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The Role of Parents' Social Media Use in Digital Safety Awareness and Its Implications for Children's Learning Environment

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As people of all ages increasingly use social media platforms (SMP) for various purposes, this study investigates how these platforms influence social media addiction (SMA) among parents. Each SMP has different features. The reasons why parents use these platforms, as well as the ways in which they use them, may vary. This study investigates which SMP influence SMA among parents, and the effect of these platforms on parents' awareness of digital data security (DDSA). Path analysis was conducted to examine the direct and indirect relationships among the identified SMP (YouTube, Facebook, Instagram, Pinterest, TikTok, X, WhatsApp, and Snapchat), SMA, and DDSA. The analysis revealed that parents' use of Pinterest, X, and Snapchat significantly affected their DDSA: Snapchat had a negative effect, whereas Pinterest and X had positive effects. Parents' use of Snapchat, Pinterest, WhatsApp, and TikTok was found not to significantly affect SMA, while SMA was significantly and positively affected by the use of Facebook, Instagram, YouTube, and X. Conversely, it was found that parents' DDSA significantly and negatively affected SMA. These findings have important implications for children's digital learning environments and parental involvement in technology-supported learning. The findings have been used to provide recommendations to help parents adopt healthier social media (SM) habits and safer digital practices.

Introduction

Billions of people worldwide use SMP for various purposes, including communication, content sharing, entertainment, self-presentation, and income generation (Bavel et al., 2024). SMP have transformed the way people communicate and are widely used across all age groups (O'Day & Heimberg, 2021). In the United States, the most commonly used SMP include YouTube, Facebook, Instagram, Pinterest, TikTok, LinkedIn, WhatsApp, Snapchat, X, Reddit, and BeReal (Gottfried, 2024), whereas YouTube, Instagram, TikTok, and Facebook are the most widely used platforms in Türkiye (We Are Social, 2025). Since different SMP have different functions, user behaviours can be affected (Meshi et al., 2020; Rozgonjuk et al., 2021). Individuals use SMP for various purposes. TikTok is used for short videos, Instagram for body

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and lifestyle content, and Snapchat for discovering content and easily connecting with friends via photos and videos that reward daily messaging and disappear after viewing (Meshi et al., 2020; Wells et al., 2021). Facebook is used for obtaining information, academic learning, teaching, maintaining relationships, and researching products, while YouTube is used for obtaining information, teaching, entertainment, academic learning, and researching products (Moghavvemi et al., 2017). X, Instagram, and Pinterest are the most popular apps for educational purposes (Dash et al., 2022). WhatsApp is commonly used for everyday communication, such as coordinating meetings, chatting, maintaining social relationships, and exchanging information (Addeo et al., 2023). While Snapchat facilitates brief and transient communication, Facebook is more enduring (Meshi et al., 2020).

It can be said that SMP, which can have both positive and negative effects on individuals and organisations, has different characteristics today. This study aims to investigate the effect of using these platforms on parents' SMA. Additionally, the impact of the identified SMP (Pinterest, X, and Snapchat) on DDSA, as well as the influence of parents' DDSA levels on SMA, will be examined. The literature shows that many studies have been conducted on the DDSA of individual users, teachers, academics, students, parents, and different sectors (Akman et al., 2023; Aksoğan & Atıcı, 2023; Islam, 2018; Özerbaş et al., 2023; Öztürk & Çakır, 2022; Sabillon & Bermejo Higuera, 2023). While technology is said to improve the quality of life, it can also cause technological problems. Security and privacy concerns may arise from the use of technology and SMP. Security involves integrating people, processes and technology, and individuals need to be DDSA issues to protect themselves against cyber threats in digital environments (Alkhazi et al., 2022).

In particular, the existing literature has not examined parents' SM use, SMA, and DDSA within a single study. Given the influence of parenting behaviors on children's development, promoting healthy parenting practices may contribute to positive developmental outcomes. One innovation brought about by technology is SM (Hoffman & Novak, 2012). This study aims to investigate which SMP parents use, how often they use them, and which affect SMA. Parents with SMA may be more likely to experience adverse psychological and social outcomes, which may also affect their children (Akman et al., 2023). In particular, parents' excessive phone use and SMA may undermine their role as positive role models for their children (Bostancı, 2023). Children and adolescents identify with their parents by imitating their behaviours, and this situation also occurs in digital environments (Bostancı, 2023). Parents' level of SMA may also negatively affect communication with their children and spouses. The quality of the time spent together may be interrupted. Problems may occur in the fulfilment of the parents' responsibilities at work and at home. The parents' SMA status and not paying attention to DDSA while using SM can lead to negative effects on both the individual and the child (Akan et al., 2024). The development of children and parenting practices are increasingly being shaped by technology, digitalisation, and SM. It is believed that parents' levels of SM use are not just a personal habit, but can also indirectly impact children's learning outcomes. In particular, an excessive focus on SM by parents may reduce parent-child interaction, resulting in a decline in the guidance and academic support children require during their learning. This may result in poorer core learning outcomes for children, such as reduced attention, motivation, and task completion. Low digital literacy among parents may result in children spending more uncontrolled time in digital environments. Parents who are mindful of their own SM use and aware of digital safety issues can support their children in using digital environments more intentionally and under greater control, thereby making a positive contribution to their learning. Positive individual development is often considered an important contributor to societal well-being. There is a gap in the literature regarding research on parents' evolving technology-related

behaviours (Akan et al., 2024; Akman et al., 2023; Bostancı, 2023; Subaşı et al., 2024). It is reported that parents with SMA influence their children's use of SM (Topan et al., 2025). In contrast, parents with lower levels of SMA may be more likely to encourage their children to participate in sports and socialize with their peers, potentially as a way of limiting their exposure to SM. They also employ strict measures, such as confiscating devices (Topan et al., 2025). Accordingly, this study focuses on parents, who are a key stakeholder group in the educational process but have received relatively little attention in existing literature. The SMP with the largest user bases for this study were Facebook, YouTube, Instagram, X, Pinterest, TikTok, Snapchat, and WhatsApp (Gottfried, 2024; Keleş, 2025; We Are Social, 2025). A path analysis was conducted to examine the association between identified SMP and parents' SMA, the effect of specific platforms (Pinterest, X and Snapchat) on DDSA and the potential role of DDSA in explaining SMA. Understanding these relationships may inform relevant stakeholders and guide future efforts to address parents' SM use. Further research and analysis can then be conducted to determine why some SMP have an impact on addiction, while others do not. Examining the use of SM by parents is thought to be necessary both individually and socially. This research addresses the under-researched topic of parents' use of SMP and aims to improve our understanding of it.

A model was created to determine which SMP affect parents' SMA status. Two research questions were formulated to test the model.

(1) What SMP affects parents' SMA status?
(2) Which model best explains the relationships between the SMP used by parents, their DDSA, and SMA?

SMP and Parents' Addiction

Facebook

Facebook was founded in 2004 by Mark Zuckerberg and his Harvard University friends to facilitate communication within the university (Arık & Arık, 2020). It has become a high-impact, low-risk platform that is used by individuals, schools, and teachers around the world to share information and quickly interact with other members of society and parents (Kimmons et al., 2021; Tscholl et al., 2023). Excessive and uncontrolled use of Facebook can lead to problematic use, also known as Facebook addiction. Research suggests that young people can interact with their parents on Facebook (Ball et al., 2013; Child et al., 2015; Child & Westermann, 2013), but excessive use will negatively impact these relationships (Bukhari, 2024). This study aims to investigate the effect of parents' Facebook use on SMA status.

YouTube

Founded in 2005, YouTube is the second most-visited website in the world (Arthurs et al., 2018; McGrady et al., 2023). It offers a wide variety of content, is easy to navigate and free for users (Shoufan & Mohamed, 2022). It is also suitable for learning purposes (Shoufan & Mohamed, 2022), and is the fastest-growing video content provider with the richest cultural repository in the history of the web (Snickars & Vonderau, 2009). It is suggested that autoplay, recommendations, and playlists are employed to maximise SM usage in the attention economy; however, they diminish individuals' sense of agency, exploit psychological vulnerabilities, and necessitate recommendation systems that more accurately reflect user preferences (Lukoff et al., 2021). However, some studies highlight the positive aspects of YouTube (Bakri & Yusni,

2021; Setiyana & Kusuma, 2021; Wulandari, 2024). YouTube is also said to be effective in the online learning process thanks to its accessibility at any time and in any place, and it is described as a learning tool that can help teachers and eliminate barriers (Colás-Bravo & Quintero-Rodríguez, 2023; Rahmatika et al., 2021). YouTube videos are also useful for educating parents on how to protect their children's health (Duman, 2020). This study aims to investigate the effect of parents' use of YouTube on SMA.

Instagram

Since its launch in 2010 as a photo-sharing platform, Instagram has evolved into a widely used SMP for personal communication, brand promotion and direct interaction between businesses and their target audiences (Yeniçıktı, 2016). However, as with every SMP, there are also studies reporting negative aspects of Instagram (Faelens et al., 2021; Wells et al., 2021). Researchers state that some of the problems experienced are specific to Instagram; these problems are not unique to SMP, and social comparisons are worse on Instagram (Wells et al., 2021). Research suggests that parents use Instagram to share content about their children (Ranzini et al., 2020) and to present themselves as competent caregivers (Le Moignan et al., 2017). This study aims to investigate the effect of parents' use of Instagram on SMA.

X (Twitter)

X, founded by Jack Dorsey, Biz Stone, Evan Williams, and Noah Glass in San Francisco in 2006, was originally limited to 140 characters (Suvay Eker, 2022). Originally called Twitter, where users could share short messages of up to 280 characters called 'tweets', the platform was renamed X after being purchased by Elon Musk in 2022 (Suvay Eker, 2022; Yıldırım & Ayan, 2024). It has been suggested that X fosters a sense of community and commitment among higher education students, enhancing their academic achievement, participation, and reflective practices (Bamalan, 2024). As with other SMP, X can have both positive and negative effects on individuals. Digital visuals can be used to share fake news, intervene in political events, make jokes, and create crises on X (Homsi et al., 2021; Msughter et al., 2025). X is one of the most commonly used SMP among parents (Akan et al., 2024). This study aims to investigate the effect of parental use of X on DDSA and SMA.

Pinterest

Founded in 2009 by Ben Silbermann, Evan Sharp, and Paul Sciarra in the USA, Pinterest is a platform for sharing and discovering images (Bahçecioğlu, 2024). Unlike many other SMP, Pinterest is primarily designed for discovering visual content and sharing ideas, and it attracts users who are seeking inspiration for personal or commercial purposes (Bahçecioğlu, 2024; Merten et al., 2022). It can also support students' development thanks to its ability to save content and share visual and creative ideas (Balseca-Obando et al., 2024; Dewi & Aminuddin, 2024; Muthmainnah et al., 2022; Saputra, 2024). Parents use Pinterest to plan meals, read recipes, share recipes, comment on recipes, create new recipes, and try out recipes (Guidry et al., 2023). This study aims to investigate the effect of parents' use of Pinterest on DDSA and SMA.

TikTok

TikTok was founded in China in 2015 under the name Douyin. It was renamed after Beijing Bytedance Technology acquired the application in 2017 (Keleş, 2025; Montag et al., 2021). TikTok provides its users with opportunities such as video editing and creation, and live

broadcasting (Keleş, 2025; Montag et al., 2021). Young people like the humour, entertainment, customisability, educational content, diversity of content, TikTok culture, user interface, short videos, stress management, and relatable content on TikTok (Martinez et al., 2024). Negative interactions, attention-seeking, platform drama, privacy issues, the platform's addictive nature, fake news, negative moods, political content, advertising, trending content, platform guidelines, irrelevant content, and revealing content are aspects of TikTok that users dislike (Martinez et al., 2024). The possibility of fake and misleading news and videos is a disadvantage of all SMP. Parents often share videos on TikTok to document their children's growth and development with family and friends (Lim & Wang, 2024). This study intends to investigate the effect of parents' use of TikTok on SMA.

Snapchat

Snapchat was founded in 2011 by Stanford University students Evan Spiegel, Reggie Brown, and Bobby Murphy to share limited photos and videos among friends (Kara, 2016). Unlike other SMP, it is an application that allows users to determine how long photos and videos, known as 'snaps', can be viewed (Habib et al., 2022; Hristova et al., 2022). Snaps can be opened once or twice within a limited time frame of between one and ten seconds (Kara, 2016; Van Essen & Van Ouytsel, 2023). Images are deleted afterwards, and the content owner is informed when a screenshot is taken (Hristova et al., 2022; Kara, 2016). As the content shared on Snapchat is temporary, users can share ordinary, fun, and humorous posts (Ben Amor & Mzoughi, 2023; Van Essen & Van Ouytsel, 2023). Due to the temporary nature of its content, concerns have been raised about harassment, sexual propositions, and messages containing inappropriate content (Pijlman & Burgmeijer, 2024; Van Essen & Van Ouytsel, 2023). Research on parents' use of Snapchat is limited, but young adults use it to stay in touch with family and friends (Vaterlaus et al., 2016). This study aims to investigate the effect that parents' use of Snapchat has on DDSA and SMA.

WhatsApp

Established in 2009, WhatsApp is the world's most popular instant messaging application, with billions of users (Gul et al., 2021; Keles, 2025). It was created to make communication easy and enjoyable all over the world (Gul et al., 2021; Keles, 2025). Although not designed for educational purposes, WhatsApp has become one of the most widely used tools in education and training thanks to its features, such as personal chat, instant messaging, calls, voice messages, video calls, group formation, and sharing documents, photos, images and audio (Cervantes Rosas & Alvites-Huamaní, 2021; Mulyono et al., 2021; Suárez-Lantarón et al., 2022). Although online learning on WhatsApp is generally considered to be the best option, there are potential difficulties, such as weak student supervision, incomprehensible teaching materials, and high data costs (Khasanah et al., 2021). Parents are said to use WhatsApp to follow their children's school agenda, compare their school achievements with those of other children, and demonstrate their concern as parents (Moyano Dávila & Tabilo Prieto, 2024). This study aims to investigate the effect of parents' WhatsApp use on SMA.

Parents' Use of SM

SM is an important communication tool that provides individuals with different services (Yang, 2021). The rise of SM as a communication tool has increased the relevance of the Uses and Satisfactions Theory (Ruggiero, 2000). This theory focuses on how and why individuals use the media to communicate and meet their needs and desires (Child & Haridakis, 2017). This theory helps to explain why SM is used (Olpin et al., 2023). The most widely used SMP in

Türkiye are Facebook, YouTube, WhatsApp, Instagram, TikTok, and X, and their usage is increasing day by day (Keleş, 2025). Popular SMP have been the focus of numerous studies (Gözün Kahraman & Demirbaş, 2022; Keleş, 2025; Wiederhold, 2021). Although most SMP are free, users may incur costs ranging from loss of privacy to deterioration of mental health (Wiederhold, 2021). However, SM can also contribute to raising mental health awareness, providing peer support to those in distress, maintaining relationships, and combating loneliness (Wiederhold, 2021). Because the effects of SM are context-dependent, its overall impact cannot be generalized as either beneficial or harmful. Therefore, the present study specifically examined SMA. It was found that there is little large-scale research in the literature investigating the effect of different SMP on SMA in individuals (Boulianne et al., 2024; Cha & Kweon, 2021; Kimmons et al., 2021). The existing research is limited and focuses on one or a few platforms (Boulianne et al., 2024; Cha & Kweon, 2021; Kimmons et al., 2021; Wells et al., 2021). Facebook addiction (Akın et al., 2017; Andreassen et al., 2012), Instagram addiction (Kavaklı & İnan, 2020), YouTube addiction (Pakpour et al., 2023), and TikTok addiction (Galanis et al., 2024), and WhatsApp addiction were investigated by replacing 'Facebook' with 'WhatsApp' in the Facebook addiction scale (Andreassen et al., 2012; Gul et al., 2021). While the scales developed have been used to investigate addiction levels in individuals and young people, the effects of these platforms on individuals' SMA have only been investigated to a limited extent. It is stated that individuals' use of digital platforms emerges within technical and socio-cultural contexts and, in turn, shapes the environmental conditions (Arslankara et al., 2022). This study fills a gap in the literature by examining parents' SMA across multiple SMP in a single study. The fact that previous studies have focused on individuals and young people, with no research on parents, makes this research particularly important. It has been suggested that SM creates a virtual reality and that people with low intra-family communication and less communication with their spouses share more SM posts (Ulusoy & Atar, 2020). It has been suggested that as mothers' SMA levels increase, their family functionality decreases and the problems they experience with their children intensify, resulting in a deterioration of their relationships with them (Gözün Kahraman & Demirbaş, 2022). This study aims to investigate which identified SMP affect parents' SMA. Parental behaviours may influence family interactions. These findings could help us to better understand parents' use of SM, their potential addiction to it, and their DDSA. As parenting behaviours, human nature, and individual behaviours form complex patterns, methodologies and research designs are needed to explain these relationships and create new connections. In particular, identifying which SMP affects SMA will benefit research aimed at understanding the behaviours of parents, children, and individuals. The findings may help developers of SM applications to understand which platform features may be associated with parents' SMA.

Research design

First, a literature review was conducted to identify the SMP to be included in the study. A path model was then specified to examine the relationships between the selected SMP, SMA and DDSA. Several alternative path models were evaluated before the final model was selected. The primary aim of this research is to investigate the impact of SMP on parents' SMA. Several alternative path models were evaluated, and the final model was selected based on theoretical support from the literature and model fit indices. The study employed a quantitative, descriptive survey design and used path analysis to examine the direct and indirect relationships between the variables (Duncan, 1996). The selected path diagram is shown in Figure 1.

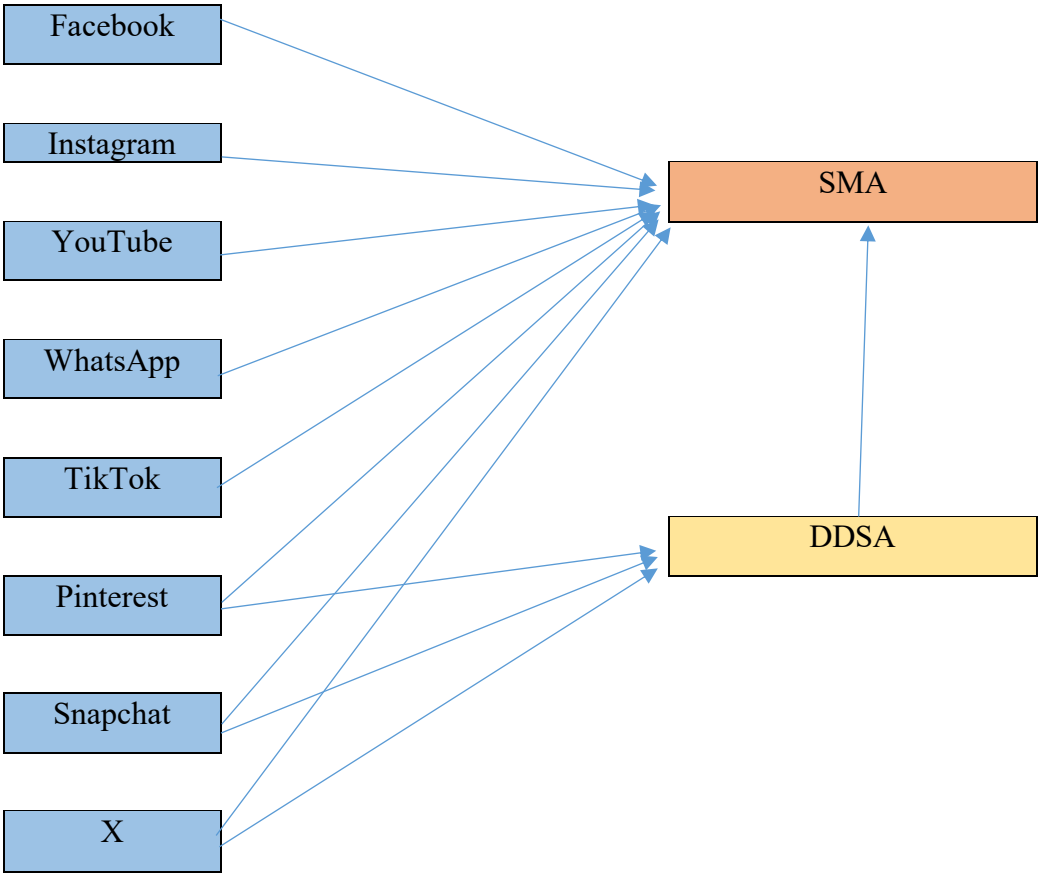

Figure 1. This is a Path Analysis Showing the Relationships Between the Variables

Participants

The study was conducted with parents residing in various provinces across Türkiye. A personal information form was created using Google Forms, including the scale items and parents' demographic information. As the aim was to reach parents via SM, the scale items were shared via the SM accounts of various individuals, and organisations. Parents were recruited using convenience sampling (Özen & Gül, 2007). The survey was distributed via SM accounts belonging to individuals, schools, municipalities, trade unions and non-governmental organisations (NGOs). Participation was entirely voluntary. As all items in the scale had to be answered, there was no missing data, and 742 parents participated in the study. The parents' demographic data are given in Table 1, and their SMP use status is given in Figure 2.

Table 1. Demographic Data of Parents

		Frequency (f)	Percent (%)
Parent	Mum	483	65.1
	Father	213	28.7
	Other	46	6.2
Parent's age	22-28	52	7.0
	29-34	77	10.4
	35-43	268	36.1
	44-53	264	35.6
	54-60	66	8.9
	≥61	15	2.0
Child's age	0-2	77	10.4
	3-6	70	9.4
	7-11	169	22.8
	12-18	288	38.8
	19-25	98	13.2
	≥26	40	5.4
Daily use of SM	I don't use it	22	3.0
	0-2	468	63.1
	3-4	184	24.8
	5-6	51	6.9
	7-8	12	1.6
	≥9	5	0.7
	Total	742	100.0

Analysis of Table 1 shows that the majority of the participants were mothers with children aged 12–18 years and reported using SM for 0–2 hours per day.

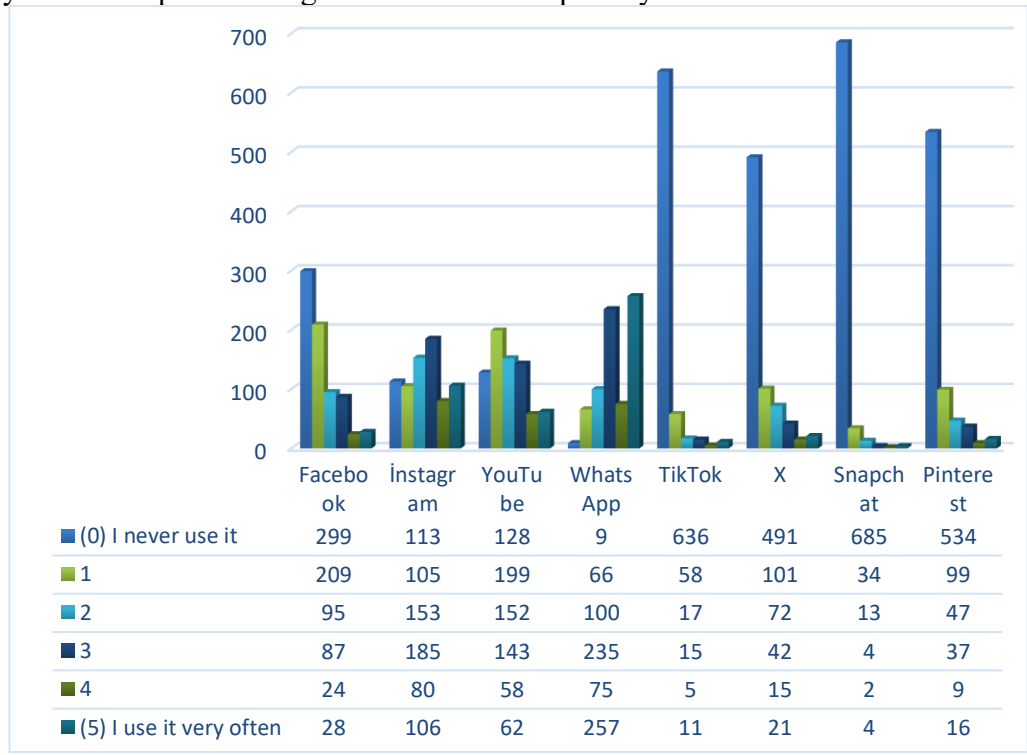

Figure 2. Parents' Use of SMP

Figure 2 shows that nearly all participants used WhatsApp. Most participants did not use TikTok, X, Snapchat or Pinterest, whereas Instagram and YouTube were used at similar rates. Approximately half of the participants reported using Facebook.

Data Collection Tools

SMA Scale

The SMA scale was used to measure parents' SMA levels (Şahin & Yağcı, 2017). The scale consists of two factors: Virtual tolerance and Virtual communication. Items 5 and 11 are reverse-worded items. The scale comprises 20 items in a five-point Likert format. The Kaiser–Meyer–Olkin (KMO) value was calculated as 0.945, and Bartlett's Test of Sphericity yielded a chi-squared value of 7051.32.

DDSA Scale

To measure parents' DDSA, the DDSA scale (Yılmaz et al., 2015) was used. This scale was developed as a single-factor instrument comprising 32 items rated on a five-point Likert scale. The KMO value for the scale was found to be 0.945.

Data Analysis

To examine the direct and indirect effects between SMP, SMA, and DDSA, a path diagram was created and analysed using path analysis. Path analysis is an extension of multiple regression, offering greater analytical power as it enables the analysis of complex models (Streiner, 2005). If the path diagram is created correctly, according to the established cause-effect relationship, path analysis can be used to analyse and interpret linear and indirect relationships between variables (Keskin, 1998). A literature review on the variables was conducted while determining the paths between them. As the study used a quantitative research method, the sample size was first determined. It has been stated that 200–250 samples are sufficient for most studies, but this can be increased to 400 (five times the number of items) for the structural equation modelling and to 10 times (Akbulut & Çapık, 2022; Gürbüz & Şahin, 2018). For the 742 parents, the Kolmogorov–Smirnov test revealed that $p = 0.007$ and $p < 0.05$, while the skewness test showed that the data fell within the range of (-0.591; 0.090). Additionally, the kurtosis test indicated that the data did not exhibit normal distribution. To ensure normality, extreme values were checked, and 32 data points were excluded according to the calculated z-values. As the sample size was greater than 200, z values outside the range $-3.29 \leq z \leq +3.29$ were identified and removed (Gürbüz & Şahin, 2018). For the remaining 710 parents, the Kolmogorov–Smirnov test was found to be in the $p > 0.05$ range ($p = 0.200$), with skewness and kurtosis values between -1 and +1, indicating that the normality condition was met. Path analysis was performed to answer the research questions and determine the goodness-of-fit values and direct and indirect effects. The analyses were performed using AMOS and SPSS. To calculate the indirect effect, bootstrap resampling was set to 5.000 with a 95% confidence interval. The bootstrap method is a simple and reliable technique for providing better confidence intervals by resampling the dataset (Orekici Temel et al., 2012).

Results

The path diagram between SMP, SMA, and DDSA was analysed. As no missing data were identified, modification indices were examined to assess whether model fit could be improved (Çapık, 2014). However, no modifications were required. The goodness-of-fit indices

for the path analysis were as follows: χ^2 (5, N = 710) = 1.777, p = 0.879; CMIN/DF = 0.355; GFI = 0.999; AGFI = 0.994; NFI = 0.999; IFI = 1.003; CFI = 1.000; TLI = 1.025; RMSEA = 0.000; RMR = 0.005; SRMR = 0.005. The analysis showed that the model was compatible with the data, with all the goodness-of-fit values being excellent (Erkorkmaz et al., 2013; Gürbüz & Şahin, 2018; Schermelleh-Engel et al., 2003). It was therefore be concluded that the model is both theoretically significant and statistically robust. The correlations among the variables were presented in Table 2, the path diagram in Figure 3, and the path coefficients in Table 3.

Table 2. Pearson Item-Moment Correlations Between Measures of SMA

Measures	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
(1)SMA	1									
(2)DDSA	-0.153**	1								
(3)Facebook	0.225**	0.064	1							
(4)Instagram	0.292**	0.050	0.316**	1						
(5)YouTube	0.252**	0.058	0.257**	0.463**	1					
(6)WhatsApp	0.174**	0.076*	0.282**	0.535**	0.501**	1				
(7)TikTok	0.120**	-0.031	0.175**	0.094*	0.148**	0.044	1			
(8)X	0.225**	0.161**	0.231**	0.257**	0.260**	0.241**	0.108**	1		
(9)Snapchat	0.109**	-0.025	0.041	0.063	0.114**	0.046	0.459**	0.213**	1	
(10)Pinterest	0.080*	0.090*	0.019	0.229**	0.212**	0.201**	0.122**	0.141**	0.346**	1

(Note: **p < 0.01, *p < 0.05, two-tailed)

Pearson correlation coefficients were first calculated to determine the relationships between SMP, DDSA, and SMA. The Pearson correlation coefficient (r) ranged from −1 to +1 and was interpreted as follows: 0.00 indicated no relationship; 0.01–0.29 indicated a weak relationship; 0.30–0.70 indicated a moderate relationship; 0.71–0.99 indicated a strong relationship; and 1.00 indicated a perfect relationship (Alsaqr, 2021; Schober et al., 2018). The sign of r indicates the direction of the correlation: r = −1 indicated a negative linear relationship, whereas r = +1 indicated a positive linear relationship (Alsaqr, 2021; Schober et al., 2018). Table 2 showed that there was a low but significant correlation between all SMP and SMA, between WhatsApp, X, and Pinterest and DDSA, and between DDSA and SMA.

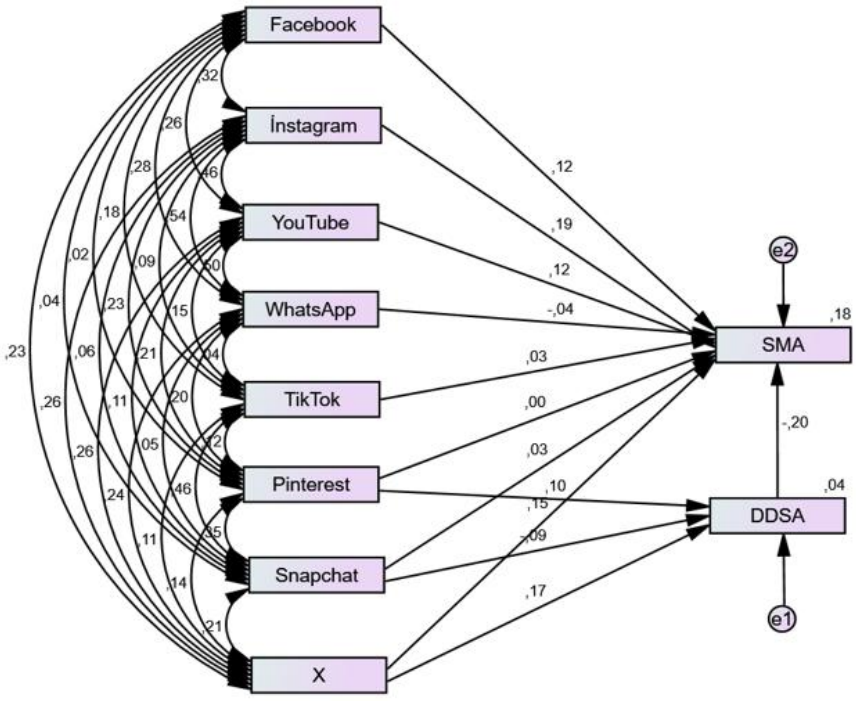

Figure 3. Path Analysis

The path diagram in Figure 3 was analysed. While the DDSA predictor variables explained 4% of the variance, the SMA predictor variables explained 18%. For parents' SMA, the strongest direct effect was from parents' DDSA, followed by Instagram and X. Snapchat had the strongest direct effect on parents' DDSA.

Table 3. Path coefficients

Exogenous variables		Endogenous variables	B	S.E	C.R	P	DE	SIE	TE	STE
Snapchat	→	DDSA	-0.095	0.050	-2.382	0.017	-0.120	-	-	-
	→	SMA	0.030	0.046	0.718	0.473	0.033	0.019	0.053	0.048
Pinterest	→	DDSA	0.099	0.024	2.520	0.012	0.060	-	-	-
	→	SMA	0.001	0.020	0.017	0.986	0.000	-0.019	-0.010	-0.019
WhatsApp	→	DDSA	-	-	-	-	-	-	-	-
	→	SMA	-0.045	0.019	-1.033	0.302	-0.019	-	-	-
TikTok	→	DDSA	-	-	-	-	-	-	-	-
	→	SMA	0.030	0.029	0.763	0.446	0.022	-	-	-
Facebook	→	DDSA	-	-	-	-	-	-	-	-
	→	SMA	0.118	0.016	3.164	0.002	0.050	-	-	-
Instagram	→	DDSA	-	-	-	-	-	-	-	-
	→	SMA	0.189	0.016	4.383	***	0.070	-	-	-
YouTube	→	DDSA	-	-	-	-	-	-	-	-
	→	SMA	0.121	0.016	2.887	0.004	0.047	-	-	-
X	→	DDSA	0.168	0.020	4.437	***	0.089	-	-	-
	→	SMA	0.150	0.017	4.022	***	0.070	-0.033	0.055	0.118
DDSA	→	SMA	-0.196	0.030	-5.640	***	-0.171		-0.171	-0.196

(Note: ***=p<0.001. β: Standardised Regression Weights, S:E: Standard error, DE: Direct effect, SIE: Standardised indirect effect, T.E: Total effect, STE: Standardised total effect)

Table 3 indicated that parents' use of Snapchat (β = −0.095, p = 0.017), Pinterest (β = 0.099, p = 0.012), and X (β = 0.168, p < 0.001) significantly affected DDSA. It was concluded that Snapchat had a negative effect on DDSA, while Pinterest and X had positive effect.

The study also observed that parents' use of Snapchat (β = 0.030, p = 0.473), Pinterest (β = 0.001, p = 0.986), WhatsApp (β = -0.045, p = 0.302), and TikTok (β = 0.030, p = 0.446) had no significant effect on SMA. However, it was found that parents' use of Facebook (β = 0.118, p = 0.002), Instagram (β = 0.189, p < 0.001), YouTube (β = 0.121, p = 0.004), and X (β = 0.150, p < 0.001) significantly and positively affected SMA. Parents' DDSA was found to have a significant negative effect on SMA (β=-0.196, p<0.001). The greatest direct and total effects on SMA were observed for DDSA. X and Instagram had the second strongest direct effect.

To find the total effect of parents' Pinterest use on SMA, the direct and indirect effects were added together. The direct effect from Pinterest to SMA was 0.00. The indirect effects were 0.06 from Pinterest to DDSA and -0.17 from DDSA to SMA. Multiplying these values resulted in a total indirect effect of −0.010, which was then added to the direct effect to obtain a total effect of −0.010. According to the bootstrap results, the indirect effect of Pinterest on SMA via DDSA was found to be significant (β = -0.019; 95% CI [-0.037, -0.006]). This result showed that DDSA had an indirect effect on the relationship between Pinterest and SMA.

The direct and indirect effects were summed to determine the overall impact of parents' use of Snapchat on SMA. The direct effect of Snapchat on SMA was found to be 0.03. The indirect effects were -0.12 from Snapchat to DDSA and -0.17 from DDSA to SMA. (-0.12)(-0.17) = 0.020, meaning the total effect from Snapchat to SMA is 0.03 + 0.020 = 0.050. According to the bootstrap results, the indirect effect of Snapchat on SMA via DDSA was found to be significant (β = 0.019; 95% CI [0.006, 0.038]). This showed that DDSA had an indirect effect on the relationship between Snapchat and SMA. Therefore, it was concluded that Snapchat had a significant indirect effect on SMA through DDSA.

The direct and indirect effects were summed to determine the overall impact of parental use of X on SMA. The direct effect of X on SMA was 0.07. The indirect effects were 0.09 from X to DDSA and -0.17 from DDSA to SMA. (0.09)(-0.17) = -0.015 meaning the total effect from X to SMA was 0.07 + (-0.015) = 0.055. According to the bootstrap results, the indirect effect of X on SMA via DDSA was found to be significant (β = -0.033; 95% CI [-0.052, -0.018]). This finding indicated that DDSA mediated the relationship between X and SMA. Therefore, the negative indirect effect through DDSA reduced the positive direct effect of X on SMA.

Overall, the path analysis indicated that the variables included in the model explained 18% of the variance in SMA.

Discussion

Parents' use of Pinterest, X, and Snapchat significantly affected their DDSA. It was observed that Snapchat had a negative influence on the DDSA, while Pinterest and X had a positive influence. Although very few parents use Snapchat, it can be concluded that an increase in parental use of Snapchat will lead to a decrease in DDSA. Snapchat was found to have the most direct effect on the DDSA. Although not many parents use Pinterest or X, it can be said that when parents' use of SM increases, so will DDSA. This finding is particularly important in the context of children's DDSA, as lower levels of parental DDSA may limit parents' ability to

guide and protect their children during technology-supported learning activities. As digitally aware and literate parents can consciously manage their children's learning processes on digital platforms, they may contribute to improving children's digital learning experiences. It is believed that this could also positively impact pupils' academic achievement.

The difference between the platforms, as revealed by the analysis, may be related to the reasons for using SM or the specific features of the applications. Since parents use Pinterest primarily for browsing and spending time rather than producing content, they may pay more attention to their digital security. Pinterest's algorithms are designed to recognise when individuals may be experiencing stress or anxiety, and to provide them with resources to help them cope (Wiederhold, 2021). To make users feel more comfortable, the company has improved its content moderation processes and ensures individuals' safety by not storing data on who accesses this content (Pardes, 2019). Pinterest's studies on digital security may have led to the development of DDSA among users. Problems such as threats, identity theft, hacking, sharing obscene content, fraud, and threats to individuals' digital security may occur on Snapchat, another platform (Huie et al., 2024). Although the ephemeral nature of Snapchat content has raised concerns about harassment and sexting (Pijlman & Burgmeijer, 2024; van Essen & van Ouytsel, 2023), further research is needed to understand why parents' DDSA decreased as its use increased. Parents may have neglected their digital security due to the transient nature of Snapchat content. DDSA is an issue for all SMP. Fake news and misinformation can spread rapidly on X (Msughter et al., 2025), as can spam, false comments, and fake accounts, which can also compromise individual security (Homsi et al., 2021). Parents who are aware of these issues may also pay attention to their DDSA when using X to mitigate potential risks. Alternatively, X users may have different characteristics from users of other SMP due to the nature and functioning of the X platform itself. From a broader perspective, these findings suggest that differences in DDSA on platforms may extend beyond individual safety concerns and influence the quality of children's learning environments. When parents are more aware of and in control of digital risks, they can create a more supportive learning environment for their children. However, it is thought that a reduction in parents' DDSA may lead to a lack of parental mediation, resulting in inattention in children, a decline in academic discipline, and reduced learning efficiency.

The analysis revealed that parents' use of Snapchat, Pinterest, WhatsApp, and TikTok had no significant effect on SMA, whereas their use of Facebook, Instagram, YouTube, and X had a significant positive effect. It can be stated that greater use of Facebook, Instagram, YouTube, and X by parents was associated with higher levels of SMA. However, changes in parents' use of Pinterest, Snapchat, TikTok, and WhatsApp were not significantly associated with SMA. DDSA was found to mediate the relationships between X, Snapchat, and Pinterest use and SMA. X was found to have the greatest indirect effect on SMA. It was also observed that parents' DDSA had a significant negative effect on SMA. The findings suggest that greater attention to DDSA may be associated with lower SMA levels. The most direct and total effect on SMA was observed with DDSA. After DDSA, Instagram showed the strongest direct effect on SMA, followed by X.

A review of the literature reveals inconsistent findings regarding individuals' SMA levels (Allahverdi, 2022; Caponnetto et al., 2025; Leeuwen, 2023; Simsek & Balaban Sali, 2014; Ying et al., 2022). It has been suggested that TikTok use should be considered an addiction, with problematic use being highly correlated with withdrawal, craving, overuse, salience, tolerance, daily life habits, and the desire to control consumption (Caponnetto et al., 2025). It has been suggested that using Instagram, Facebook, and X contributes to SMA in university students

(Allahverdi, 2022), and that users of YouTube, X, Pinterest, and LinkedIn have higher internet addiction scores (Şimşek & Sali, 2014). Furthermore, it is suggested that the use of YouTube, Pinterest, and Instagram predicts SMA in adolescents (Ying et al., 2022). The majority of university students use SM, with Facebook and X showing high addiction rates and Instagram showing low rates (Victor Ugochukwu et al., 2021). Like alcohol, tobacco, or drug addiction, digital addiction has also been described as a form of addiction (Arslankara & Usta, 2020). The level of technology use among individuals may vary depending on their purpose, frequency, age, and gender (Usta et al., 2014). It has been noted that fathers' use of SM to connect with friends and family is associated with family well-being (Olpin et al., 2023). As online interaction increases, so does addiction. It has been observed that addicted users face difficulties in many areas of their lives, including family, work, health, social, and finances (Arslankara & Usta, 2020). According to the uses and gratifications theory, family well-being is said to differ depending on the satisfaction derived from SM use (Olpin et al., 2023). The literature shows that different SMP affect SMA in individuals. There are likely different findings in the literature, especially since young people, parents, and students can use different SMP. Parents' intentions to use SMP, their reasons for doing so, and their addiction status may have led to different findings in the study. In this study, although almost all parents used WhatsApp intensively, it was observed that WhatsApp use did not affect their SMA. This may be attributed to WhatsApp being perceived primarily as a communication tool. Although almost half of the parents do not use Facebook, and most do not use X, increased use of these platforms increases SMA. It has been reported that parents' SMA influences their children's likelihood of becoming addicted to SM themselves (Topan et al., 2025). Meanwhile, children who are addicted to SM experience a decline in academic performance (Göksu & Gültekin, 2023). When developing SMP, it is possible that developers created Facebook, YouTube, X, and Instagram in a way that would create addiction in individuals.

These findings may also have significant implications for children's learning outcomes. An increase in parents' SM activity may reduce the quality of parent-child interaction, thereby limiting the guidance and support that children require during their learning processes. If parents focus on SM, children may receive less supervision and support with their academic activities, which could negatively affect key learning outcomes such as attention, motivation, and task completion. In this context, parents' levels of SMA and DDSA, as well as their mediating behaviours, are important factors that influence children's learning processes.

Limitations and Suggestions

The SMP identified in this study were limited to those commonly used by researchers and parents in Türkiye. Parents may use SMP beyond those identified. Further research is recommended in countries with a variety of SMP, such as WeChat, LinkedIn, Facebook Messenger, Telegram, Reddit, QQ, Weibo, Qzone, Kuaishou, Quora, Skype, Viber, Tieba, and Teams. To determine how often parents use each SMP, objective measurements and analyses are recommended. Research should be conducted into the reasons for, and possible consequences of, addiction to Facebook, Instagram, YouTube, and X platforms, since greater use of these platforms was associated with higher SMA levels. Additionally, it is recommended to investigate why increased Snapchat usage negatively affects DDSA, as this was not examined in this study. Different findings on SMP may be related to the reasons for their existence, application, and use. Therefore, quantitative, qualitative, experimental, and longitudinal studies should be conducted to better understand the reasons why parents use these SMP, factors associated with SMA development, and how this affects them and their children. The developers of the investigated SMP should consider the findings of the study. In particular,

developers may consider revising platform features to reduce potential risks associated with SMA. Awareness of the SM found to increase SMA should be raised among individuals. Relevant institutions and individuals can provide awareness-raising activities, training, seminars, and counselling services to ensure that parents pay attention to their own and their children's digital safety when using SM, and the internet.

Declarations

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