Journal of Information Technology Management

Print ISSN: 2008-5893

Online ISSN: 2423-5059

The Role of Parental Mediation in the Relationship between Adolescents' Use of Social Media and Family Relationships in Saudi Arabia

Najwa Albeladi*

*Corresponding author, PhD Candidate, Department of Neuroscience, Psychology & Behaviour, University of Leicester, George Davies Centre, Leicester, LE1 7HA, UK, E-mail: nsha1@le.ac.uk

Emma Palmer

Reader in Forensic Psychology, Department of Neuroscience, Psychology & Behaviour, University of Leicester, George Davies Centre, Leicester, LE1 7HA, UK, E-mail: ejp8@leicester.ac.uk

Abstract

This study aimed to examine the impact of parenting mediation strategies on family relationships and social media use among Saudi adolescents. To achieve the aim, a quantitative research design was used, involving questionnaires with data collected from 393 Saudi students aged 13-18 years. Pearson correlation and hierarchical multiple regression analyses were performed. The key findings of this study showed that Snapchat and Instagram were the most popular social media sites among Saudi adolescents, and parenting mediation strategies were affected by family relationships. Just over a third of participants (35.62%) reported that they spent 3-5 hours per day on social media with another 30.79% spending more than 6 hours per day on social media. Family relationships were found to strongly predict the social integration and social media addiction. The data showed a significant negative correlation between excessive use of social media and two components of family relationships (cohesion and expressiveness). Moreover, the results suggest that lower levels of family expressiveness and higher levels of family conflict were associated with social media addiction. The parenting mediation strategies were shown to predict the cohesiveness and expressiveness of family relationships. Finally, technical and monitoring parenting mediation strategies were found significant associated with the social media use and the family relationships. These results contribute to formulating guidelines for parents and policymakers in developing countries such as Saudi Arabia to protect their children from the social media risks.

Keywords: Parenting mediation strategies, Social media use, Family relationships, Adolescents, Saudi Arabia.

DOI: 10.22059/jitm.2020.75799

Introduction

Adolescence or teenage years is a developmental phase in human beings that is marked by various important life changes. These changes are physical in the form of puberty, psychological in the form of identity formation, and psychosocial in the form of negotiations within parent child relationships (Erikson, 1959). Puberty is considered as the initial stage of human development, and with time, the transformations that occur in the mind and body of a child often create disagreements with respect to choices, activities, feelings, etc. (Morris & Udry, 1980).

In the present technological era, the majority of adolescents and young people use the internet and social networks sites (Tariq *et al*., 2012). According to Zhao (2009), 93% of American adolescents aged 12 and 17 years have access to the internet. Further, one study found that 30% of 11- to 16-year-old European children use the internet excessively, which means they go online for much longer a day (Livingstone *et al*., 2011). In Saudi Arabia, 60% of teenagers reported that they use social media for more than five hours per day (Ali, Harbi, & Rahman, 2018). Teenagers mostly tend to use technological sites for social reasons, such as building social relationships and communicating with friends and family, whereas parents use technology and social media for more day-to-day purposes such as tracking the location of children, calling them, and texting family members (Daud *et al*., 2014). It is also known that the internet and social media entail different opportunities and risks for users of different age groups (Richards *et al*., 2015).

Several studies have been conducted to determine the usefulness of social media websites for adolescents, and the extent of damage resulting from their use (Livingstone and Helsper, 2010; Vandoninck *et al*., 2010). So far, research has not reached a conclusive decision on whether the benefits of social media websites outweigh the harm, or vice versa. It is evident that social media has many positive, educational, and social benefits for adolescents. One of the benefits is that it allows for fast-track communication, learning from one other, and sharing of experiences and information with each other (Livingstone and Helsper, 2010; Vandoninck *et al*., ;;;;; ;; ee effe *et al*.,)))))) cc crr ggggoo’’ ee effe *et al.* (2011), one of the most positive effects of the use of social media websites in children/adolescents is their ability to search for information, which is an important skill needed for the completion of homework. Additionally, social media websites introduce children/adolescents to other cultures, satisfy their needs in terms of hobbies, help them to communicate with friends, and provide them with access to a wide range of entertainment, including video games and iiii es LLiii ggeeeee edd ee rrrrr r ;;;;; ;; ee effe *et al*., 2011). However, there are also many risks involved in the use of these tools by adolescents (Rideout *et al*., 2010). It has been argued that children and adolescents are exposed to more risks than any rrrrr age gpppp ppKKeeffe *et al*., 2011). The risks may assume different forms, and the

most dangerous ones may involve sexual texts/messaging, cyberbullying, and meeting strangers through informal chats on social media or other online platforms (Livingstone *et al.*, ;;;;; ;; ee effe *et al.*, 2011). In fact, as much as 12% of 9- to 16-year-olds in Europe claim they were bothered or disturbed by something on the internet (Livingstone *et al.*, 2011).

Lately, it has been suggested that social media websites have a negative effect on social and family relationships. For example, the long periods of time that teenagers spend on social media websites every day has hampered dialogue and communication in the family environment, which is an important aspect of building family relationships and bonds (Williams and Merten, 2011; Chambers, 2013). In addition, a study by Nielsen *et al.* (2019) reported that family cohesion and conflict have repeatedly been associated with both internet use and online gaming rates in adolescents: it was found that higher rates of internet use and online gaming were linked to higher rates of family conflict and lower rates of family cohesion. Thus, one of the biggest challenges faced by families is the excessive use of social networking sites and their negative influence on children. Shklovski, *et al.*, (2004) reported that time given by the adolescents to the online activities significantly reduced the family communication. On the other hand, Yen *et al*., (2007) revealed that lower functioning of the family and higher parent-adolescent conflict might predict Internet addiction. It also indicated that adolescents with higher disputes with parents may, therefore, refuse to comply with parental supervision including guidelines for Internet use (Yen *et al*., 2007). Soh et al., (2014) found that the key cause of internet addiction might be poor adolescent–parent relationships.

However, many studies have emphasised the role of parents in reducing the risks of online engagement for children and adolescents (Bersamin *et al.*, 2008; Buijzen and Valkenburg, 2005). According to one study on the topic, children are dependent on their parents or guardians for protection from the environmental risks associated with social media communities (Livingstone *et al.*, 2017).

One way in which parents try to reduce the level of social media risks posed to their clll rr en ss ggggggg ggggg rr eeeiii ee aaaggggsss called aaaeellll llllll llnn aaaaggg’’’. The theoretical framework for the present study is adapted from the parental mediation theory (PMT) developed by Clark (2011), according to which social and interpersonal interactions between parents and children play a significant role in forming the patterns of socialisation and the integration of children into society. This theory was developed in response to the increasing exposure of children to new media risks, and illustrates the use of parental aaaaa aann aaaggggsss oo eeccc e eee eegaiiee eeeeeeeee ff ——— nn clll rr e’’ s yyycgggggggg and emotional development. According to Livingstone *et al.* (2011), PMT involves five main strategies:

1. Active mediation of internet use (co-use), which is defined as a discussion between parents and their children about the content of the internet and the sharing of their media-related activities (Livingstone et al., 2011; Dürager and Sonck, 2014);
2. Restrictive mediation, in which parents set rules for limiting the time or activity of internet and media usage among children (Nathanson, 1999; Eastin et al., 2006; Livingstone et al., 2011);
3. Active mediation of internet safety, in which parents provide advice and guidance to their children with regard to their online activities and teach them how to respond if they are bothered by someone (Dürager and Sonck, 2014);
4. The technical mediation strategy, according to which parents use software or filters to reduce the internet risks that their children are exposed to (Livingstone et al., 2011; Sonck et al., 2013);
5. iiii ggggggggcccc h ss eeeeeed as aaeellll l eecggggadd iiii ggggggff clll rr e'' s iiii ee usage, for example, parental checking of their accounts and emails, and the websites visited (Dürager and Sonck, 2014).

From the perspective of educational as well as social interventions, parental mediation strategies and activities are considered as important actions and measures for promoting safe and responsible use of the internet among children (Livingstone and Helsper, 2008; Clark, 2011). The parent-based strategies focus on the role of parents in observing the frequency of social media use and the contents viewed or shared by children and adolescents on social media platforms. It has been found that effective strategies of parental mediation are important for optimal development in children and their protection from negative influences on their minds, such as harmful sexual behaviour, abusive content, harassment, and cyberbullying (Livingstone *et al.*, 2011; Dürager and Livingstone, 2012). Lee (2013) indicated that a successful parental mediation strategy is essentially based on research of clll rr e'' s eeeeiiii nn usage, and this has been applied to the internet as well as other new media (Nathanson, 1999; Livingstone and Helsper, 2008). The effectiveness of these .... gggsss nneeccc ggg iiii ee kkkkkkaffecdddyy eeeeaal aacssss ssss ss aaee'''' 'ccc aiinn add digital llll ,,, eee eeeeeeeiiiii i ssssss ss eee aaii iie,, clll rr e'' s age, add eee cttt rr al cxxxxx (Clark, 2011; Livingstone *et al.*, 2011).

Lee add Caaess 77777 yyyyy eessss aaaddd eee mmaaaaaae ff co-use and active aaaaa aann nn giiii gg clll rr e'' s iiii ee .... Sasson and Mesch (2014) stated that active parental mediation led to a decrease in the time that children spent on the internet. In agreement with this, Chen and Shi (2018) showed that active mediation and co-use were more beneficial in protecting children from media-related threats than restrictive mediation, and Nielsen *et al.* (2019) showed that active mediation may be helpful for reducing the rates of

problematic screen use. However, the study of Livingstone and Helsper (2008) reported that although parents use active and co-use strategies widely, these have not been found to be substantially effective in reducing internet-related risks in children.

It has been reported that the risk of being bothered or disturbed online is significantly lower with parental restrictive mediation (Dürager and Livingstone, 2012). Chng et al. (2015) tested the effect of restrictive mediation on the level of exposure of adolescents to online risks, and reported that it was an effective parental strategy for decreasing the harm associated with internet use. Additionally, they indicated that the impact of restrictive mediation is dependent on the level of comfort and encouragement in the general family environment (Chng et al., 2015). In contrast to these findings, Lwin *et al.* (2008) reported that restrictive mediation was less effective than active mediation. Further, Shin and Ismail (2014) found that restrictive mediation was positively linked to risky behaviour among children on social networks.

With regard to the effectiveness of the active mediation of internet safety, according to Livingstone *et al.*, (2011), 68% of children reported that their parents explained to them why websites are good or bad and helped them to understand things that were difficult. The study emphasised that active mediation of internet safety was the most common strategies in some European countries (Livingstone *et al.*, 2011).

Livingstone and Helsper (2008) posited that the use of filtering and protective software might be helpful in decreasing online risks. Such a technological mediation approach was found to be effective as a tool for parents to minimise online risks for children between 13 and 18 years of age (Symons *et al.*, 2017). In addition, Benrazavi *et al.* (2015) illustrated the positive effect of technical mediation on exposure of children to the risks associated with online activates such as video games. In agreement with all these findings, Mitchell *et al.* (2003) found that software and technical restrictions were more effective than monitoring strategies with regard to reducing online risks.

The study of Mesch (2009) demonstrated that parental use of monitoring techniques and guidelines for internet use that define acceptable and unacceptable sites might reduce the risk of cyberbullying among children. Similar findings were reported on the effect of monitoring for reducing online harassment and time spent on social networks among 12- to 17-year-olds (Khurana *et al.*, 2015). This means that the strategy of monitoring might protect young people from negative media influences.

Although a number of research studies have demonstrated the effectiveness of various mediation strategies used by parents to regulate the usage of social networking sites by their children and to reduce the negative effects of media content on their lives, very little research sheds light on the ways through which parental mediation strategies can be used to protect

children in the context of Saudi Arabia. Therefore, this research study will focus on adolescents from Saudi Arabia. The cultural, social, and economic factors, as well as the personalities and mindsets of teenagers, are different between Saudi Arabia and Western countries. Therefore, it is critical to investigate the effectiveness of parental mediation aaaaggggsss SS Saeee eeeeeeee'''' ''' ' ' ''' ''' aaaaa a

Study Aim

This study aimed to measure the impact of parenting mediation strategies on family relationships and social media use among Saudi adolescents.

Based on the theoretical framework of parenting mediation the following hypotheses were designed to meet the aim of this study.

Hypotheses

H1. Parenting mediation strategies (active, restrictive, internet safety, monitoring and technical mediations) will be associated with Saudi adolescents' excessive social media use.

H2. Parenting mediation strategies (active, restrictive, internet safety, monitoring and technical mediations) will be associated with Saudi adolescents' social media platforms use (Snapchat and Instagram)

H3. Parenting mediation strategies (active, restrictive, internet safety, and monitoring and ccaaaaaa aaaaa aa)))))))) ee aaaaaaaaaa hhhh haiii acccccc'''' ''ii yy eeooooonship (cohesion, expressiveness and conflict)

H4. Family relationship (cohesion, expressiveness and conflict) will be associated with excessive social media use.

H5. Family relationship (cohesion, expressiveness and conflict) will be associated with social media platforms use (Snapchat and Instagram).

H6. Family relationships will uniquely predict social media integration and excessive social media use after controlling for age, gender and parenting mediation strategies.

H7. Excessive social media use will be associated with family relationship (cohesion, expressiveness and conflict).

Materials and Methods

Research design

The research study was conducted using quantitative methodology based on the variables identified from the theoretical framework; quantitative research allowed effective testing the

hypotheses of the study. The research design was cross-sectional, and data was collected at a single point in time. For data collection, a paper version of the questionnaire was used. The yyyyyaa s carrddd ttt nn Saiii rr a,,,, ,,, ee aaaaaaaaaaa ee ee sssssss ssmm eee cyyyyyyyy public intermediate and high schools.

Study sample

The aim of this study aa s oo asssss sss mmaact ff aaedlll lllll llnn nn accccccc'''' ''''' ' media use and family relationships. This research adopted the concept of adolescents from the United Nations, which describes them as persons aged between 10 and 19 years (UNICEF, 2011). The UK Safer Internet Centre (2018) stated that the lowest age band for the use of social media in Europe is limited to 13 years. This study collected data from Saudi adolescents whose ages ranged between 13 and 18 years.

To increase the sample representation for the entire population, the research also collected data from participants from different socioeconomic backgrounds. The participants were recruited for this study using a simple random sampling technique. Simple random sampling is an effective technique in cases where each member of the population is selected with an equal probability and chance. The key feature of random chance sampling is its ability to be representative of a population. (Sharma, 2017).

The sample size was calculated based on Frttz add ccc ''''''' ' rr eeeeeeeeeeee eeeee y stated that the sample size for evaluating the direct and indirect impacts of variables should be between 115 and 285. Hence, the sample size used in the study (n= 393 for Saudi adolescents) surpassed above this sgggedddddddlll d crrrrrrrrr r aaaaaaaaaaaages aagged eeeee en 33 add 18 years, with a mean age of 15.61 (SD = 1.66). Of these, 68.70% were females and 31.30% were males.

Research procedure

The researchers connected with the local education authorities in Saudi Arabia to gain permission to access the schools. They then visited four schools, which were intermediate schools and high schools (ooo yyy'' ccsssss add ooo g''''' '' sssss s. The administration of each school were informed about the research aim, objectives, etc., so they would be aware of the purpose of the research. Only students who consented were allowed to participate in the survey. The survey was administered during March and April 2019.

Study data collection instrument

A five-part questionnaire was designed for the data collection. The first part contained the aaaaaaaaaaaaaaggg aabbbbbbff yy, cccc h zzzzzzzz rrrrr rrrrrr r tttt ttt clll '' v , eeee ,, age, grade and social media usage time along with the reasons for their usage and parental

aaa eeee ss ff eee a ’’’’ ’’’’’ ’ aaaaa .... eecddd hh—ff eee eee iii aaaa eeedddd ddd Bergen Social Media Addiction Scale adapted from the Bergen Facebook Addiction Scale developed by Andreassen *et al.* (2012) to measure the general level of social media use of the participants. The scale is a short self-report scale with six items rated on a five-point Likert scale ranging from 1 (very rarely) to 5 (very often). Part three constituted the Social Media Use Integration Scale developed by Jenkins-Guarnieri *et al.* (2013), which is used to evaluate social emotional and routines of social media users. This scale is a 10-item self-report scale that is rated on a Likert-type scale that ranges from 1 (strongly disagree) to 5 (strongly agree). As this study considered different social media platforms (e.g. Instagram, Snapchat etc.), the scale items were repeated for each platform. In part four, the Brief Family Relationship Scale developed by Fok *et al.* (2014) was used to measure the adolescents' aai yyeesssssssssss ssss respect to three different but related aspects: cohesion (7 items), expressiveness (3 items) and conflict (6 items). The items were rated on a Likert-type scale that ranged between 0 (not at all) and 2 (a lot).

The fifth part of the survey, the EU Kids Online-II Survey (Livingstone *et al.*, 2011), ss s aaadddddd aaa eeee aaeellll llllll llnn hhhh hhccccct oo clll rr e'' s aaaaaa aaaaa .... scale was initially designed to assess internet mediation for both parents and children (Livingstone *et al.*, 2011). For the purpose of this study, the version for children was adjusted to the social media context. For example, some items on the survey were updated to refer to "aaaaaa aaaaa a tttt ead ff "ttt . eee... eee ccaee ciiii sss ff 55 ttess hhhh five dimensions: active mediation of internet, restrictive, active mediation of internet safety, monitoring and technical mediation. The items on the scale are rated on a 4-point Likert-type scale that ranges between 1 (never) and 4 (frequently).

Study data analysis methods

SPSS version 25 for Windows was used to analyse the data. The frequency statistics were reported to provide a summary about the characteristics of the sample. To determine how participants scored on the study variables, descriptive statistics (e.g. mean, standard deviation) were reported. Before inferential statistics were carried out, the distribution of the data was tested using skewness and kurtosis analysis. The analysis also used Pearson correlation to examine the relationship between variables. To determine whether predetermined independent variables could predict the dependent variables, multiple regression analysis was performed. It is important to realize that data on the scale of social integration were only evaluated on Snapchat hdd Igggggg, eecaeee ff eee rrrrrrr rry ff eeeee ooooooooo ooo agggg eee participants.

Results

Frequency statistics

The results show that the most widely used social media site was Instagram (88%), followed by Snapchat (85.50%), Twitter (53.69%), Facebook (21.88%), WhatsApp (13.74%) and YouTube (10.94%). A limited number of participants (less than 5%) mentioned using other platforms (Telegram, BBM, TikTok and LinkedIn). Seven participants reported that they did not use social media platforms for various reasons. The most preferred social media platforms were Instagram (45.04%), Snapchat (31.30%) and Twitter (12.21%). More than a third of participants (35.62%) spent 3–5 hours daily on social media sites, while 30.79% spent more than 6 hours per day on social media.

Table 1. Independent sample t-test comparing gender across variables

Variable	Gender	N	Mean	SD	t	df	*P*
Social media addiction	Male	120	17,02	4,57	-1,54	384	0,12
	Female	266	17,85	5,07			
Snapchat	Male	123	1,23	0,42	2,84	184,68	0,01
	Female	270	1,11	0,31			
Instagram	Male	123	1,15	0,36	1,44	391	0,15
	Female	270	1,10	0,31			
Cohesion	Male	123	9,89	2,93	1,57	391	0,12
	Female	270	9,35	3,26			
Expressiveness	Male	123	3,52	1,61	0,95	391	0,34
	Female	270	3,34	1,79			
Conflict	Male	123	4,03	2,82	-1,09	391	0,28
	Female	270	4,38	2,99			
Active mediation	Male	123	7,17	3,54	0,13	391	0,89
	Female	270	7,12	3,64			
Restrictive mediation	Male	123	11,44	4,49	-1,05	391	0,29
	Female	270	11,92	4,12			
Internet safety	Male	123	11,20	5,01	-0,66	391	0,51
	Female	270	11,54	4,69			
Monitoring	Male	123	4,89	4,03	1,53	391	0,13
	Female	270	4,26	3,67			
Technical mediation	Male	123	5,78	3,55	1,45	391	0,15
	Female	270	5,21	3,67			

Among the respondents, 28.1% used social media for entertainment, and 24.9% used it to communicate with their family and friends. Among the participants, 47.07% reported being friends with either of their parents on social media accounts or with both (35.62%). Some participants confirmed that either their mother or father (39.95 %) or both their mother and father (35.11 %) were aware of their social media activities.

Descriptive statistics

The descriptive statistics include minimum, maximum, mean and standard deviation alongside Cronbach alpha values for internal consistency. The participants had low scores in social media addiction (M = 17.59, SD = 4,93), conflict (M = 4.27, SD =2,94), active mediation (M = 7.13, SD =3,60), monitoring (M = 4.45, SD =3,79) and technical mediation (M = 5.39, SD =3,64), while they had high scores on cohesion (M = 9.52, SD =3,16), expressiveness (M = 3.40, SD =1,73), restrictive mediation (M = 11.77, SD =4,24) and internet safety (M = 11.43, SD =4,79). The internal consistency reliability for each of the scales used in this study showed acceptable reliability.

Gender comparison for adolescents using t-test

An independent sample t-test was conducted to compare males and females across the study variables. Except in the case of Snapchat, which was found to be statistically significant, with males reporting higher mean scores (M = 1.23 vs. M = 1.11, t (184.68) = 2.84, $p < 0.05$), no significant difference was obtained in the scores of males and females for social media addiction, Instagram, family relationships and parenting mediation strategies. (see Table 1)

Correlation analysis

Pearson correlations were performed between excessive social media use, family relationship, parenting mediation and social media integration for the Snapchat and Instagram scales. The results in Table 2 show that Snapchat and Instagram were the most common social media platforms among Saudi adolescents; therefore, the correlations and other subsequent analyses were performed only on these two social media. The relation between excessive social media usage and the two elements of family relationships (cohesion and expressiveness) was significant and negative, whereas a significant positive correlation was found between social media addiction and conflict. Excessive social media use was also significantly positively associated with both components of social media integration. In contrast to these results, there were no meaningful associations between excessive social media use and the various types of parenting mediation.

There were no significant findings in terms of correlations between family relationships and parenting mediation strategies except a negative relationship between conflict and

restrictive mediation. Additionally, parenting mediation techniques were not shown to be related to social media integration.

Table 2. Correlations among the social media addiction, family relationship, parenting mediation and social media integration scales

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Social media addiction	1										
Family relationship											
2. Cohesion	-.24**	1									
3. Expressiveness	-.25**	.54**	1								
4. Conflict	.22**	-.39**	-.32**	1							
Parental mediation strategies											
5. Active mediation	.01	-.04	.05	-.01	1						
6. Restrictive mediation	.07	.08	.05	-.11*	.01	1					
7. Internet safety mediation	-.03	-.02	.01	.03	.43**	.03	1				
8. Monitoring mediation	-.08	-.02	.02	-.01	.42**	-.17**	.36**	1			
9. Technical mediation	-.01	-.05	-.08	.09	.42**	-.21**	.46**	.61**	1		
Social media integration (total)											
10. Snapchat	.37**	.06	.07	-.06	.04	.08	.03	.05	-.07	1	
11. Instagram	.37**	.06	.08	-.05	.05	.07	.03	.06	-.07	.99**	1

**. $p < 0.01$; *. $p < 0.05$

Testing hypotheses 1, 2 and 3

The results of the regression analysis are presented in Table 3 for each dependent variable. The overall regression model of parenting mediation in predicting social media integration was statistically significant for the regression analysis, with monitoring being a powerful predictor for Snapchat (b = 4.56, $p < 0.05$) and Instagram (b = 4.94, $p < 0.05$) and with technical mediation also being a significant predictor for Snapchat (b = -6.39, $p < 0.05$) and Instagram (b = -6.79, $p < 0.05$). This indicates that higher levels of parenting monitoring were linked to higher levels of social media integration for Snapchat and Instagram, while lower ranks of parenting technical mediation were associated with higher levels of social media integration for Snapchat and Instagram.

Table 3. A summary of hierarchical regressions predicting social media addiction, social media integration and family relationship

	Social media addiction					Snapchat					Instagram				
	B	**SE**	**Beta**	**T**	***p***	**B**	**SE**	**Beta**	**t**	***p***	**B**	**SE**	**Beta**	**t**	***p***
Step 1	$F(2,383) = 2.70, r = .12, r^2 = .01, p > 0.05$					$F(2,390) = 4.24, r = .15, r^2 = .02, p < 0.05$					$F(2,390) = 4.66, r = .15, r^2 = .02, p < 0.05$				
Gender	0.61	0.56	0.06	1.09	0.28	-15.13	14.29	-0.05	-1.06	0.29	-17.91	14.26	-0.06	-1.26	0.21
Age	-0.27	0.16	-0.09	-1.74	0.08	-11.51	3.99	-0.15	-2.89	0.00	-11.95	3.98	-0.15	-3.00	0.00
Step 2	$F(7,378) = 1.64, r = .17, r^2 = .03, \Delta r^2 = .02, p > 0.05$					$F(7,3385) = 2.76, r = .22, r^2 = .05, \Delta r^2 = .03, p < 0.05$					$F(7,3385) = 3.05, r = .23, r^2 = .05, \Delta r^2 = .03, p < 0.05$				
Active mediation	0.05	0.08	0.04	0.66	0.51	1.22	2.10	0.03	0.58	0.56	1.42	2.10	0.04	0.68	0.50
Restrictive mediation	0.08	0.06	0.07	1.34	0.18	1.78	1.57	0.06	1.13	0.26	1.66	1.56	0.05	1.06	0.29
Internet safety	-0.05	0.06	-0.05	-0.84	0.40	1.27	1.59	0.05	0.80	0.43	1.27	1.59	0.05	0.80	0.42
Monitoring	-0.15	0.09	-0.12	-1.77	0.08	4.56	2.20	0.13	2.07	0.04	4.94	2.20	0.15	2.25	0.02
Technical mediation	0.13	0.10	0.09	1.34	0.18	-6.39	2.41	-0.18	-2.65	0.01	-6.79	2.40	-0.19	-2.82	0.01
	Cohesion					**Expressiveness**					**Conflict**				
	B	**SE**	**Beta**	**T**	***p***	**B**	**SE**	**Beta**	**t**	***p***	**B**	**SE**	**Beta**	**t**	***p***
Step 1	$F(2,390) = 1.24, r = .08, r^2 = .01, p > 0.05$					$F(2,390) = 2.84, r = .11, r^2 = .01, p > 0.05$					$F(2,390) = 2.71, r = .12, r^2 = .01, p > 0.05$				
Gender	-0.52	0.35	-0.08	-1.48	0.14	-0.09	0.19	-0.02	-0.45	0.65	0.51	0.33	0.08	1.56	0.12
Age	0.02	0.10	0.01	0.17	0.87	0.11	0.05	0.10	2.01	0.04	0.19	0.09	0.11	2.05	0.04
Step 2	$F(7,385) = .89, r = .13, r^2 = .02, \Delta r^2 = .01, p > 0.05$					$F(7,385) = 1.87, r = .18, r^2 = .03, \Delta r^2 = .02, p > 0.05$					$F(7,385) = 2.12, r = .19, r^2 = .04, \Delta r^2 = .02, p > 0.05$				
Active mediation	-0.03	0.05	-0.04	-0.63	0.53	0.04	0.03	0.07	1.25	0.21	-0.02	0.05	-0.02	-0.32	0.75
Restrictive mediation	0.06	0.04	0.08	1.50	0.13	0.01	0.02	0.03	0.65	0.51	-0.07	0.04	-0.10	-1.87	0.06
Internet safety	0.00	0.04	0.00	0.06	0.95	0.01	0.02	0.03	0.47	0.64	0.01	0.04	0.02	0.31	0.76
Monitoring	0.03	0.06	0.03	0.49	0.62	0.04	0.03	0.08	1.25	0.21	-0.08	0.05	-0.10	-1.49	0.14
Technical mediation	-0.04	0.06	-0.04	-0.64	0.52	-0.08	0.03	-0.17	-2.40	0.02	0.11	0.06	0.13	1.92	0.05

The finding of the hierarchical regression analysis for parenting mediation strategies found that these strategies predicted family expressiveness [$F(7,385) = 1.87$, $r = .18$, $r^2 = .03$, $\Delta r^2 = .02$, $p > 0.05$] and family conflict [$F(7,385) = 2.12$, $r = .19$, $r^2 =$,,,, , $r^2 = .02$, $p > 0.05$]. Technical mediation expects a major unique variation in family expressiveness (b = -0.08, $p < 0.05$) and family conflict (b = 0.11, $p = 0.05$). These findings indicate that higher levels of technical mediation were associated with lower levels of expressiveness, while higher levels of technical mediation were linked to higher levels of conflict. In those relationships, age was also a significant predictor for Snapchat in Step 1 (b = -11.51, $p < 0.01$), Instagram (b = -11.95, $p < 0.01$), expressiveness (b = 0.11, $p < 0.05$) and conflict (b = 0.19, $p < 0.05$). Higher age scores were associated with lower Snapchat and Instagram scores and with higher expressive and conflict scores.

Testing hypotheses 4 and 5

A hierarchical multi-regression analysis had already been performed to investigate the effect of family relationships on social media integration and social media addiction. The results suggest a model in which the effect of family relationships on social media addiction was found to be significant [$F(5,380) = 8.54$, $r = .32$, $r^2 =$,,,, , $r^2 = .09$, $p < 0.01$]. Explicitly, only expressiveness (b = -0.38, $p < 0.05$) and conflict (b = 0.24, $p < 0.05$) were predictors of social media addiction, with age being a significant predictor for Snapchat (b = -11.51, $p < 0.01$) and Instagram (b = -11.95, $p < 0.01$). The findings indicated that lower expressiveness rates and higher conflict levels were correlated with social media addiction.

Testing of hypothesis 6

The hypothesis stating that family relationships will predict social media integration and social media addiction after controlling for age, gender and parenting mediation strategies was tested using hierarchical regression analysis. The results presented in Table 4 show that the effect of family relationships on predicting social media addiction after removing parenting mediation strategies and demographic variables of gender and age was statistically significant [$F(10,375) = 5.06$, $r = .35$, $r^2 =$,,,, , $r^2 = .09$, $p < 0.01$]. It is clear that expressiveness (b = -0.37, $p < 0.05$) and conflict (b = 0.25, $p < 0.01$) meaningfully predicted unique variation in social media addiction after controlling for the impact of parental mediation strategies and demographic information, indicating that lower expressiveness and higher conflict rates were correlated with social media addiction. In this stage, demographic information and parental mediation strategies, when entered into the first step, also caused significant results with monitoring (b = 4.56, $p < 0.05$ for Snapchat; b = 4.94, $p < 0.05$ for Instagram), technical mediation (b = -6.39, $p < 0.05$ for Snapchat; b = -6.79, $p < 0.05$ for Instagram) and age (b = -11.44, $p < 0.01$ for Snapchat; b = -11.86, $p < 0.01$ for Instagram) as meaningful predictors of Snapchat and Instagram. This simply suggests that age, monitoring

and technical mediation are extremely important predictors of variance in Snapchat and Instagram.

Table 4. A summary of hierarchical regression predicting social media addiction and social media integration

	Social media addiction					**Snapchat**					**Instagram**					
	B	**SE**	**Beta**	**t**	***p***	**B**	**SE**	**Beta**	**t**	***p***	**B**	**SE**	**Beta**	**t**	***p***
Step 1	$F(7,378) = 1.64$, $r = .17$, $r^2 = .03$, $p > 0.05$					$F(7,385) = 2.76$, $r = .22$, $r^2 = .05$, $p < 0.01$					$F(7,385) = 3.05$, $r = .23$, $r^2 = .05$, $p < 0.01$					
Gender	0.59	0.56	0.06	1.05	0.29	-17.09	14.28	-0.06	-1.20	0.23	-19.77	14.23	-0.07	-1.39	0.17
Age	-0.26	0.16	-0.09	-1.67	0.10	-11.44	3.97	-0.15	-2.88	0.00	-11.86	3.95	-0.15	-3.00	0.00
Active mediation	0.05	0.08	0.04	0.66	0.51	1.22	2.10	0.03	0.58	0.56	1.42	2.10	0.04	0.68	0.50
Restrictive mediation	0.08	0.06	0.07	1.34	0.18	1.78	1.57	0.06	1.13	0.26	1.66	1.56	0.05	1.06	0.29
Internet safety	-0.05	0.06	-0.05	-0.84	0.40	1.27	1.59	0.05	0.80	0.43	1.27	1.59	0.05	0.80	0.42
Monitoring	-0.15	0.09	-0.12	-1.77	0.08	4.56	2.20	0.13	2.07	0.04	4.94	2.20	0.15	2.25	0.02
Technical mediation	0.13	0.10	0.09	1.34	0.18	-6.39	2.41	-0.18	-2.65	0.01	-6.79	2.40	-0.19	-2.82	0.01
Step 2	$F(10,375) = 5.06$, $r = .35$, $r^2 = .12$, $\Delta r^2 = .09$, $p < 0.01$					$F(10,382) = 2.11$, $r = .23$, $r^2 = .05$, $\Delta r^2 = .00$, $p > 0.05$					$F(10,382) = 2.29$, $r = .24$, $r^2 = .06$, $\Delta r^2 = .00$, $p > 0.05$					
Cohesion	-0.17	0.09	-0.11	-1.85	0.07	1.26	2.53	0.03	0.50	0.62	1.11	2.52	0.03	0.44	0.66
Expressiveness	-0.37	0.17	-0.13	-2.21	0.03	3.64	4.53	0.05	0.80	0.42	3.65	4.51	0.05	0.81	0.42
Conflict	0.25	0.09	0.15	2.71	0.01	0.40	2.43	0.01	0.16	0.87	0.63	2.42	0.01	0.26	0.79

Testing hypothesis 7

The hypothesis that excessive social media use will be associated with family relationship (cohesion, expressiveness and conflict) was tested using hierarchical regression analyses between demographic information, family relationships and social media addiction. The findings presented in Table 5 suggest that social media addiction was an important and meaningful predictor of family relationship components [$F(3,382) = 8.06$, $r = .24$, $r^2 = .06$, $\Delta r^2 = .05$, $p < 0.01$] for cohesion; [$F(3,382) = 9.42$, $r = .26$, $r^2 = ,,,,$, $r^2 = .06$, $p < 0.01$] for expressiveness; and [$F(3,382) = 8.60$, $r = .25$, $r^2 = ,,,,$, $r^2 = .05$, $p < 0.01$] for conflict. In other words, higher levels of social media addiction significantly predicted lower levels of cohesion (b = -0.15, $p < 0.01$) and expressiveness (b = -0.08, $p < 0.01$) and higher levels of conflict (b = 0.13, $p < 0.01$). In the first step, age was also a significant positive predictor of expressiveness (b = 0.12, $p < 0.05$), meaning that younger adolescents might have higher levels of expressiveness.

Table 5. A summary of regression analysis predicting family relationship from social media addiction scale

	Cohesion					**Expressiveness**					**Conflict**				
	B	**SE**	**Beta**	**T**	***p***	**B**	**SE**	**Beta**	**t**	***p***	**B**	**SE**	**Beta**	**t**	***p***
Step 1	$F(2,383) = .98$, $r = .07$, $r^2 = .01$, $p > 0.05$					$F(2,383) = 2.54$, $r = .11$, $r^2 = .01$, $p > 0.05$					$F(2,383) = 2.41$, $r = .11$, $r^2 = .01$, $p > 0.05$				
Gender	-0.46	0.36	-0.07	-1.29	0.20	-0.04	0.19	-0.01	-0.22	0.83	0.56	0.33	0.09	1.70	0.09
Age	0.02	0.10	0.01	0.21	0.83	0.12	0.05	0.11	2.13	0.03	0.16	0.09	0.09	1.75	0.08
Step 2	$F(3,382) = 8.06$, $r = .24$, $r^2 = .06$, $\Delta r^2 = .05$, $p < 0.01$					$F(3,382) = 9.42$, $r = .26$, $r^2 = .07$, $\Delta r^2 = .06$, $p < 0.01$					$F(3,382) = 8.60$, $r = .25$, $r^2 = .06$, $\Delta r^2 = .05$, $p < 0.01$				
Social media addiction	-0.15	0.03	-0.23	-4.70	0.00	-0.08	0.02	-0.24	-4.78	0.00	0.13	0.03	0.23	4.55	0.00

Discussion

This study aimed to investigate the effect of parental mediation strategies on family relationships and social media use among Saudi adolescents. The outcomes of this study revealed that Instagram, Snapchat and Twitter were the most prevalent social media platforms among adolescents. Similarly, many other studies indicate a higher use of Instagram, Snapchat (Anderson and Jiang, 2018) and Twitter (Chen, 2011) among adolescents. The results show that the correlation between excessive social media usage and two components of family relationships (cohesion and expressiveness) were significant and negative, while a significant positive correlation was found between excessive social media usage and conflict, which means that when the adolescents used social media excessively, the cohesion and expressiveness of the family dimension decreased. This is likely to be because cohesion can result from children spending time with their parents and other siblings. This finding is in line with those of the study of Nielsen *et al.* (2019) indicating that family cohesion and conflict were linked both to internet use and to online gaming problems in adolescents. Many other studies have supported the findings that addiction to the internet and excessive online activities may contribute to the breakdown of family relationships between adolescents and their parents (Shklovski *et al*., 2004; Yen et al., 2007).

Higher conflict levels and lower expressiveness rates were also correlated with excessive social media use, which means expressiveness was significantly reduced and conflicts were significantly increased with excessive social media use, which is consistent with previous research (Yen *et al*., 2007; Soh *et al.*, 2014). The lack of communication and expressiveness between parents and children causes conflicts in family relationships (Hill, 1995).

With these results all taken together, excessive social media use of Saudi adolescents is detrimental to family cohesion and expressiveness and might be the cause of conflicts within Saudi families. Therefore, it is important that parents should set up suitable parental mediation strategies to reduce the growth of excessive social media use among children in order to save the peace and serenity within Saudi households.

Finally, regarding parental mediation and social media use, the outcomes of this study showed that higher levels of parental monitoring were related to higher levels of Snapchat and Instagram integration, whereas lower levels of technical mediation were linked to higher levels of Snapchat and Instagram integration. That might indicate the effectiveness of technical strategies in reducing the use of social media (Snapchat and Instagram) in Saudi adolescents, which is similar to the results of previous studies (Mitchell *et al.*, 2003; Livingstone and Helsper, 2008; Benrazavi *et al.*, 2015; Symons *et al.*, 2017) with regard to the effectiveness of technical and software strategies in reducing internet and online risks.

The results also presented a negative correlation between monitoring techniques and Snapchat and Instagram integration, which may be evidence of the ineffectiveness of the strategy of limiting social media use. Mitchell *et al.* (2003) similarly stated that software and technical restrictions were more effective than monitoring strategies regarding reducing online risks. Despite the effectiveness of technical mediation, it has a negative impact on family relationships, as the study showed that higher levels of technical mediation were associated with lower expressivity levels while higher levels of technical mediation were linked to higher levels of conflict.

This study indicated that there was no correlation between any types of parental mediation strategies and social media addiction. It also indicated that some parental mediation strategies (such as active mediation of internet use, restrictive mediation and active internet aaaaa aann ff ttt eeeet aaeeyy) aad oo mmaact nn Saiii acccccc'''' '''' ' aaaaa ,,,, ,, mmeeee viewpoint of the children. This is evidence of the different degrees of effectiveness of these strategies in different countries and cultures as well as the extent to which parents have applied these strategies correctly.

Conclusions

Parents need to select high-quality content and implement different mediation strategies to control and regulate the usage of social media and protect their children from the negative effects of social networking sites. Parents must be actively involved with their children but not limit their autonomy and independence. Parents should not confine the children and stop their use of social media, because this can create loneliness, aggression, fear and other effects tttt tee ttt gddd rrr eee clll rr e'' s eeaaaaaaayy eeeemmmmm. Ween clll rr en aee ttt ff eee control of parents, a restrictive mediation strategy should be used to minimise the time they

use social networking sites; however, the time allowed should be enough for them to socialise, play games and interact with others, since that is needed for their optimal development. Therefore, parents need to improve their digital skills and regulate their own media habits, so they can leave a positive impression on their children and protect their clll rr en rrmm gggtal aaaaa ..... . aeesss aee eeiiiii iii rrr eeeeiiii gg clll rr e'' s personalities, and they are the ones who can transform or frame the relationship of the children towards digital media.

Recmmmeaaa iisss rrr iiii cyeeee ss eeeeeee eee eellll ll gnnnnnnnnn clll rr e'' s behaviours and their active involvement with social media sites. Parents often struggle with ways and strategies which can be used to create effective outcomes, so policymakers should pay considerable attention to developing public policy and various efforts to help parents seeking advice and guidance about appropriate strategies to use with their children. Responsible educators as well as parents should work together to regulate the work of children using the internet, so their development can be supported. Education systems should also be encouraged to develop and implement innovative and interesting literacy programs that can empower children and parents to thrive in a media-saturated world.

Researchers currently focus on social media addiction, which is a negative aspect of social media usage by adolescents. But research is also required to investigate how social media or the internet can become a positive force in gaining education and learning and in eeeeiiii gg eee clll rr e'' s ii .... .n rrrrr r, tt llll ee mmaaaaaa oo eeeeacch aaa t eee eett practices are in terms of parental mediation in the changing world of media. Also, it will be interesting to research different types of societies and how they deal with parental mediation with respect to the internet or social media usage and their children. Different types of research can be performed on this subject, for example longitudinal, experimental and cross-sectional research, to examine the ways in which parents can use social networking sites and other forms of media as tools to strengthen family relationships and connectivity as a whole, from childhood to the teenage years and on to adulthood. It will also be interesting to investigate the relationship between parental mediation and effects of media on the relationships of the family, depending on the age and personality of the child.

Acknowledgments

We are grateful to Education Authority in Saudi Arabia for kind support, and our sincere thanks to all Saudi students who took part in this study.

References

Age Restrictions on Social Media Services (n.d.) *UK Safer Internet Centre wins award*. Age Restrictions on Social Media Services. Retrieved February 23, 2019, from https://www.saferinternet.org.uk/blog/age-restrictions-social-media-services.

Ali, S., Harbi, H. A. A., & Rahman, S. R. (2018). Relationship between Use of Social Media and Depression among Female Teenagers in Buraidah, AlQassim, Saudi Arabia. *Journal of Child and Adolescent Behavior*, *06*(03). doi: 10.4172/2375-4494.1000374

Anderson, M. and Jiang, J. (2018). Teens, social media, & technology 2018. *Pew Research Centre*. Retrieved January 23, 2020 from http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/.

Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook Addiction Scale. *Psychological Reports*, *110*(2), 501–517. doi: 10.2466/02.09.18.pr0.110.2.501-517

Benrazavi, R., Teimouri, M., & Griffiths, M. D. (2015). Utility of Parental Mediation Model on Yttt '' s llll ll tt ic Oll iee Gmmigg. *International Journal of Mental Health and Addiction*, *13*(6), 712–727. doi: 10.1007/s11469-015-9561-2

Bersamin, M., Todd, M., Fisher, D. A., Hill, D. L., Grube, J. W., & Walker, S. (2008). Parenting Practices and Adolescent Sexual Behavior: A Longitudinal Study. *Journal of Marriage and Family*, *70*(1), 97–112. doi: 10.1111/j.1741-3737.2007.00464.x

Buijzen, M., & Valkenburg, P. M. (2005). Parental Mediation of Undesired Advertising Effects. *Journal of Broadcasting & Electronic Media*, *49*(2), 153–165. doi: 10.1207/s15506878jobem4902_1

Chambers, D. (2013). *Social media and personal relationships online intimacies and networked friendship*. London: Palgrave.

Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior*, *27*(2), 755–762. doi: 10.1016/j.chb.2010.10.023

Chen, L., & Shi, J. (2018). Reducing Harm From Media: A Meta-Analysis of Parental Mediation. *Journalism & Mass Communication Quarterly*, *96*(1), 173–193. doi: 10.1177/1077699018754908

Chng, G. S., Li, D., Liau, A. K., & Khoo, A. (2015). Moderating Effects of the Family Environment for Parental Mediation and Pathological Internet Use in Youths. *Cyberpsychology, Behavior, and Social Networking*, *18*(1), 30–36. doi: 10.1089/cyber.2014.0368

Clark, L. S. (2011). Parental Mediation Theory for the Digital Age. *Communication Theory*, *21*(4), 323–343. doi: 10.1111/j.1468-2885.2011.01391.x

Daud, A., Omar, S. Z., Hassan, M. S., Bolong, J., & Teimouri, M. (2014). Parental Mediation of iii lrr ''' s sss stivs ss f ff tII I tt rr ttt . *Life Science Journal*, 11(8), 360–369.

Dürager, A. and Livingstone, S. (2012). *How can parents support children's internet safety?* London: EU Kids Online.

Dürager, A. and Sonck, N. (2014). *Testing the reliability of scales on parental internet mediation*. London: EU Kids Online, LSE.

Eastin, M. S., Greenberg, B. S., & Hofschire, L. (2006). Parenting the Internet. *Journal of Communication*, *56*(3), 486–504. doi: 10.1111/j.1460-2466.2006.00297.x

Erikson, E. H. (1959). *Psychological issues: identity and the life cycle*. New York: International Universities Press.

Fok, C. C. T., Allen, J. A., Henry, D. undefined, & Team, P. undefined. (2014). The Brief Family Relationship Scale: a brief measure of the relationship dimension in family functioning. *Assessment*, *21*(1), 67–72. doi: 10.1177/1073191111425856

Fritz, M. S., & Mackinnon, D. P. (2007). Required Sample Size to Detect the Mediated Effect. *Psychological Science*, *18*(3), 233–239. doi: 10.1111/j.1467-9280.2007.01882.x

Hill, N. E. (1995). The Relationship Between Family Environment and Parenting Style: A Preliminary Study of African American Families. *Journal of Black Psychology*, *21*(4), 408–423. doi: 10.1177/00957984950214007

Jenkins-Guarnieri, M. A., Wright, S. L., & Johnson, B. D. (2013). Development and Validation of the Social Media Use Integration Scale. *Psychology of Popular Media Culture*, *2*(1), 38–50. doi: 10.1037/e638312012-001

Khurana, A., Bleakley, A., Jordan, A. B., & Romer, D. (2015). The Protective Effects of Parental iiii trr igg ddd Itt rr ttt Rsstritt inn nn Alll sseett '' Rikk ff Oll iee Hrr ssmmtt . *Journal of Youth and Adolescence*, *44*(5), 1039–1047. doi: 10.1007/s10964-014-0242-4

Lee, S.-J. ()))))) rrr ttt ll rsstritt ive miii tt inn ff iii lrr ''' s itt rr ttt eee: fff cctive frr wttt ddd frr whom? *New Media & Society*, *15*(4), 466–481. doi: 10.1177/1461444812452412

Lee, S.-J., & Chae, Y.-G. (2007). Childrens Internet Use in a Family Context: Influence on Family Relationships and Parental Mediation. *CyberPsychology & Behavior*, *10*(5), 640–644. doi: 10.1089/cpb.2007.9975

vvviggtt ,,,, ,,, & Hll eeer, .. ()))))) Bll cccigg rrrrr riii tiss ddd rikks in teegggrr '' eee ff tee internet: the role of online skills and internet self-efficacy. *New Media & Society*, *12*(2), 309–329. doi: 10.1177/1461444809342697

Livingstone, S., & Helsper, E. J. (2008). Parental Mediation of Childrens Internet Use. *Journal of Broadcasting & Electronic Media*, *52*(4), 581–599. doi: 10.1080/08838150802437396

Livingstone, S., Haddon, L., Görzig, A. and Olafsson, K. (2011). *Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries* (EU Kids Online, Deliverable D4). London, UK: EU Kids Online Network.

Livingstone, S., Haddon, L., Görzig, A. and Ólafsson, K. (2011). *The 2010 EU kids online survey*. London: The London School of Economics and Political Science.

Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing Opportunities and Minimizing Risks for Children Online: The Role of Digital Skills in Emerging Strategies of Parental Mediation. *Journal of Communication*, *67*(1), 82–105. doi: 10.1111/jcom.12277

Lwin, M., Stanaland, A., & Miyazaki, A. (2008). Protecting childrens privacy online: How parental mediation strategies affect website safeguard effectiveness. *Journal of Retailing*, *84*(2), 205–217. doi: 10.1016/j.jretai.2008.04.004

Mesch, G. S. (2009). Parental Mediation, Online Activities, and Cyberbullying. *CyberPsychology & Behavior*, *12*(4), 387–393. doi: 10.1089/cpb.2009.0068

Mitchell, K. J., Finkelhor, D., & Wolak, J. (2003). The Exposure Of Youth To Unwanted Sexual Material On The Internet. *Youth & Society*, *34*(3), 330–358. doi: 10.1177/0044118x02250123

Morris, N. M., & Udry, J. R. (1980). Validation of a self-administered instrument to assess stage of adolescent development. *Journal of Youth and Adolescence*, *9*(3), 271–280. doi: 10.1007/bf02088471

Nathanson, A. I. (1999). Identifying and Explaining the Relationship Between Parental Mediation and Childrens Aggression. *Communication Research*, *26*(2), 124–143. doi: 10.1177/009365099026002002

Nielsen, P., Favez, N., Liddle, H., & Rigter, H. (2019). Linking parental mediation practices to llll sseett'' rr lll mmtt ic lll iee ccreen eee: A yytt mmtt ic litrr tt rr e rvvi... *Journal of Behavioral Addictions*, *8*(4), 649–663. doi: 10.1556/2006.8.2019.61

Okeeffe, G. S., & Clarke-Pearson, K. (2011). The Impact of Social Media on Children, Adolescents, and Families. *Pediatrics*, *127*(4), 800–804. doi: 10.1542/peds.2011-0054

Richards, D., Caldwell, P. H., & Go, H. (2015). Impact of social media on the health of children and young people. *Journal of Paediatrics and Child Health*, *51*(12), 1152–1157. doi: 10.1111/jpc.13023

Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M2: media in the lives of 8- to 18-year-olds*. Menlo Park, CA: Henry J. Kaiser Family Foundation.

Sasson, H., & Mesch, G. (2014). Parental mediation, peer norms and risky online behavior among adolescents. *Computers in Human Behavior*, *33*, 32–38. doi: 10.1016/j.chb.2013.12.025

Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research* , 3(7),749-752.

Shin, W., & Ismail, N. (2014). Exploring the Role of Parents and Peers in Young Adolescents Risk Taking on Social Networking Sites. *Cyberpsychology, Behavior, and Social Networking*, *17*(9), 578–583. doi: 10.1089/cyber.2014.0095

Shklovski, I., Kraut, R., & Rainie, L. (2004). The Internet and Social Participation: Contrasting Cross-Sectional and Longitudinal Analyses. *Journal of Computer-Mediated Communication*, *10*(1), 00–00. doi: 10.1111/j.1083-6101.2004.tb00226.x

Soh, P. C.-H., Charlton, J. P., & Chew, K.-W. (2014). The influence of parental and peer attachment on Internet usage motives and addiction. *First Monday*, *19*(7). doi: 10.5210/fm.v19i7.5099

Sonck, N., Nikken, P. and de Haan, J. (2013). Determinants of internet mediation. *Journal of Children and Media*, 7(1), 96–113.

Symons, K., Ponnet, K., Emmery, K., Walrave, M., & Heirman, W. (2017). A Factorial Validation of Parental Mediation Strategies with Regard to Internet Use. *Psychologica Belgica*, *57*(2), 93–111. doi: 10.5334/pb.372

Tariq, W., Mehboob, M., Khan, M. and Ullah, F. (2012). The impact of social media and social networks on education and students of Pakistan. *International Journal of Computer Science Issues*, 9(3), 407–412.

UNICEF. (2011). *The State of the World's Children 2011: Adolescence – An Age of Opportunity*. (2011, March 4). Retrieved August 18, 2019, from https://www.unicef.org/sowc2011/

Vandoninck, S., Dhaenens, L., & Donoso, V. (2010). Digital Literacy of Flemish Youth: How do they handle online content risks? *Communications*, *35*(4). doi: 10.1515/comm.2010.021

Williams, A. L., & Merten, M. J. (2011). iFamily: Internet and Social Media Technology in the Family Context. *Family and Consumer Sciences Research Journal*, *40*(2), 150–170. doi: 10.1111/j.1552-3934.2011.02101.x

Yen, J.-Y., Yen, C.-F., Chen, C.-C., Chen, S.-H., & Ko, C.-H. (2007). Family Factors of Internet Addiction and Substance Use Experience in Taiwanese Adolescents. *CyberPsychology & Behavior*, *10*(3), 323–329. doi: 10.1089/cpb.2006.9948

Zhao, S. (2009). Parental education and childrens online health information seeking: Beyond the digital divide debate. *Social Science & Medicine*, *69*(10), 1501–1505. doi: 10.1016/j.socscimed.2009.08.039

Bibliographic information of this paper for citing:

Albeladi, N., & Palmer, E. (2020). The Role of Parental Mediation in the Relationship btt ween Adonnnnnns' Use of Social Media and Family Relationships in Saudi Arabia. *Journal of Information Technology Management*, 12(2), 163- 183.