Turkish Journal of Pediatric Disease

Original Article

Cyberbullying and cybervictimization among pediatric healthcare professionals in a single-center hospital: A cross-sectional study

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Received : 18.07.2026, Accepted : 09.11.2026
DOI: 10.12956/TJPD.2026.1412

ABSTRACT

Objective: This study aimed to examine internet and social media use characteristics, as well as healthcare professionals' response patterns and recognition of behavioral characteristics related to cyberbullying and cybervictimization.

Materials and Methods: This descriptive, cross-sectional study was conducted with 266 physicians and nurses employed at a single pediatric hospital in Ankara, Türkiye. Participants were recruited using convenience sampling. Data were collected using a Sociodemographic Characteristics Questionnaire and a researcher-developed Cyberbullying/Cybervictimization Questionnaire. Descriptive statistics and Pearson's chi-square test, Fisher's exact test, or Fisher–Freeman–Halton exact/Monte Carlo test were used.

Results: The mean age of the participants was 29.40±6.09 years, and 72.6% were nurses. Almost all participants (97.0%) reported having at least one social media account, and 53.0% spent 3–5 hours per day on the internet. Most healthcare professionals had never encountered a child involved in cyberbullying (93.6%) or cybervictimization (93.2%). Furthermore, 78.6% reported that they were unfamiliar with the behavioral characteristics of children who perpetrate cyberbullying, while 74.4% reported being unfamiliar with the behavioral characteristics of children experiencing cybervictimization. Most participants reported recognizing common cyberbullying behaviors, including unauthorized account access, impersonation, and sharing digital content without consent. However, considerable uncertainty was observed regarding risk factors, epidemiological characteristics, and the professional responsibilities of healthcare providers in preventing and managing cyberbullying. Familiarity with the behavioral characteristics of children who perpetrate cyberbullying differed by profession and education, while familiarity with those experiencing cybervictimization differed by education ($p = 0.014$, $p < 0.001$, and $p = 0.008$, respectively).

Conclusion: Healthcare professionals' responses indicated limited familiarity with the behavioral characteristics of children involved in cyberbullying and cybervictimization and uncertainty regarding their professional responsibilities. These findings highlight the need for educational initiatives that strengthen healthcare professionals' recognition of cyberbullying and cybervictimization and support the integration of digital risk assessment into pediatric healthcare practice.

Keywords: Cyberbullying, healthcare professionals, nurses, pediatrics, physicians

Introduction

The widespread use of the internet has substantially increased children's and adolescents' exposure to digital risks. Among these risks, cyberbullying has emerged as one of the most prevalent and harmful threats to their health and well-being. Cyberbullying, which occurs through digital communication technologies and is also regarded as a communication-related problem is broadly defined as "an aggressive, intentional act carried out repeatedly over time by an individual or a group using electronic forms of communication against a victim who cannot easily defend himself or herself" (1,2). Unlike traditional face-to-face bullying, cyberbullying can occur anytime and anywhere through digital technologies (3). It most frequently takes place on social media platforms, online multiplayer gaming environments, and chat rooms (4). Cyberbullying encompasses behaviors such as impersonating another person, deceiving others online, deliberately excluding individuals from social networks, spreading rumors, threatening or humiliating others, and sharing photographs or videos without consent (5).

Cyberbullying has become an increasingly recognized global public health concern (6). In Türkiye, a recent study reported that 17.2% of adolescents aged 10–19 years had experienced cybervictimization, while 10.3% had engaged in cyberbullying behaviors (7). Similarly, a study conducted in Spain found that 52.9% of adolescents had experienced cybervictimization and 43.1% had been involved in

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cyberbullying (8). Furthermore, a meta-analysis of 42 studies reported that the prevalence of cybervictimization ranged from 2.0% to 72.0% worldwide, highlighting the substantial variation across populations and settings (6).

Exposure to cyberbullying has serious consequences for children's and adolescents' physical, psychological, and social well-being. Individuals exposed to cyberbullying are more likely to experience depression, anxiety, anger, emotional distress, reduced self-esteem, loneliness, and increased stress (9,10). Moreover, problematic internet use, social media addiction, revenge motivation, anger, and stress have been identified as factors associated with both cyberbullying perpetration and cybervictimization (11,12). A meta-analysis by Kwan et al. (13) demonstrated that cyberbullying is significantly associated with anxiety, depression, aggression, low self-esteem, loneliness, peer relationship problems, and self-harming behaviors among adolescents. Likewise, John et al. (14) reported that adolescents exposed to cyberbullying had a 2.3-fold higher risk of self-harm and a 2.5-fold higher risk of suicidal behavior, while Predescu et al. (15) similarly identified an increased risk of self-harm and suicide among cyber victims. Given these potentially life-threatening consequences, protecting children and adolescents from cyberbullying has become an important public health priority.

Healthcare professionals play a pivotal role in the prevention, early identification, and management of cyberbullying because of its significant impact on child and adolescent health. The American Academy of Pediatrics recommends that pediatric healthcare providers educate parents about protecting their children from digital risks and promoting safe digital behaviors (16). Healthcare professionals are expected to understand the psychological consequences of cyberbullying, evidence-based prevention and intervention strategies, and the legal implications of cyberbullying while guiding parents in supporting and protecting their children (17). In addition, healthcare professionals are encouraged to provide education on cyberbullying and digital citizenship and to teach communication, empathy, and coping skills to children suspected of being involved in cyberbullying, either as victims or perpetrators (18).

Among healthcare professionals, physicians and nurses working in pediatric settings occupy a particularly important position because they frequently interact with children and their families during routine health assessments, outpatient visits, emergency care, and hospitalization. They are often among the first professionals to encounter children presenting with psychological, emotional, or behavioral consequences related to cyberbullying. Adequate knowledge enables healthcare professionals to recognize warning signs, conduct appropriate assessments, provide counseling to children and their families, and initiate timely referrals to mental health or child protection services when necessary. Early recognition and intervention may reduce the long-term psychological and social consequences associated with cyberbullying. Although the responsibilities of healthcare professionals in preventing and managing cyberbullying have been widely acknowledged, the existing literature has predominantly focused on children, adolescents, parents, and teachers, whereas studies examining healthcare professionals' knowledge and preparedness to recognize and manage cyberbullying remain scarce (19). This evidence gap is particularly important in pediatric healthcare settings, where physicians and nurses may be among the first professionals to identify children experiencing the psychological and behavioral consequences of cyberbullying and initiate appropriate assessment, counseling, and referral. Determining the current familiarity with cyberbullying and cybervictimization among pediatric physicians and nurses is therefore essential for identifying educational needs and informing evidence-based educational programs and institutional strategies aimed at strengthening early recognition and effective management of cyberbullying.

Accordingly, this study aimed to describe healthcare professionals working in a pediatric hospital regarding cyberbullying and cybervictimization.

Research Questions

- What are the internet and social media use characteristics of healthcare professionals?
- What behavioral characteristics of children who perpetrate cyberbullying or experience cybervictimization are recognized by healthcare professionals?

Materials and Methods

Study design

This was a descriptive, cross-sectional study.

Setting, population, and sample

The study was conducted at Ankara Bilkent City Hospital, Children's Hospital, Ankara, Türkiye, and data were collected between April and August 2023. A convenience sampling method was used. An a priori sample size analysis was performed using G*Power version 3.1.9.4. A chi-square goodness-of-fit test for contingency tables was specified, with an effect size of 0.30, an alpha level of 0.05, a statistical power of 0.95, and 5 degrees of freedom. The analysis indicated a minimum required sample size of 220 participants. The target population consisted of physicians and nurses working in the participating pediatric hospital. Healthcare professionals were eligible to participate if they (1) were working as a physician or nurse in the pediatric hospital, (2) were actively working during the data collection period, (3) were able to communicate in Turkish, and (4) voluntarily agreed to participate in the study. Healthcare professionals who were not actively working during the data collection period or who did not provide informed consent were not included. A total of 266 healthcare professionals completed the Cyberbullying/Cybervictimization Questionnaire. All completed questionnaires were reviewed at the time of collection, and no questionnaires were excluded because of missing or incomplete responses. The final sample exceeded the required sample size, ensuring adequate statistical power for the planned analyses.

Data collection instruments

Sociodemographic Characteristics Questionnaire: The Sociodemographic Characteristics Questionnaire was

developed by researchers based on the relevant literature (5,20). The questionnaire consisted of two sections. The first section included seven items assessing participants' sociodemographic characteristics. The second section comprised 11 items evaluating internet and social media use habits, experiences related to cyberbullying and cybervictimization, and the recognition of behaviors associated with cyberbullying.

Cyberbullying / Cybervictimization Questionnaire: A researcher-developed Cyberbullying / Cybervictimization Questionnaire was developed following a comprehensive review of the relevant literature to assess healthcare professionals' responses regarding cyberbullying and cybervictimization and to cover key aspects of these phenomena (2,4,5,20,21). The questionnaire consisted of 25 items covering the definition, characteristics, types, causes, consequences, prevention, and management of cyberbullying and cybervictimization, as well as healthcare professionals' roles and responsibilities in recognizing and responding to such situations. Responses were evaluated at the item level and presented as frequencies and percentages for the "Yes," "No," and "I don't know" response categories. No total questionnaire score was calculated. The preliminary version of the questionnaire was evaluated by a multidisciplinary expert panel consisting of three faculty members in pediatric nursing, two faculty members in child development, one faculty member in public health nursing, and one pediatrician. The experts reviewed the items for their relevance, clarity, comprehensibility, and appropriateness for the target population. Following expert review, the questionnaire was pilot tested with 10 healthcare professionals who had characteristics similar to those of the target population. The pilot study was conducted to evaluate the clarity, comprehensibility, and feasibility of the items, as well as the time required for completion. Feedback from the participants indicated that all items were clear and understandable, and no further revisions were considered necessary. Data obtained during the pilot study were not included in the final analysis.

Data collection

Data collection commenced after approval had been obtained from the institutional ethics committee and the participating hospital. Eligible physicians and nurses were informed about the purpose and procedures of the study and invited to participate voluntarily. Informed consent was obtained from all participants before data collection. Data were collected by researchers using face-to-face questionnaires administered at times that did not interfere with participants' clinical responsibilities. Completion of the questionnaires requires approximately 20 minutes for each participant.

Statistical Analysis

Statistical analyses were performed using IBM SPSS Statistics for Windows, Version 27.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics, including frequencies, percentages, means, standard deviations, and minimum and maximum values, were used to summarize the data. Pearson's chi-square (χ^2) test was used to compare categorical variables. Fisher's exact test or the Fisher–Freeman–Halton exact/ Monte Carlo test was used when expected cell frequencies were small. Because numerous statistical comparisons were performed, the analyses were treated as exploratory, and no adjustment for multiple comparisons was applied. Statistical significance was set at $p < 0.050$.

Results

The mean age of the healthcare professionals who participated in the study was 29.40±6.09 years (range: 19-56 years), and 83.5% were between 19 and 35 years of age. Of the participants, 78.2% were female, 72.6% were nurses, and 27.4% were physicians. Additionally, 76.7% held a bachelor's degree, 44.7% were married, and 12.8% had one child. Regarding professional experience, 61.7% had been working for 1-4 years, with a mean length of professional experience of 6.01±6.22 years (range: 1-34 years) (Table I).

Among the healthcare professionals, 53.0% reported spending 3-5 hours per day on the internet. The internet was primarily used for conducting research (91.4%) and obtaining information (92.1%), while 30.1% reported using it for reading books. Nearly all participants (97.0%) reported having at least one social media account. The most frequently used social media platforms were WhatsApp® (93.6%) and Instagram® (89.8%), and 62.8% of the participants reported spending 0-2 hours per day on social media. Most healthcare professionals reported that they had never encountered a child who had perpetrated cyberbullying (93.6%) or a child who had experienced cybervictimization (93.2%). Furthermore, 78.6% reported that they were not familiar with the behavioral characteristics of children who perpetrate cyberbullying. Among those who reported familiarity, aggressive behavior was the most frequently reported characteristic (61.4%). Similarly, 74.4% reported that they were not familiar with the behavioral characteristics

Table I: Sociodemographic characteristics of the healthcare professionals

Characteristic	Values
Age (years)*	29.40±6.09 (19-56)
19-35†	222 (83.5)
≥36†	44 (16.5)
Sex†	
Female	208 (78.2)
Male	58 (21.8)
Profession†	
Nurse	193 (72.6)
Physician	73 (27.4)
Educational level†	
High school/Associate degree	14 (5.3)
Bachelor's degree	204 (76.7)
Graduate degree	48 (18.0)
Marital status†	
Married	119 (44.7)
Single	147 (55.3)
Number of children†	
None	202 (75.9)
1	34 (12.8)
2	30 (11.3)
Years of professional experience*	6.0±6.22 (1-34)
1-4 years†	164 (61.7)
5-10 years†	61 (22.9)
≥11 years†	41 (15.4)

**: mean ±SD (min-max), †: n(%)*

Table II: internet and social media use, experience with cyberbullying/cybervictimization, and related characteristics of healthcare professionals

Characteristic	Values
Time spent on the internet per day*	212.82±118.73 (20-720)
0-2 hours†	88 (33.1)
3-5 hours†	141 (53.0)
≥6 hours†	37 (13.9)
Purpose of internet use‡	
Searching for information†	243 (91.4)
Obtaining information†	245 (92.1)
Using social media†	240 (90.2)
Listening to music†	222 (83.5)
Reading books†	80 (30.1)
Watching videos†	223 (83.8)
Online shopping†	235 (88.3)
Reading news†	198 (74.4)
Online banking/e-government services†	229 (96.1)
Use of social media accounts†	
Yes	258 (97.0)
No	8 (3.0)
Time spent on social media per day†	137.50±101.45 (0-600)
0–2 hours	167 (62.8)
3–5 hours	85 (32.0)
≥6 hours	14 (5.3)
Social media platforms used‡	
Instagram®†	239 (89.8)
WhatsApp®†	249 (93.6)
X®†	124 (46.6)
YouTube®†	191 (71.8)
Facebook®†	56 (21.1)
TikTok®†	20 (7.5)
Pinterest®†	54 (20.3)
Have you encountered a child who perpetrated cyberbullying?†	
Yes	17 (6.4)
No	249 (93.6)
Have you encountered a child who experienced cybervictimization?	
Yes	18 (6.8)
No	248 (93.2)
Familiarity with the behavioral characteristics of children who perpetrate cyberbullying†	
Yes	57 (21.4)
No	209 (78.6)
Most frequently reported characteristics of children who perpetrate cyberbullying (n=57)†	
Aggressive	35 (61.4)
Angry	11 (19.3)
Hostile	11 (19.3)
Familiarity with the behavioral characteristics of children experiencing cybervictimization†	
Yes	68 (25.6)
No	198 (74.4)
Most frequently reported characteristics of children experiencing cybervictimization (n=68)†	
Social withdrawal	41 (60.3)
Depression	18 (26.5)
Fear and anxiety	9 (13.2)

**: mean±SD (min-max), †: n(%), ‡: Multiple responses were allowed.*

of children experiencing cybervictimization, while 60.3% identified social withdrawal as a common characteristic of children experiencing cybervictimization (Table II).

The pediatric healthcare professionals' responses to the Cyberbullying/Cybervictimization Questionnaire are presented in Table III. Nearly all participants endorsed several common forms of cyberbullying. Specifically, 99.2% agreed that using another person's account without permission to post humiliating content constitutes cyberbullying. Similarly, 96.2% agreed that gaining unauthorized access to another person's online or social media account password as cyberbullying, 95.5% agreed that sharing another person's photographs or videos online without permission constitutes cyberbullying, and 94.4% agreed that creating a fake social media account and impersonating another individual as cyberbullying (Table III).

Regarding responses to the items about cyberbullying, 66.2% responded "No" to the statement that cyberbullying is merely a form of joking or entertainment. Likewise, 37.2% selected that gossiping about someone on social media or the internet is not cyberbullying, and 32.7% selected "No" for the statement that excluding someone from social media or online environments is not cyberbullying. However, considerable uncertainty was observed for several items. Specifically, 41.7% selected "No" to the statement that spending more than three hours per day on the internet may be associated with engaging in cyberbullying, while 22.6% selected "No" to the statement that healthcare professionals have responsibilities in the prevention and management of cyberbullying among children (Table III).

Uncertainty was also evident in the response patterns for several items. More than half of the pediatric healthcare professional (52.3%) selected "I don't know" for the statement that individuals who perpetrate cyberbullying may have previously been victims of cyberbullying. Similarly, 48.9% selected "I don't know" regarding whether cyberbullying is more commonly perpetrated by boys, 40.2% selected "I don't know" regarding whether cybervictimization is more common among girls, and 39.1% selected "I don't know" for the statement that spending more than three hours per day on the internet may be associated with becoming a victim of cyberbullying. In addition, 27.1% selected "I don't know" regarding whether internet addiction is associated with cybervictimization (Table III).

The associations between pediatric healthcare professionals' sociodemographic characteristics and internet and social media use are presented in Table IV. Time spent on the internet was significantly associated with age, marital status, number of children, and years of professional experience (χ^2=23.836, p<0.001; χ^2=13.088, p<0.001; χ^2=29.971, p<0.001; and χ^2= 27.693, p<0.001, respectively). The highest proportions of participants who reported spending 3-5 hours per day on the internet were those aged 19-35 years (57.7%), those who were single (57.1%), those with no children (57.4%), and those with 1-4 years of professional experience (59.1%) (Table IV).

Social media account ownership differed significantly according to profession (χ^2=5.091, p=0.038), whereas no statistically significant differences were observed according to age, sex, marital status, educational level, number of children, or years of professional experience. Nurses were

Table III: Responses of healthcare professionals to the cyberbullying/cybervictimization questionnaire

Item	Yes*	No*	I don't know*
Cyberbullying is a communication problem.	226 (85.0)	16 (6.0)	24 (9.0)
Obtaining another person's internet/social media account password without authorization constitutes cyberbullying.	256 (96.2)	5 (1.9)	5 (1.9)
Using another person's account without permission to post humiliating content constitutes cyberbullying.	264 (99.2)	0 (0.0)	2 (0.8)
Spreading rumors about someone on social media or the internet constitutes cyberbullying.	121 (45.5)	99 (37.2)	46 (17.3)
Excluding a person from social media or online environments constitutes cyberbullying.	139 (52.3)	87 (32.7)	40 (15.0)
Threatening or insulting a person via social media or the internet constitutes cyberbullying.	189 (71.1)	54 (20.3)	23 (8.6)
Sending offensive or humiliating messages through social media, the internet, or electronic communication devices constitutes cyberbullying.	240 (90.2)	15 (5.6)	11 (4.1)
Creating a fake social media account and impersonating another person constitutes cyberbullying.	251 (94.4)	6 (2.3)	9 (3.4)
Sharing another person's photos/videos online without permission constitutes cyberbullying.	254 (95.5)	5 (1.9)	7 (2.6)
Individuals who perpetrate cyberbullying may previously have been victims of cyberbullying.	72 (27.1)	55 (20.7)	139 (52.3)
Cyberbullying is more commonly perpetrated by boys.	69 (25.9)	67 (25.2)	130 (48.9)
Cybervictimization is more common among girls.	93 (35.0)	66 (24.8)	107 (40.2)
Cyberbullying is simply a form of joking or entertainment.	49 (18.4)	176(66.2)	41 (15.4)
Cyberbullying is related to peer bullying.	156 (58.6)	48 (18.0)	62 (23.3)
Cyberbullying is a risk that children of all ages may encounter.	241 (90.6)	4 (1.5)	21 (7.9)
Cyberbullying is a public health problem.	214 (80.5)	14 (5.3)	38 (14.3)
Cyberbullying may negatively affect children's physical health.	239 (89.8)	6 (2.3)	21 (7.9)
Cyberbullying may negatively affect children's psychological health.	245 (92.1)	4 (1.5)	17 (6.4)
Children who experience cybervictimization first disclose it to their parents.	61 (22.9)	109(41.0)	96 (36.1)
Spending more than three hours per day on the internet may be associated with perpetrating cyberbullying.	51 (19.2)	111(41.7)	104 (39.1)
Spending more than three hours per day on the internet may be associated with becoming a victim of cyberbullying.	65 (24.4)	97 (36.5)	104 (39.1)
internet addiction is associated with cyberbullying behavior.	137 (51.5)	56 (21.1)	73 (27.4)
internet addiction is associated with cybervictimization.	146 (54.9)	48 (18.0)	72 (27.1)
Failure to take online safety precautions increases the risk of cyberbullying.	217 (81.6)	17 (6.4)	32 (12.0)
Healthcare professionals have responsibilities in the prevention and management of cyberbullying among children.	151 (56.8)	60 (22.6)	55 (20.7)

**: n(%)*

more likely to report having a social media account than physicians (98.4% vs. 93.2%, respectively), and all participants with a high school education reported having at least one social media account (Table IV).

Time spent on social media was significantly associated with age, profession, marital status, number of children, and years of professional experience (χ^2=13.153, p<0.001; χ^2=6.423, p=0.041; χ^2=8.332, p=0.016; χ^2=16.121, p=0.002; and χ^2 =18.878, p<0.001, respectively). The highest proportions of participants who reported spending 3-5 hours per day on social media were those aged 19-35 years (35.6%), nurses (34.7%), single participants (38.8%), participants without children (36.6%), and those with 1-4 years of professional experience (37.8%) (Table IV).

Encountering a child who had perpetrated cyberbullying was not significantly associated with educational level (χ^2= 3.405, p=0.156). Healthcare professionals with a graduate degree reported a higher proportion of encountering children who had engaged in cyberbullying (12.5%) than those with a bachelor's degree (5.4%) (Table IV). In addition, encountering a child who had experienced cybervictimization differed significantly according to the number of children of the healthcare professionals (χ^2=5.988, p=0.035). Participants with one child were more likely to report encountering a child who had experienced cybervictimization (17.6%) than those with no children (5.4%) or two children (3.3%) (Table IV).

Reported familiarity with the behavioral characteristics of children who perpetrate cyberbullying differed significantly according to profession (χ^2=6.070, p=0.014) and educational level (χ^2 =19.755, p<0.001). A greater proportion of nurses (82.4%) than physicians reported that they were not familiar with these behavioral characteristics. Likewise, all participants with a high school education indicated that they did not know the behavioral characteristics of children who perpetrate cyberbullying. Reported familiarity with the behavioral characteristics of children experiencing cybervictimization also differed significantly according to educational level (χ^2=9.721, p=0.008). Specifically, 58.3% of participants with a graduate degree, 77.0% of those with a bachelor's degree, and 92.9% of those with a high school education reported that they were not familiar with the behavioral characteristics of children experiencing cybervictimization (Table IV).

Reported behavioral characteristics of children experiencing cybervictimization were significantly associated with sex (p=0.011), whereas no statistically significant associations were identified with the other sociodemographic variables examined (Table IV).

Discussion

Pediatric healthcare professionals' familiarity with cyberbullying and cybervictimization is essential for the early recognition and management of children exposed to digital risks. Understanding pediatric healthcare professionals' response patterns regarding these issues is particularly important because early identification may facilitate timely intervention, appropriate counseling, and

Table IV: Distribution of internet and social media usage habits and factors related to cyberbullying, cybervictimization and behavioral characteristics according to the sociodemographic characteristics of pediatric healthcare professionals.

Features	Age		Sex		Profession		Educational level			Marital status		Number of children			Experience		
	19-35	≥36	Female	Male	P	Nurse	HS	BD	GD	Married	Single	None	1	2	1-4	5-10	≥11
internet time*																	
0-2 hours	59 (26.6)	29 (65.9)	72 (34.6)	16 (27.6)	30 (41.1)	58 (30.1)	5 (35.7)	65 (31.9)	18 (37.5)	52 (43.7)	36 (24.5)	52 (25.7)	13 (38.2)	23 (76.7)	38 (23.2)	23 (37.7)	27 (65.9)
3-5 hours	128 (57.7)	13 (29.5)	108 (51.9)	33 (56.9)	35 (47.9)	106 (54.9)	7 (50.0)	110 (53.9)	24 (50.0)	57 (47.9)	84 (57.1)	116 (57.4)	19 (55.9)	6 (20.0)	97 (59.1)	31 (50.8)	13 (31.7)
6 ≤	35 (15.8)	2 (4.5)	28 (13.5)	9 (15.5)	8 (11.0)	29 (15.0)	2 (14.3)	29 (14.2)	6 (12.5)	10 (8.4)	27 (18.4)	34 (16.8)	2 (5.9)	1 (3.3)	29 (17.7)	7 (11.5)	1 (2.4)
Statistical†	X^2=23.836/p<0.001		X^2=1.027/p=0.598		X^2=3.069/p=0.216		X^2=0.795/p=0.952			X^2=13.088/p<0.001		X^2=29.971/p<0.001			X^2=27.693/p<0.001		
Use of SM*																	
Yes	217 (97.7)	41 (93.2)	201 (96.6)	57 (98.3)	68 (93.2)	190 (98.4)	14 (100.0)	200 (98.0)	44 (91.7)	114 (95.8)	144 (98.0)	196 (97.0)	34 (100.0)	28 (93.3)	160 (97.6)	60 (98.4)	38 (92.7)
No	5 (2.3)	3 (6.8)	7 (3.4)	1 (1.7)	5 (6.8)	3 (1.6)	0	4 (2.0)	4 (8.3)	5 (4.2)	3 (2.0)	6 (3.0)	0 (0)	2 (6.7)	4 (2.4)	1 (1.6)	3 (7.3)
Statistical†	p=0.129		p=1.000		p=0.038		X^2 =4.576/p=0.097			p=0.473		X^2 =2.114/p=0.214			X^2 =2.827/p=0.2119		
Daily time SM*																	
0-2 hours	129 (58.1)	38 (86.4)	132 (63.5)	35 (60.3)	54 (74.0)	113 (58.5)	10 (71.4)	123 (60.3)	34 (70.8)	86 (72.3)	81 (55.1)	115 (56.9)	25 (73.5)	27 (90.0)	89 (54.3)	42 (68.9)	36 (87.8)
3-5 hours	79 (35.6)	6 (13.6)	64 (30.8)	21 (36.2)	18 (24.7)	67 (34.7)	2 (14.3)	70 (34.3)	13 (27.1)	28 (23.5)	57 (38.8)	74 (36.6)	9 (26.5)	2 (6.7)	62 (37.8)	18 (29.5)	5 (12.2)
6 ≤	14 (6.3)	0 (0.0)	12 (5.8)	2 (3.4)	1 (1.4)	13 (6.7)	2 (14.3)	11 (5.4)	1 (2.1)	5 (4.2)	9 (6.1)	13 (6.4)	0 (0.0)	1 (3.3)	13 (7.9)	1 (1.6)	0 (0.0)
Statistical†	X^2 =13.153/p<0.001		X^2 =0.812/p=0.645		X^2 =6.423/p=0.041		X^2 =5.719/p=0.192			X^2 =8.332/p=0.016		X^2 =16.121/p= 0.002			X^2 =18.878/p<0.001		
Encountering cyberbullies																	
Yes	15 (6.8)	2 (4.5)	13 (6.3)	4 (6.9)	6 (8.2)	11 (5.7)	0 (0.0)	11 (5.4)	6 (12.5)	7 (5.9)	10 (6.8)	12 (5.9)	4 (11.8)	1 (3.3)	9 (5.5)	5 (8.2)	3 (7.3)
No	207 (93.2)	42 (95.5)	195 (93.8)	54 (93.1	67 (91.8)	182 (94.3)	14 (100.0)	193 (94.6)	42 (87.5)	112 (94.1)	137 (93.2)	190 (94.1)	30 (88.2)	29 (96.7)	155 (94.5)	56 (91.8)	38 (92.7)
Statistical†	p=0.747		p=0.770		X^2 =0.562/p=0.453		X^2 =3.405/p=0.156			X^2 =0.093/p=0.760		X^2 =2.040/p=0.4214			X^2 =0.907/p=0.7153		
Encountering cybervictims																	
Yes	16 (7.2)	2 (4.5)	12 (5.8)	6 (10.3)	6 (8.2)	12 (6.2)	1 (7.1)	10 (4.9)	7 (14.6)	9 (7.6)	9 (6.1)	11 (5.4)	6 (17.6)	1 (3.3)	8 (4.9)	7 (11.5)	3 (7.3)
No	206 (92.8)	42 (95.5)	196 (94.2)	52 (89.7)	67 (91.8)	181 (93.8)	13 (92.9)	194 (95.1)	41 (85.4)	110 (92.4)	138 (93.9)	191 (94.6)	28(82.4)	29 (96.7)	156 (95.1)	54 (88.5)	38 (92.7)
Statistical†	p=0.746		p=0.239		p=0.588		X^2 =5.432/p=0.054			X^2 =0.216/p=0.642		X^2 =5.988/p=0.035			X^2 =3.170/p=0.212		
Identifying cyberbully																	
I know	45(20.3)	12(27.3)	43(20.7)	14(24.1)	23(31.5)	34(17.6)	0(0.0)	36(17.6)	21(43.8)	27(22.7)	30(20.4)	44(21.8)	6(17.6)	7(23.3)	30(18.3)	16(26.2)	11(26.8)
I don't know	177(79.7)	32(72.7)	165(79.3)	44(75.9)	50(68.5)	159(82.4)	14(100.0)	168(82.4)	27(56.3)	92(77.3)	117(79.6)	158(78.2)	28(82.4)	23(76.7)	134(81.7)	45(73.8)	30(73.2)
Statistical†	X^2 =1.069/p=0.301		X^2 =0.323/p=0.570		X^2 =6.070/p=0.014		X^2 =19.755/p<0.001			X^2 =0.203/p=0.652		X^2 =0.368/p=0.832			X^2 =2.503/p=0.286		
Identifying cybervictim																	
I know	56(25.2)	12(27.3)	57(27.4)	11(19.0)	20(27.4)	48(24.9)	1(7.1)	47(23.0)	20(41.7)	30(25.2)	38(25.9)	54(26.7)	6(17.6)	8(26.7)	39(23.8)	18(29.5)	11(26.8)
I don't know	166(74.8)	32(72.7)	151(72.6)	47(81.0)	53(72.6)	145(75.1)	13(92.9)	157(77.0)	28(58.3)	89(74.8)	109(74.1)	148(73.3)	28(82.4)	22(73.3)	125(76.2)	43(70.5)	30(73.2)
Statistical†	X^2 =0.081/p=0.850		X^2 =1.697/p=0.193		X^2 =0.178/p=0.753		X^2 =9.721/p=0.008			X^2 =0.014/p=0.905		X^2 =1.284/p=0.526			X^2 =0.807/p=0.668		
Cyberbully behaviors																	
Aggressive	30(66.7)	5(41.7)	27(62.8)	8(57.1)	14(60.9)	21(61.8)	0(0.0)	23(63.9)	12(57.1)	17(63.0)	18(60.0)	30(68.2)	3(50.0)	2(28.6)	21(70.0)	10(62.5)	4(36.4)
Angry	8(17.8)	3(25.0)	8(18.6)	3(21.4)	4(17.4)	7(20.6)	0(0.0)	7(19.4)	4(19.0)	4(14.8)	7(23.3)	8(18.2)	1(16.7)	2(28.6)	5(16.7)	3(18.8)	3(27.3)
Hostile	7(15.6)	4(33.3)	8(18.6)	3(21.4)	5(21.7)	6(17.6)	0(0.0)	6(16.7)	5(23.8)	6(22.2)	5(16.7)	6(13.6)	2(33.3)	3(42.9)	4(13.3)	3(18.8)	4(36.4)
Statistical	X^2 =2.984/p=0.239		X^2 =0.359/p=1.000		X^2 =0.193/p=0.908		X^2 =0.570/p=0.925			X^2 =0.814/p=0.758		X^2 =5.924/p=0.141			X^2 =4.456/p=0.366		
Cybervictim behaviors																	
Social withdrawal	33(58.9)	8(66.7)	38(66.7)	3(27.3)	11(55.0)	30(62.5)	1(100.0)	25(53.2)	15(75.0)	20(66.7)	21(55.3)	31 (57.4)	4 (66.7)	6 (75.0)	19 (48.7)	13 (72.2)	9 (81.8)
Depression	15(26.8)	3(25.0)	11(19.3)	7(63.6)	7(35.0)	11(22.9)	0 (0.0)	14(29.8)	4(20.0)	8(26.7)	10(26.3)	15 (27.8)	1 (16.7)	2 (25.0)	13 (33.3)	4 (22.2)	1 (9.1)
Fear and anxiety	8(14.3)	1(8.3)	8(14.0)	1(9.1)	2(10.0)	7(14.6)	0 (0.0)	8(17.0)	1(5.0)	2(6.7)	7(18.4)	8 (14.8)	1 (16.7)	0 (0)	7 (17.9)	1 (5.6)	1 (9.1)
Statistical	X^2 =0.279/p=1.000		X^2 =8.176/p=0.011		X^2 =1.130/p=0.638		X^2 =4.037/p=0.455			X^2 =2.026/p=0.413		X^2 =1.617/p=0.907			X^2 =5.188/p=0.251		

: n(%), †: Pearson chi-square or Fisher's exact test / Fisher–Freeman–Halton exact/Monte Carlo test, **SM: Social Media, **P:** Physician, **HS:** High school, **BD:** Bachelor's degree, **GD:** Graduate degree*

referral when necessary. The present findings are discussed in relation to the existing literature to provide possible explanations and highlight their implications for pediatric healthcare practice.

More than half of the pediatric healthcare professionals (53.0%) reported spending 3-5 hours per day on the internet, whereas 13.9% reported spending more than six hours online each day. Chapala et al. (22) reported that 31.9% of healthcare professionals spent 3-5 hours and 38.5% spent more than five hours per day on screen time. In another study of nurses, 54 (23.4%) reported spending more than three hours per day on the internet (23). Although direct comparison is limited because the studies assessed different aspects of digital use and included different groups of healthcare professionals, the amount of time spent online suggests that digital technologies constitute an important part of healthcare professionals' daily lives. This pattern highlights the need to consider the potential implications of prolonged internet use for both professional practice and personal well-being.

Nearly all pediatric healthcare professionals reported using social media, with WhatsApp® and Instagram® emerging as the most frequently used platforms, consistent with previous studies (24,25). WhatsApp® may be preferred because it enables rapid communication, collaboration, and professional information sharing through private groups, whereas Instagram® offers opportunities for visual communication, professional networking, public engagement, and health promotion activities (25). These characteristics may explain the widespread use of both platforms among healthcare professionals.

internet and social media use was significantly higher among younger healthcare professionals (19-35 years), those who were single, had no children, and had 1-4 years of professional experience. Global digital usage statistics likewise indicate that young adults constitute the most active users of the internet and social media platforms (26). In contrast, family responsibilities associated with marriage and parenthood, together with increasing professional seniority, have been shown to reduce the amount of time devoted to digital media and screen-based activities. Similarly, Lefebvre et al. (27) reported that 87% of nurses used a general social media account and that increasing age was associated with decreasing frequency of social media use. Consequently, the greater internet and social media observed among younger healthcare professionals represents an expected pattern that is consistent with the existing literature.

One of the most striking findings was that almost all pediatric healthcare professionals reported never having encountered a child who had engaged in cyberbullying or experienced cybervictimization. Considering the prevalence of cyberbullying and cybervictimization reported both internationally and in Türkiye, this observation is particularly noteworthy. Recent evidence indicates that the prevalence of cybervictimization ranges from 2.0% to 72.0%, whereas cyberbullying perpetration ranges from approximately 10.3% to 43.1% (6-8). Rather than suggesting that cyberbullying is uncommon among children, this finding may reflect the fact that cyberbullying rarely constitutes the primary reason for seeking healthcare. Children affected by cyberbullying frequently present with nonspecific complaints such as somatic symptoms, anxiety, depressive symptoms, sleep disturbances, or declining academic performance (9), while the underlying cyberbullying experience often remains undisclosed or is not routinely explored during clinical assessment.

Another finding supporting this interpretation was that the majority of healthcare professionals reported that they were unfamiliar with the behavioral characteristics of children who perpetrate cyberbullying and those who experience cybervictimization. Most of the healthcare professionals who reported being familiar with these behaviors described children who perpetrate cyberbullying as "aggressive." However, the literature indicates that children who perpetrate cyberbullying cannot be explained solely by aggressive characteristics; rather, they exhibit multidimensional personality and behavioral characteristics, such as impulsivity, lack of empathy, dominance, leadership tendencies, difficulties with anger control, and a low sense of responsibility (28). Therefore, it can be suggested that healthcare professionals tend to evaluate children who perpetrate cyberbullying primarily based on overt aggressive behaviors and do not adequately consider the complex psychosocial nature of cyberbullying. Similarly, it is noteworthy that healthcare professionals predominantly described children experiencing cybervictimization as "socially withdrawn". Favini et al. (28) reported that introverted and overcontrolled children are not always a high-risk group for cybervictimization because they may avoid online environments to a greater extent, whereas this characteristic is more commonly observed among victims of traditional bullying. Therefore, it can be suggested that healthcare professionals' perceptions of cybervictimization are largely based on patterns associated with traditional bullying. In fact, unlike traditional bullying, cyberbullying is characterized by features such as anonymity, online interaction, and the fluidity of roles (29). Focusing solely on conventional behaviors such as social withdrawal or aggression may result in cyberbullying cases being overlooked. Indeed, recent studies have shown that children who perpetrate cyberbullying may also experience cybervictimization and that these two roles are not mutually exclusive but are often overlapping experiences (4,12). In other words, a child who displays angry and aggressive behaviors may also experience victimization in online environments. Therefore, it is highly important for healthcare professionals to adopt a comprehensive assessment approach that considers the possibility that children may simultaneously experience both roles. However, in the present study, more than half of the healthcare professionals (52.3%) indicated that they did not know whether cyberbullying and cybervictimization may be related. This finding highlights the need to strengthen healthcare professionals' awareness of cyberbullying and cybervictimization, particularly regarding the overlapping nature of perpetration and victimization roles. Profession and educational level were also associated with responses regarding cyberbullying and cybervictimization. These differences may reflect variations in professional roles and educational exposure. However, because previous formal training was not assessed, the reasons for these differences cannot be determined.

The individual questionnaire responses revealed differences in how pediatric healthcare professionals recognized various forms of cyberbullying. Pediatric healthcare professionals more readily recognize clear and overt forms of cyberbullying,

including unauthorized use of another person's account, online impersonation, and sharing content without consent, which are well-established manifestations of cyberbullying (1,5). In contrast, fewer participants identified spreading rumors (45.5%) and social exclusion (52.3%) as forms of cyberbullying. The lower proportion of participants who identified these behaviors as cyberbullying may be related to the less overt and more relational nature of these behaviors. Regarding sex-related perceptions, 48.9% of participants were uncertain whether cyberbullying perpetration is more common among boys, while 40.2% were uncertain whether cybervictimization is more common among girls. This uncertainty may be understandable given the inconsistent findings regarding sex differences in cyberbullying and cybervictimization.

One of the most striking findings of the present study was that approximately one-quarter (22.6%) of healthcare professionals did not consider the prevention and management of cyberbullying to be part of their professional responsibilities. This finding appears inconsistent with current recommendations regarding the role of healthcare professionals in addressing digital risks among children and adolescents. The American Academy of Pediatrics recommends incorporating discussions of children's and adolescents' digital media use and online experiences into healthcare and providing guidance to children and families on safe and healthy digital media use (30). The World Health Organization identifies cyberbullying as a form of online violence against children and emphasizes the important role of healthcare professionals in the early identification, assessment, and referral of children exposed to violence (31). A recent systematic review further emphasized that healthcare and public health professionals are uniquely positioned to contribute to the early identification, prevention, and management of bullying and cyberbullying; however, their roles are not yet consistently integrated into bullying prevention frameworks (19). The perception that cyberbullying falls outside the professional role of healthcare providers may reflect limited awareness of their potential role in addressing digital risks. This may represent a barrier to the early identification of children exposed to cyberbullying, provision of appropriate counseling, and referral to multidisciplinary support services.

Although pediatric assessments routinely include family history, physical health, and developmental evaluation, questions regarding children's digital lives, social media use, online interactions, and experiences of cyberbullying are rarely incorporated into standard clinical practice. Consequently, healthcare professionals may have encountered children affected by cyberbullying without recognizing the underlying cause of their psychological or behavioral problems. These findings emphasize the importance of integrating routine assessment of digital experiences into pediatric healthcare in order to facilitate the early identification of children at risk of cyberbullying and cybervictimization.

Limitations

This study has several limitations that should be considered when interpreting the findings. First, because the study was conducted at a single pediatric hospital, the generalizability of the findings to healthcare professionals working in other healthcare settings may be limited. Second, the cross-sectional design precludes conclusions regarding causal relationships between the variables. Third, the data were collected using self-reported questionnaires, which may be subject to recall and social desirability bias. In addition, participants were recruited while they were on duty, which may have introduced selection bias and may limit the representativeness of healthcare professionals who were not on duty during the data collection period. A response rate could not be calculated because the total number of eligible healthcare professionals approached during the data collection period was not recorded.

Finally, healthcare professionals' responses regarding cyberbullying and cybervictimization were assessed using a researcher-developed questionnaire based on the existing literature. Although the questionnaire was reviewed by a multidisciplinary panel of experts to ensure the relevance, clarity, and comprehensiveness of its content, its psychometric properties were not comprehensively evaluated because no standardized and validated instrument addressing this topic was available at the time of the study. Moreover, the questionnaire assessed participants' responses to individual items rather than objectively measured knowledge, and no total knowledge score was calculated. Therefore, the findings should be interpreted as response patterns rather than as a direct measure of overall knowledge. Furthermore, multiple statistical comparisons were performed without adjustment for multiple testing; therefore, the findings of these exploratory analyses should be interpreted cautiously. Future research should focus on developing and validating standardized instruments to assess healthcare professionals' knowledge of cyberbullying and cybervictimization and should evaluate these constructs in larger and more diverse healthcare populations.

Conclusions

Despite the widespread use of the internet and social media among healthcare professionals, the findings indicate limited familiarity with the behavioral characteristics of children involved in cyberbullying and cybervictimization and uncertainty regarding professional responsibilities. Although cyberbullying and cybervictimization are common problems affecting children and adolescents, most healthcare professionals reported that they had never encountered a child involved in either situation. Furthermore, many participants reported being unfamiliar with the behavioral characteristics associated with children who perpetrate or experience cyberbullying, and approximately one-quarter did not consider the prevention and management of cyberbullying to be part of their professional responsibilities.

These findings highlight the need to strengthen healthcare professionals' competencies in recognizing and responding to cyberbullying. Continuing professional education programs for physicians and nurses working with children and adolescents should incorporate evidence-based content on cyberbullying risk factors, behavioral indicators, screening strategies, and appropriate management approaches. In addition, routine pediatric psychosocial assessments should include questions

regarding digital media use, online experiences, and exposure to cyberbullying to facilitate the early identification of children at risk. Given the growing impact of digital technologies on children's health and well-being, effective prevention and management of cyberbullying require multidisciplinary collaboration among healthcare professionals, educators, families, and mental health specialists. Developing coordinated, evidence-based clinical and educational strategies may improve the early identification, prevention, and management of cyberbullying and cybervictimization while promoting safer digital environments for children and adolescents. Future research should evaluate the effectiveness of educational interventions designed to improve healthcare professionals' competence in recognizing and managing cyberbullying. In addition, studies should investigate whether integrating routine digital risk assessment into pediatric healthcare settings improves the early identification, referral, and support of children affected by cyberbullying and cybervictimization.

Ethics committee approval

This study was conducted in accordance with the Helsinki Declaration Principles. The study was approved by Ankara Yıldırım Beyazıt University (10.11.2022, reference number: 2022-1205).

Contribution of the authors

Study conception and design: DU; data collection: DU, SK, NK; analysis and interpretation of results: DU, SK, NK; draft manuscript preparation: DU. All authors reviewed the results and approved the final version of the article.

Source of funding

The authors declare the study received no funding.

Conflict of interest

The authors declare that there is no conflict of interest.

Generative AI Statetment

During the preparation of this work the authors used [Chatgpt/AI] to grammar corrections and language improvements. After using this tool/service, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article

References

1. Smith PK, Mahdavi J, Carvalho M, Fisher S, Russell S, Tippett N. Cyberbullying: its nature and impact in secondary school pupils. J Child Psychol Psychiatry. 2008;49(4):376-85. https://doi.org/10.1111/j.1469-7610.2007.01846.x
2. Dilmaç JA.Deviance in the Digital Era: Cyberbullying Turkish Studies - Social Sciences, 2020; 15(3): 1087-99. https://doi.org/10.29228/TurkishStudies.3989
3. Fisher BW, Gardella JH, Teurbe-Tolon AR. Peer Cybervictimization Among Adolescents and the Associated Internalizing and Externalizing Problems: A Meta-Analysis. J Youth Adolesc. 2016;45(9):1727-43. https://doi.org/10.1007/s10964-016-0541-z
4. Uludasdemir D, Kucuk S. Cyber Bullying Experiences of Adolescents and Parental Awareness: Turkish Example. J Pediatr Nurs. 2019;44:e84-e90. https://doi.org/10.1016/j.pedn.2018.11.006
5. Topcu C, Erdur-Baker O. RCBI-II: the second revision of the Revised Cyber Bullying Inventory. Meas Eval Couns Dev. 2018;51(1):32-41. https://doi.org/10.1080/07481756.2017.1395705
6. Li C, Wang P, Martin-Moratinos M, Bella-Fernández M, Blasco-Fontecilla H. Traditional bullying and cyberbullying in the digital age and its associated mental health problems in children and adolescents: a meta-analysis. Eur Child Adolesc Psychiatry. 2024;3(9):2895-909. https://doi.org/10.1007/s00787-022-02128-x
7. Eyuboglu D, Eyuboglu M, Oktar D, et al. Risk Factors and Correlates of School Bullying and Cyberbullying among Turkish Adolescents: Evidence from a School-Based Cross-Sectional Study. Alpha Psychiatry. 2025;26(2):38859. https://doi.org/10.31083/AP38859
8. Moral-García JE, Rusillo-Magdaleno A, Patiño-Villada FA, Martínez-López EJ. Bullying and Cyberbullying Are Associated with Inappropriate Use of the internet, Cell Phones, and Video Games in Children and Adolescents. Eur J Investig Health Psychol Educ. 2025;15(5):82. https://doi.org/10.3390/ejihpe15050082
9. Bozduman Çelebi S, Cambaz Kurt N. Bullying and cyberbullying among adolescents: associations with somatic symptoms, psychiatric symptoms, and sleep disturbance. Middle East Curr Psychiatry. 2025;32:106. https://doi.org/10.1186/s43045-025-00602-1
10. Liston AMS, Pando AT, Managbanag JD, Managbanag MRV, Maestre MKA, Mamites IO. An umbrella review of the prevalence, characteristics, and impacts of cyberbullying among elementary students. Front Educ. 2026;11:1816975. https://doi.org/10.3389/feduc.2026.1816975
11. Real-Fernández M, Navarro-Soria I, Rosales-Gómez M, Delgado B. Problematic internet Use and Its Relationship with Cyberbullying, Anxiety, and Executive Functions in Adolescence. Children (Basel). 2025;12(4):503. https://doi.org/10.3390/children12040503
12. Kucuk S, Uludasdemir D, Unal SA. Examining the relationship between adolescents' social media addiction levels and cyberbullying experiences. Rev Esc Enferm USP. 2025;58:e20240233. https://doi.org/10.1590/1980-220X-REEUSP-2024-0233en
13. Kwan I, Dickson K, Richardson M, et al. Cyberbullying and Children and Young People's Mental Health: A Systematic Map of Systematic Reviews. Cyberpsychol Behav Soc Netw. 2020;23(2):72-82. https://doi.org/10.1089/cyber.2019.0370
14. John A, Glendenning AC, Marchant A, et al. Self-Harm, Suicidal Behaviours, and Cyberbullying in Children and Young People: Systematic Review. J Med internet Res. 2018;20(4):e129. https://doi.org/10.2196/jmir.9044
15. Predescu E, Calugar I, Sipos R. Cyberbullying and Non-Suicidal Self-Injury (NSSI) in Adolescence: Exploring Moderators and Mediators through a Systematic Review. Children (Basel). 2024;11(4):410. https://doi.org/10.3390/children11040410
16. Timmons-Mitchell J, Flannery DJ. What Pediatricians Should Know and Do about Cyberbullying. Pediatr Rev. 2020;41(7):373-5. https://doi.org/10.1542/pir.2019-0165
17. Carpenter LM, Hubbard GB. Cyberbullying: implications for the psychiatric nurse practitioner. J Child Adolesc Psychiatr Nurs. 2014;27(3):142-8. https://doi.org/10.1111/jcap.12079
18. Hutson E, Kelly S, Militello LK. Systematic Review of Cyberbullying Interventions for Youth and Parents With Implications for Evidence-Based Practice. Worldviews Evid Based Nurs. 2018;15(1):72-9. https://doi.org/10.1111/wvn.12257
19. Dailey SF, Roche RR, Sharkey MC. Addressing Bullying and Cyberbullying in Public Health: A Systematic Review of Interventions for Healthcare and Public Health Professionals. Int J Environ Res Public Health. 2025;22(11):1682. https://doi.org/10.3390/ijerph22111682
20. Del Rey R, Casas JA, Ortega-Ruiz R, et al. Structural validity and cross-cultural robustness of the European Cyberbullying Intervention Project Questionnaire. Comput Hum Behav. 2015;50:141-7. https://doi.org/10.1016/j.chb.2015.03.065

21. Rice E, Petering R, Rhoades H, et al. Cyberbullying perpetration and victimization among middle-school students. Am J Public Health. 2015;105(3):e66-e72. https://doi.org/10.2105/AJPH.2014.302393
22. Chapala S, Hussein M, Shirodkar K, Iyengar KP, Vaishya R, Botchu R. Digital screen usage amongst doctors: demographics, patterns of use and effect of health parameters. Apollo Med. 2025;22:303-9. https://doi.org/10.1177/09760016241290354
23. Aciksoz S, Sendir M, Atar NY, Simsekoglu N, Baydili KN. Exploring the relationship between cyberloafing and innovativeness among nurses in research hospitals: a cross-sectional study in Turkey. BMC Nurs. 2024;23(1):371. https://doi.org/10.1186/s12912-024-02008-6
24. Hazzam J, Lahrech A. Health Care Professionals' Social Media Behavior and the Underlying Factors of Social Media Adoption and Use: Quantitative Study. J Med internet Res. 2018;20(11):e12035. https://doi.org/10.2196/12035
25. Zouakia Z, Manns A, Meyre T, Burgun A, Kadlub N, Tsopra R. Adoption and Use of Social Media in Health Care Among Medical Residents: Cross-Sectional Study. JMIR Med Educ. 2026;12:e83475. https://doi.org/10.2196/83475
26. DataReportal. Digital 2025: global overview report [internet]. DataReportal; 2025 [cited 2026 Sep 25]. Available from: https://datareportal.com/reports/digital-2025-global-overview-report
27. Lefebvre C, McKinney K, Glass C, et al. Social Media Usage Among Nurses: Perceptions and Practices. J Nurs Adm. 2020;50(3):135-41. https://doi.org/10.1097/NNA.0000000000000857
28. Favini A, Gerbino M, Pastorelli C, et al. Bullying and cyberbullying: do personality profiles matter in adolescence? Telemat Inform Rep. 2023;12:100108. https://doi.org/10.1016/j.teler.2023.100108
29. Fischer SM, Bilz L; HBSC Study Group Germany. Traditional bullying and cyberbullying at schools in Germany: Results of the HBSC study 2022 and trends from 2009/10 to 2022. J Health Monit. 2024;9(1):42-61. https://doi.org/10.25646/11872.
30. Munzer T, Parga-Belinkie J, Milkovich LM, et al. Digital Ecosystems, Children, and Adolescents: Policy Statement. Pediatrics. 2026;157(2):e2025075320. https://doi.org/10.1542/peds.2025-075320
31. World Health Organization. Violence against children online: what health systems and health care providers can do. Geneva: World Health Organization; 2022 [cited 2026 Sep 20].