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Research Article **Open Access**

Clinical Practices and Experiences about Screen Time: From the Perspective of Child and Adolescent Psychiatrists in Turkey - An Online Survey

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Abstract

Background: Both mental and physical preventable health problems related to screen time (ST) in children and adolescents are increasing. It is important that psychiatrists have awareness to prevent problems in this area.
Objective: The aim of our study was to evaluate the child psychiatrists' awareness about ST, their interventions for ST, and to what extent the recommendations of the associations are implemented.
Method: All child and adolescent psychiatrists in the country who could be reached via smartphone were invited to participate in the study. Child and adolescent psychiatrists were included regardless of whether they had attended any ST courses/panels. Data were collected through an online questionnaire. A total of 302 physicians volunteered for the study.
Results: It was determined that very few child and adolescent psychiatrists had attended an ST course/training in the past or followed any guidelines. A statistically significant difference was found between physicians who received training/courses and those who did not in terms of informing patients and offering interventions ($p<0.05$). Similarly, a significant difference was found between those who followed the guidelines and those who did not.
Conclusion: Raising awareness, increasing psychiatrist participation in trainings, and following guidelines can increase the effectiveness of ST interventions, in order to achieve good results.

Keywords: Screen Time, Child and Adolescent, Psychiatrist, Awareness, Paediatric Psychiatry

Introduction:

Screen time (ST) is defined as the time spent on activities involving screen-based media, such as watching television, using a computer, tablet, game console, or smartphone (1). While most ST for children and adolescents used to mainly involve television and video games, the additional use of smartphones and tablets has become increasingly common in recent years (1). The amount of time that children and adolescents spend on electronics such as television, computers, tablets, game consoles, and smartphones continues to increase (2). A study in the United States showed that school-age children and adolescents spend around 7 hours a day in front of a screen. (3). Another study has shown that children aged 8-10 spend an average of 8 hours a day with various media, while children and adolescents spend more than 11 hours a day on screens (4). Health professionals and parents are concerned about the increase in ST, as it can have a negative impact on young people's mental and physical health.

Increased ST is associated with a negative impact on children's body posture, increased cardiometabolic risk, inappropriate expressionistic behaviour, decreased sense of fitness, and low self-esteem (5).Studies investigating the relationship between ST and anxiety and depression show that ST is positively and bidirectionally related to anxiety and depression in children (6), and that children with high ST suffer from aggression, risky behaviour, and sleep and attention problems (7). Community-based studies in child development have shown that excessive screen exposure in early childhood is associated with cognitive, language, and social/emotional delays (8). Health during childhood is a strong predictor of health in adulthood, as evidence suggests that healthy children are more likely to become healthy adults (9). Considering the long-term effects of ST on a child's development, it

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is very important to raise awareness of ST, which is known to have many effects on both physical and mental development in children and adolescents.

Seeing as parents might struggle with uncertainty about their children's regular use of technology, they may need strategies to seek advice from experts working in this field, in order to make the appropriate intervention in time. However, while child psychiatrists and paediatricians should be able to provide the necessary recommendations, it has been noted that only a very small proportion of doctors evaluate ST and intervene on this issue (10).

In a study by Hill et al., it was emphasized that doctors feel incompetent about practices and awareness surrounding the use of ST (11). Approximately 100-150 residents are admitted to the training programme each year. There are no regular training programs on ST in Turkey for child and adolescent psychiatrists. While there are courses/panels on ST at national meetings, these are only informative courses, rather than structured courses.

In general, there are presentations/panels/meetings that present the negative effects of ST on children and adolescents, and where suggestions on how to prevent or reduce these negative effects are mentioned.

Our limited research shows that the situation is similar in other countries. The aim of our study was to evaluate the child and adolescent psychiatrists' awareness about ST, their interventions, and to what extent the recommendations of the associations are implemented. This includes evaluating whether the psychiatrists consider themselves competent in this field. Furthermore, our aim was to investigate ST can cause both physical diseases and mental disorders, and whether there are differences between the interventions.

Method and Material

Working Group and Data Collection

Child and adolescent psychiatrists in Turkey were asked to participate in this study. Due to the COVID-19 pandemic, data was obtained by contacting the physicians through common email and WhatsApp groups, and using Google form surveys (Google, California, USA) sent to people's smartphones. Child and adolescent psychiatrists study for four years in a resident training program, during which a training program about ST is not included. Data collection for our study started in February 2021, in which there were 403 residents, 298 specialists, and 214 academic child and adolescent psychiatrists in Turkey. All child and adolescent psychiatrists who volunteered to participate in the study, completed the survey form, and sent it back to us, were included in the study. Child and adolescent psychiatrists were included in the study independently of whether they had attended any courses/panels on ST.

Survey Design

A survey was designed to collect information about current clinical practices related to ST and electronics use by children and adolescents, applied to the child and adolescent psychiatric outpatient clinics. Before the survey was conducted, an application was made to the Ethics Committee and their permission was obtained. The survey was analysed by five child and adolescent psychiatrists in the child and Adolescent Psychiatry Unit. The validity and reliability of the survey was not investigated.

The survey consists of four sections and 29 questions in total. The first section (questions 1-8) contains questions about the psychiatrists' socio-demographics, working conditions, and ST.

The second section (questions 9-18) is about the psychiatrists' observations and experiences. It includes questions about the electronics (tablet, phone, tv) and social media platforms used by the psychiatrists' patients. In addition, this section also inquiries about which guidelines the psychiatrists follow.

The third section (questions 19-22) asks questions concerning AACAP recommendations. Lastly, the fourth section (questions 23-29) inquiries about the patients' arrival complaints; ST intervention strategies, the accuracy of information provided to the family, recovery, and resistance to interventions. The survey form was attached as supplement file to the study participation invitation.

Statistical analyses

The SPSS Windows 23.0 package programme was used to analyse the data obtained in the study. Chi-square tests were used to analyse categorical variables. Kolmogorov-Smirnov tests were used to analyse data distributions. A two-sided p-value of <0.05 was considered statistically significant.

Results

A total of 302 child and adolescent psychiatrists completed the survey, from which we evaluated practices and experiences about ST. Socio-demographic data of the physicians are presented in Table 1. In the survey, 64 (21.1%) physicians reported they questioned 40-50% of all patients in their regular practices about ST, 58 (19.1%) physicians questioned 70-90% of patients, and 53 (17.5%) physicians questioned 20-40%. When asked if they needed details when collecting information about ST, 284 physicians (94.1%) reported that they

TABLE 1. Socio-demographic data of physicians.

Variables	*Subgroup*	*N=302 (%)*
Age	Mean 32.56 ±5.90	
	20-29 years	101 (%33.4)
	30-49 years	197 (%65.2)
	50 and more	4 (%1.3)
Gender	Female	197 (%65.2)
	Male	105 (%34.8)
Title	Resident	137 (%45.4)
	Specialist	99 (%32.8)
	Academical Personal	66 (%21.8)
Institution	University Hospital	154 (%51)
	Research And Training Hospital	73(%24.2)
	State Hospital	60 (%19.8)
	Personal Clinic	15 (%5)
Physicians's Screen Time	<30 min	9 (%3)
	30-90 min	74 (%24.5)
	90-150 min	104 (%34.5)
	150-240 min	84 (%27.8)
	240-360 min	19 (%6.3)
	>360 min	12 (%4)

TABLE 2. Physicians' Experiences and Interventions on ST.

Experiences		*N=302 (%)*
Attending a Course or Training		
	Attended	60 (%19.8)
	Not Attended	242 (%80.2)
Following the Guideline		
	Following AACAP	74 (%24.4)
	Following AAP	31 (%10.2)
	Unfollow	197 (%65.4)

TABLE 3. Physicians' Experiences and Interventions on ST.

Interventions		*Screen Time Training*		*Following The Guide*		*p value**
		Trained	*Untrained*	*Follow*	*Unfollow*	
Acquaint Patients With ST	Yes	59	0	100	4	<0.001
	No	1	242	5	193	
Querying The Screen Usage In Common Areas	Yes	50	25	72	2	<0.001
	No	10	217	33	195	

**Chi square test*

did. Regarding the type of ST, it was found that patients mainly spent time on cell phones (91.55%), tablets (88.38%), computers (87.68%), TV (86.63%), social media (75%), games (72.89%), and game consoles (41.90%). The preferred social media platforms reported were Instagram (93.69%), YouTube (75.23%), Facebook (60.36%), TikTok (59.91%), and WhatsApp (56.31%).

When psychiatrists were asked whether they had participated in any training on ST or whether they followed the guidelines, 60 (19.8%) of the psychiatrists stated that they had participated in training on this subject and 105 (34.6%) stated that they followed at least one guideline (Table 2).

Data on the approaches to ST in the clinic are presented in Table 3. It was found that psychiatrists who followed the guidelines were more informed about their patients' use of ST, compared to those who did not, and questioned patients more about screen use in common areas (Table 3) ($p<0.05$).

The child and adolescent psychiatrists were also asked about screen usage times according to the age groups recommended by AACAP. The responses given are shown in Table 4. For children and

TABLE 4. Physicians' Recommendations for Age Groups and Comparison with AACAP

Age groups	*Usage Suggestions for Age Groups*	*N=302 (%)*
0-18 Months	Never	192 (%63.7)
	Screen is used to video chat with an adult (e.g., a parent who is out of town)*	103 (%34)
	30 min	3 (%1)
	1 hr	0
	I have no idea	4 (%1.3)
18-24 Months	Never	183 (%60.4)
	Screen time should be limited to watching educational programming with a caregiver*	102 (%33.7)
	30 min	11 (%3.6)
	1 hr	0
	I have no idea	6 (%2)
2-5 years weekdays/weekends	30min / 2 hrs	220 (%72.9)
	1 hr / 1 hr	44 (%14.5)
	1 hr / 3 hrs*	25)%8.3)
	2 hrs / 2 hrs	2 (%0.7)
	2 hrs / 3 hrs	1 (%0.3)
	I have no idea	10 (%3.3)
>6 years	Should be limited to a hour per day	143 (%47.5)
	Should be limited to 2 hours per day	50 (%16.5)
	Encourage healthy habits and limit activities involving screens*	99 (%32.7)
	It should not be restricted as long as it does not affect daily life and school success	3 (%1)
	I have no idea	7 (%2.3)

AACAP: American Academy Of Child And Adolescent Psychiatry, This table shows AACAP's recommendations about screen time according to age groups. Psychiatrists were asked what the recommendations were according to age groups. Psychiatrists' responses are given as percentages.
**correct answers according to reccomendations.*

TABLE 5. Psychiatric Disorders Associated with ST problem.

Psychiatric disorders	*N*	*Ratio %*
Attention Deficit Hyperactivity Disorder	279	19.32
Sleeping disorders	244	16.90
Depressive Disorder	212	14.68
Anxiety Disorders	203	14.06
Conduct Disorder	202	13.99
Autism Spectrum Disorder	75	5.19
Speech Disorders	73	5.06
Specific Learning Disorder	68	4.71
Intellectual disability	36	2.49
Gender Identity Discontent	20	1.39
Tic Disorders	17	1.18
Bipolar disorder	8	0.55
Psychosis and Schizophrenia	7	0.48

adolescents presenting with a ST problem, the psychiatrists were asked to name the five most common diagnoses associated with the problem. Among the accompanying psychiatric disorders, attention deficit and hyperactivity disorder (ADHD) were most commonly named (19.32%), followed by sleep disorders (16.90%), depressive disorder (14.68%), anxiety disorder (14.06%), and conduct disorder (13.99%). Further data is shown in Table 5.

Discussion

In this study, a significant difference was found in the interventions of child and adolescent psychiatrists who received training and courses on ST, compared to those who did not. Child and adolescent psychiatrists reported that they received information about ST in a large proportion (40-50%) of their outpatients. The increasing prevalence of the use of electronics in recent years, and the increase in ST related mental health problems may have played a

role in increasing awareness on ST among child and adolescent psychiatrists (12).

Children and adolescents often use electronics such as TVs and cell phones in their own rooms, and several studies indicate this creates a risk for obesity and sleep disorders (13,14;15). Another study found that electronics that are not used in common areas, i.e., mainly used privately, can cause depressive disorder (16). Common areas are an important opportunity for parent-child communication and emotional connection during family activities. Thus, the presence of electronics in common areas only, could increase emotional interaction and reduce the duration of electronics usage. This condition has been found to have a positive effect on children's media use, sleep quality, and academic and social behaviour (17). Limiting ST and promoting physical activity in children has been shown to be effective in reducing ST (18). In addition, parental control is effective in restricting the use of electronics(19). Therefore, the use of electronics in common areas only may have a positive effect on the reduction of ST. At the same time, increased parental supervision in common areas protects the physical and mental health of children and adolescents. It is very important for physicians to question the use of electronics in common areas and inform parents about potential risks and benefits.

In our study, almost three in four of physicians stated that they inquire about patients' social media use. In recent years, communication has evolved from face-to-face conversations to phone calls or screen-to-screen interactions, and has become an important means of communication for children and adolescents (20). Literature reports that nearly three-quarters of adolescents have smartphones, 24% of adolescents describe themselves as constantly connected to the internet (21), and 50% feel "addicted" to their phones (22). Digitalisation of social communication may be one of the most important factors that contribute to the increase in ST, as a large proportion of ST is now due to the use of social media. For this reason, it is crucial for physicians to inquire about the use of social media.

A few of the physicians who participated in the study stated that they had previously participated in courses concerning ST. Hill et al. investigated whether physicians felt competent to advise and intervene in the field of media use. In the study, physicians reported that reasons for the inadequacy they feel about ST may be due to lack of knowledge and experience (11). In our research, we found that the interventions of physicians who participated in training or followed guidelines differed from those who did not participate (Table 3). Almost all psychiatrists who participated in the ST training were able to advise and supervise patients. In fact, this may support the idea that regular training can increase the quality and quantity of counselling and supervision.

We found that about one third of physicians adopted AACAP recommendations for children under 24 months. For the age range of 2-5 years, only 8.3% of physicians followed the AACAP's recommendations (Table 4). At the time of our study, there were no previous studies on the adoption of AACAP's ST recommendations by child psychiatrists. The reason why the guidelines have not been fully implemented may be due to a lack of consensus on common recommendations, or a lack of concrete evidence (23). Increasing awareness of the mental health problems caused by ST, and sharing guideline information through courses may increase the application of the guidelines by child and adolescent psychiatrists.

Many studies have shown ST problems to be common in children and adolescents with ADHD, or to be associated with ADHD symptoms (24, 25, 26). In our study, ADHD was the most common diagnosis reported by physicians in patients with an ST problem. Additionally, we found sleep disorders to be associated with both ADHD and high ST , which would be in accordance with the literature, where similar associations have been found (27, 28). Other psychiatric disorders that we found to be associated with ST problems are also compatible with previous studies in the literature (29; 30). Collectively, this would implicate that ST usage should be a mandatory part of a psychiatric assessment, especially for patients with ADHD and/or sleep problems.

This study also has limitations. First, our results are based on an online survey. This condition might have negatively affected the accuracy of the data. The cross-sectional nature of the study, and the fact that it was based on self-report, limited the direct evaluation of associated mental disorders. The biggest limitation of our study is the non-standardisation of training when evaluating the experiences of child and adolescent psychiatrists on ST. It is a cross-sectional study evaluating the experiences of child and adolescent psychiatrists. Nevertheless, this is still a noteworthy study in this field that will contribute to raising awareness about ST for the participants in our study, and shed light on future studies and clinical applications surrounding ST.

Clinical Implications

In this study, we evaluated whether psychiatrists' experiences and interventions towards ST changed through trainings received in the past. Interventions offered by child and adolescent psychiatrists who had received training/courses in the past differed significantly from those who had not. In order to

offer effective ST interventions, child and adolescent psychiatrists should receive a standardised training/course in this field to improve results. Additionally, clear and applicable guidelines can increase the effectiveness of treatment.

Disclosures

The authors report no conflict of interests.

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