Sleep Disturbances – Descriptive Statistics- Mean Differences by Gender-Percentage over the cutoff score

Variable	Mean (SD)	Gender		Sleep Disturbances score	
	Total Sample (n=146)	Male (n=81)	Female (n=65)	*Cutoff*	*% above the cutoff*
CSHQ total score	57.40 (9.53)	54.13 (9.30)	57.85 (9.52)	41	81.5
Bedtime resistance	11.84 (3.05)	11.73 (2.34)	11.86 (3.14)	-	-
Sleep onset delay	2.06 (.96)	2.31 (.94)	2.03 (.96)	1.78	58.9
Sleep duration	5.14 (2.00)	5.38 (2.18)	5.11 (1.99)	4.34	61.6
Sleep anxiety	8.66 (2.75)	8.38 (3.03)	8.70 (2.73)	-	-
Night wakings	5.29 (1.88)	4.63 (1.25)	5.38 (1.94)*	4.40	69.9
Parasomnias	10.64 (2.72)	9.13 (1.85)	10.83 (2.76)**	-	-
Sleep disordered breathing	4.59 (1.84)	4.06 (1.94)	4.66 (1.82)	3.87	58,9
Day time sleepiness	13.73 (2.54)	13.06 (2.23)	13.82 (2.57)	-	-

Note. M and SD are used to represent mean and standard deviation, respectively.

*indicates $p < .05$, ** indicates $p < .01$

Qualitative data on sleep patterns

A subtotal of 79 parents (54.1%) reported changes in children's sleep patterns throughout the quarantine that made children's sleep routine more challenging. Specifically, they reported bedtime resistance/delay (61 answers), waking up later in the morning (17 answers), difficulty with sleep onset (3 answers), disturbed sleep (3 answers), resist napping during the day (5 answers), bed sharing (2 answers) and napping late in the afternoon (1 answer).

Regression analysis

Hierarchical linear regression analyses were performed to identify significant predictors of CSHQ total score. All needed transformation was completed before the analysis and relevant statistical assumptions were met. The final model was a two stage hierarchical multiple regression was conducted with CSHQ total score as the dependent variable (Table 5). Screen exposure variables were entered at stage one of the regression whereas KIDMED total score was entered at stage two. Parental screen exposure related variables, gender, and the negative items of KIDMED did not have a significant effect on CSHQ total score.

Results revealed that at stage one, Screen exposure variables contributed significantly to the regression model [F (4,93) = 3.90, p = .006] and accounted for 14.4% of the variation in CSHQ. Introducing KIDMED explained only an additional .003% of variation in CSHQ and this change in R^2 was insignificant, [F (1,92) = .274, p = .602] (Table 6).

Table 6

Summary of Hierarchical Regression Analysis for Variables Predicting CSHQ total score

Variable	*b*	*t*	sr^2	*R*	R^2	ΔR^2
Step 1				.379	.144	.144
Television Screen Time	.198	2.06*	.209			
Smartphone/ tablet Screen Time	.211	2.19*	.222			
Computer Screen Time	-.247	-2.48**	-.250			
Gaming Screen Time	-.013	-.13	-.014			
Step 2				.383	.146	.003
KIDMED	.173	1.62	.157			
$^{*}p < .05$, $^{**}p < .01$						

Discussion

The purpose of this study was to assess the immediate changes in sleep in preschoolers across Greece during the COVID- 19 crisis.

The majority of children's sleep patterns changed amidst the imposed home confinement, making sleep routine more challenging, including later bedtime and wake-up time, shorter sleep duration, and co-sleeping. Gender comparison revealed significant differences in two subscales (night wakings and parasomnias). Recent studies on the topic presented mixed results either reporting sleep-related difficulties more frequently among boys (Lewien et al., 2021) or the opposite (Cellini et al., 2021) or no differences at all (Ventura et al., 2020).

Sleep disturbances indicated in CSHQ were correlated to the increased screen time. This finding is in line with recent studies (Dellaguioulia et al., 2020; Kaditis et al., 2021) who reported similar results. On top of that, a significant subtotal of preschoolers have exceeded the maximum of 1 hour screen time/day which is the recommendation for preschool children aged 2 to 5 of the American Academy of Pediatrics (Council on Communications and Media, 2016), a result reported form other COVID-19 related studies (Cartanyà-Hueso et al., 2021; Eyimaya & Irmak, 2021). Furthermore, screen exposure in preschool age affects not only sleep duration but it may also alter the circadian rhythm leading to circadian discrepancy (Lan et al., 2020).

Parent's screen exposure time significantly correlated with preschoolers screen exposure time. Interpreting qualitative data, almost all parents mentioned screen time substantial increases, filling the void left by being restricted to go out, to go to school or socialize. The closing of schools, childcare facilities and the decreasing access to outside space, such as playgrounds, removed usual opportunities for physical activity and play, and increased the access to screens (Nagata et al., 2021). In addition, activities like swimming, soft play etc. were disrupted or cancelled and opportunities to socialize with friends or contact with grandparents and family were restricted. Being together all day made dealing with demands for screens challenging. Increased children's screen time due to the need to manage education, socialization, and downtime indoors, revealed as a major parental stressor during lockdown, indicating that lower screen time rates are not a result of well-informed parenting but of well-resourced parenting (Hartshorne et al., 2021). The majority of the parents had to shift on remote working and in addition to deliver and guide children's online learning. Decreased children's physical activity and sedentary behaviors are reported in findings from previous studies, including reading, drawing and crafting, however increased leisure screen-based activities was mentioned most frequent (Clark et al., 2020; Moore et al., 2020). Some parents reported that screen time had been useful during this difficult period and allowed greater access to screens to keep children occupied. For those working from home, and even for those not working, managing everyday chores with the absence of the usual childcare was difficult (Brown et al., 2020). Screen time was often the only way to manage and to get thing done, providing much needed respite from the intensive parenting effort lockdown enforced and increasing parents' need for downtime.

Although, some parents considered these changes would be temporary and would return to normal when usual childcare, school and socialization resumed, they also emphasized that it may be difficult to reestablish boundaries and break new habits enforced in lockdown.

This study didn't identify major disruptions to healthy eating habits and routines, with the majority of children showing average or good adherence with the Mediterranean diet (MD). Reports for changes in volume and frequency of eating, including snacking, eating with the family members, varied by child and family, while most parents reported difficulties in meal routines and increased snacking less healthy items than normal, something they often linked to the stay-at-home restrictions. The emerged studies show that weight gain and obesity levels in preschool children have increased due to decreased physical activity and increased snacking and screen time (Clark et al., 2020; Rundle et al., 2020). The disease prevention messaging of COVID- 19 "stay at home" advice reduced dramatically the opportunities for physical activity, changed eating habits and disrupted sleep routines, and needs to be balanced with health promotion messaging, in order to prevent the unintended unhealthy consequences of the restriction measures (Van den Broucke, 2020). The increased use of interactive media platform, through video chat, that facilitated social connection with relatives, reveals that the need for parental support is crucial, in order for toddlers to understand what they are watching (Chassiakos et al., 2016). Developing an adapted family media use plan (Chassiakos et al., 2016) during COVID- 19 may be beneficial while mitigating the potential adverse health consequences (Nagata et al., 2020).

The study sheds light on how preschooler's sleep routines have been changed amidst the COVID-19 lockdown by using both quantitative and qualitative methods. However, it has a few limitations that can be addressed in order to further interpreting the results. A key limitation of this study is the recruitment of a convenience sample of participants from an opt-in survey. The cross-sectional design does not allow causal conclusions; therefore future longitudinal studies would be ideal to provide concrete and robust findings.

Conclusion

This study provides evidence of immediate collateral consequences of the COVID-19 outbreak, demonstrating an adverse impact on sleep of Greek preschoolers. Parents that continued to set routines for their children, including quality family time, supervised and limited leisure screen time and swap screen time for play time, healthy meals, regular sleep and wake time, managed to foster healthy behaviours and childhood development during COVID- 19 outbreak, although it was a challenging task for them. These findings may guide efforts to promote and preserve child health and development during pandemic and crisis recovery period and give prominence to strategies that may mitigate potential harm during this, as well as future pandemics.

Declarations

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Conflict of interest

The authors declare that they have no conflicts of interest.

Availability of data

The data that support the outcomes of the present study are available on demand from the corresponding author.

Ethics approval

Ethical approval was granted before the initiation of the study from the Papageorgiou General Hospital Review Board (105/339/19.02.21) and the Ethics Board of the Research Committee of the Aristotle University of Thessaloniki (6.401/6/23.03.2021). Informed consent prior to survey enrollment was a prerequisite for study inclusion. Confidentiality was assured and participants were able to withdraw consent or discontinue participation at any time.

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Figures

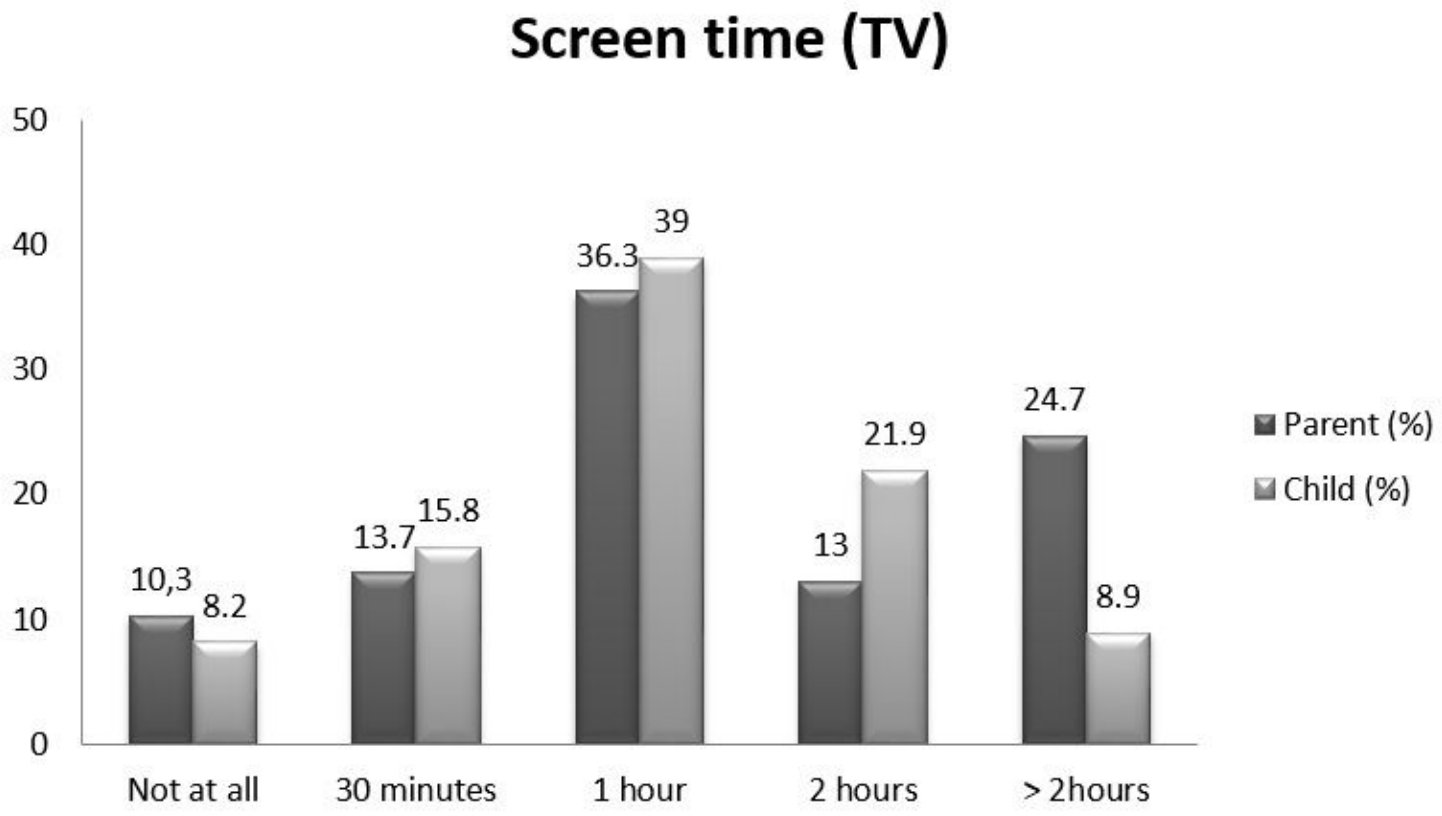

Figure 1

Television Screen Time for Parents and Children

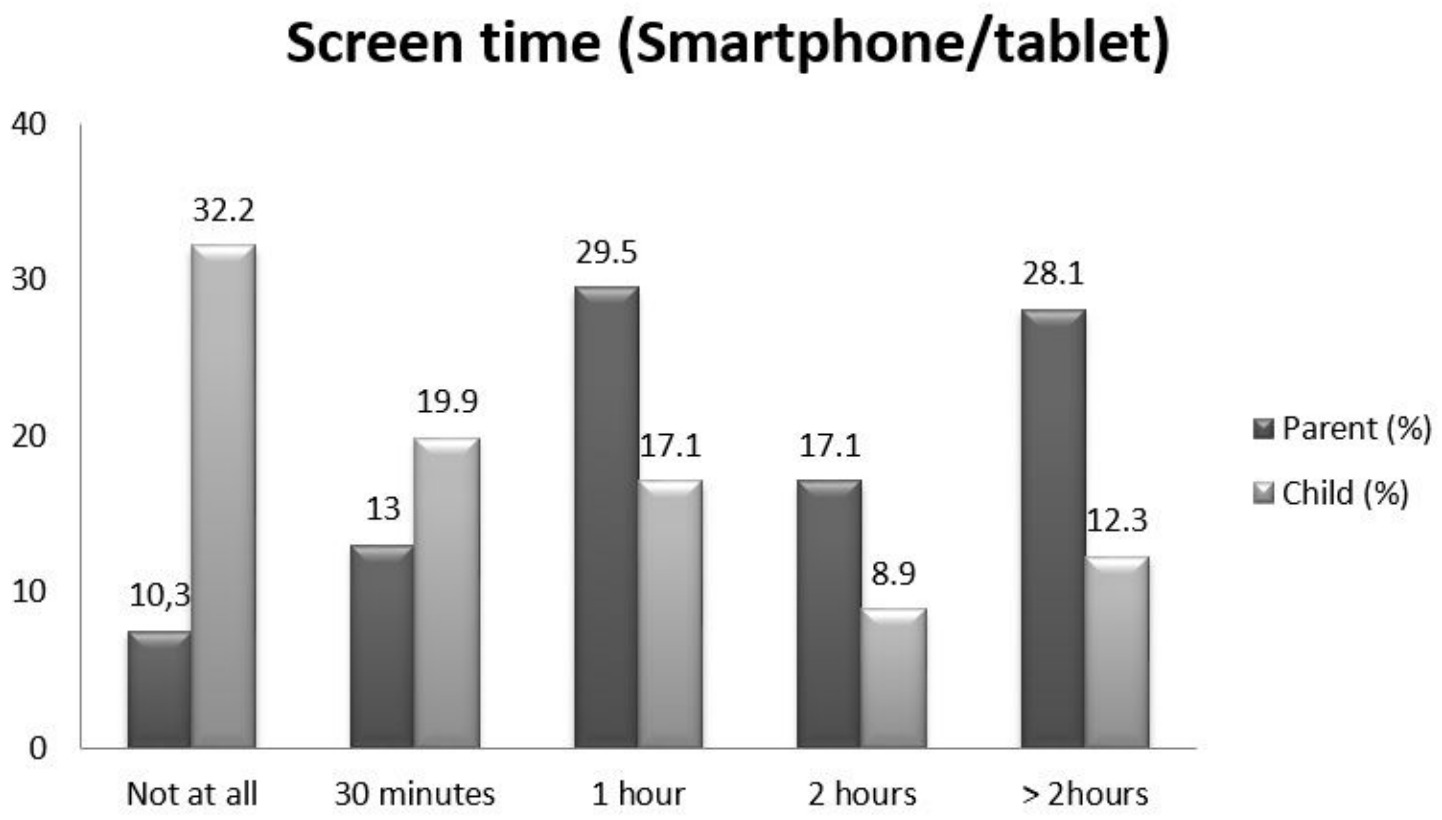

Figure 2

Smartphone/ tablet Screen Time for Parents and Children

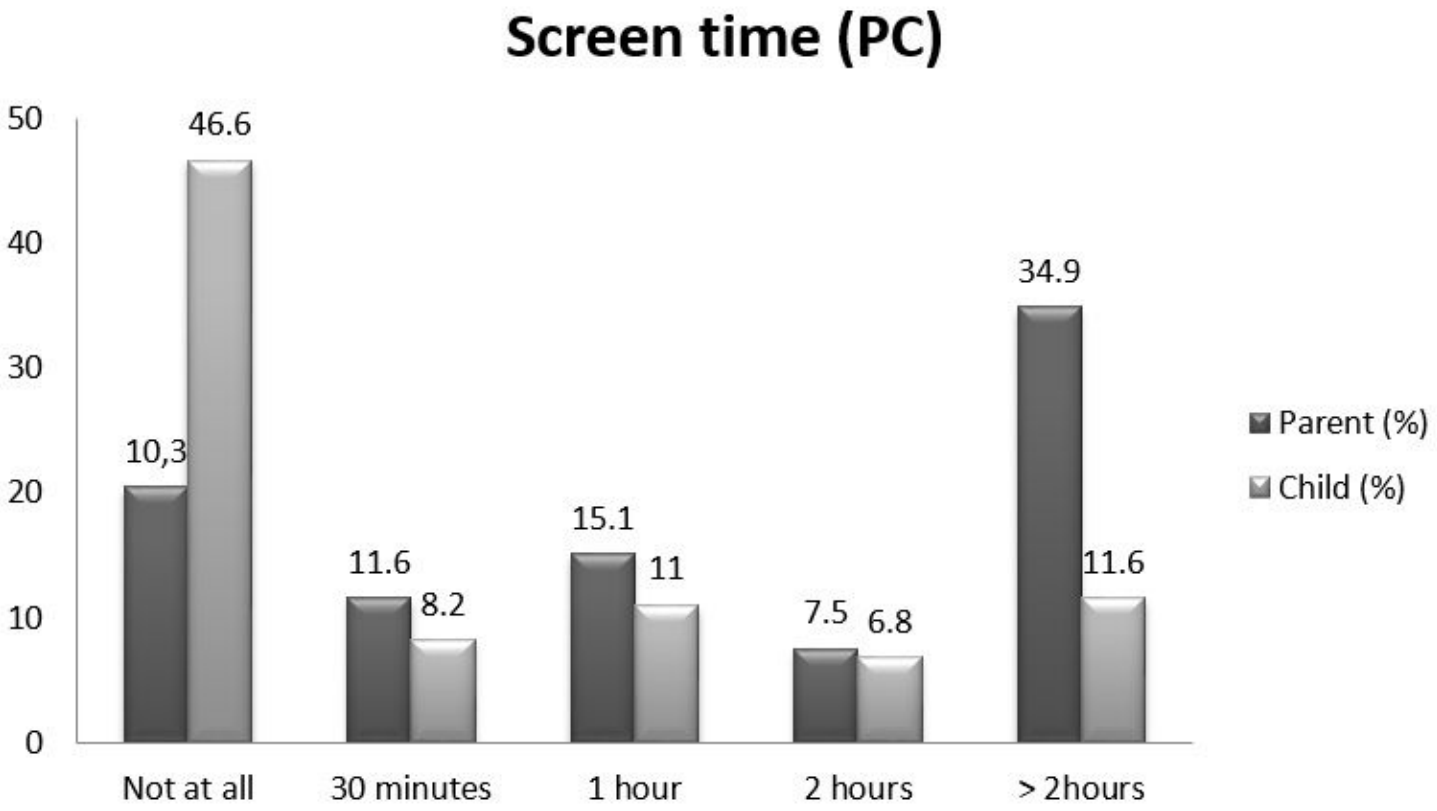

Figure 3

Computer Screen Time for Parents and Children

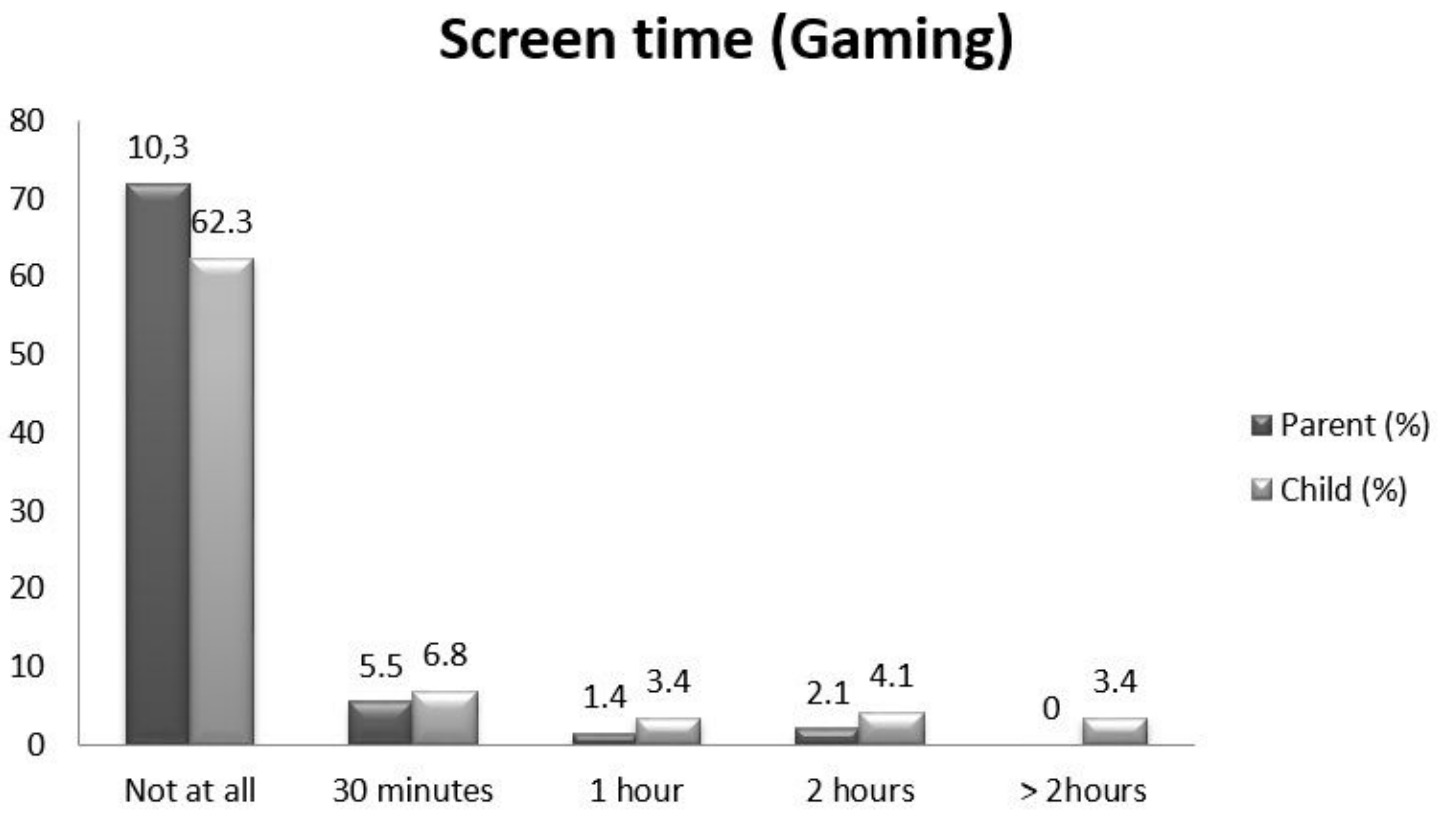

Figure 4

Gaming Screen Time for Parents and Children