

Adolescents' Social Media Use in Relation to Parenting Stress and the Role of
Internet-Specific Parental Self-Efficacy



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Abstract

An important factor contributing to parenting stress nowadays is adolescents' social media use. However, to what extent and under what circumstances is still unknown. The aim of this study is trying to understand the relationship between adolescents' social media use (intensity and problematic use) and parenting stress and the buffering role of parents' Internet-specific self-efficacy. Data from the first wave of the Digital Family Project was used. The sample consisted of 397 parents ($M = 46.6$ years, $SD = 5.3$) and 396 adolescents ($M = 14.4$ years, $SD = 2.0$). The results show that there is no main effect of intensity of social media use on parenting stress. However, higher levels of problematic social media use among adolescents are related to more parenting stress among parents. No moderation by parental self-efficacy is found. It seems that focussing on problematic social media use is important in reducing parenting stress. All in all, this study contributes to the existing literature by showing that problematic social media use is an important factor in understanding parenting stress.

Key words: parenting stress, problematic social media use, intensity of social media use, Internet-specific parental self-efficacy.

Samenvatting

Een belangrijke factor die tegenwoordig bijdraagt aan opvoedstress is het sociale mediagebruik van adolescenten. In hoeverre en onder welke omstandigheden is echter nog steeds onduidelijk. Het doel van deze studie is de relatie tussen het sociale mediagebruik van adolescenten en opvoedstress proberen te begrijpen. Aangezien ouders een belangrijke rol spelen in het sociale mediagebruik van adolescenten, is de bufferende rol van ouders' internet-specifieke self-efficacy ook meegenomen. De data van de eerste meting van het Digital Family Project is gebruik. De steekproef bestond uit 397 ouders ($M = 46.6$ jaar, $SD = 5.3$) en 396 adolescenten ($M = 14.4$ jaar, $SD = 2.0$). De resultaten laten zien dat er geen hoofdeffect van intensiteit van sociale mediagebruik op opvoedstress was. Echter, meer problematisch sociale mediagebruik onder adolescenten was wel gerelateerd aan opvoedstress onder ouders. Ouders' internet-specifieke self-efficacy bufferde de relatie niet. Focussen op problematisch sociale mediagebruik van adolescenten blijkt dus belangrijk te zijn in het verminderen van opvoedstress. Concluderend, deze studie draagt bij aan de bestaande literatuur door te laten zien dat problematisch sociale mediagebruik een belangrijke factor is in het begrijpen van opvoedstress.

Sleutelwoorden: opvoedstress, problematisch sociale mediagebruik, intensiteit van sociale mediagebruik, Internet-specifieke ouderlijke self-efficacy.

Introduction

Many parents enjoy being a parent, yet most of them also experience some level of stress now and then. Large part of the parents experience stress regarding parenting in general, which can arise from numerous factors such as financial status, child characteristics or marital status (Nikken & de Haan, 2015; Östberg & Hagekull, 2000). Higher levels of parenting stress might lead to poorer parent-child interactions and problems in family functioning (Östberg & Hagekull, 2000). Besides the emphasis on parenting behaviour, parenting stress can also influence parents' overall psychological well-being. Higher parenting stress has been linked to depression, separation anxiety and drug use (Deater-Deckard, 2006). Because of the negative consequences that parenting stress can have, it is important to examine factors that might influence parent's levels of parenting stress.

Nowadays, an important factor that might increase the level of stress among parents is their children's social media use (Nikken & de Haan, 2015). Social media is one of the most popular leisure activities among adolescents (Bányai et al., 2017), used for a variety of purposes, such as gaming, socializing, and communication with others (Kircaburun et al., 2019). Social media bring about a lot of benefits for adolescents, such as connecting with anyone and at any time and expressing themselves more easily (Brown & Bowkowski, 2011). However, social media may also bring about some risks for the adolescents themselves (e.g. increases in mental health problems and lower school performances; Twenge et al, 2017), but also for their parents. For example, parents seem to worry about the negative effects of social media use for their children, such as exposure to violence, bullying or even pornography, which can increase their level of stress (Sorbin & Lundin, 2012). Thus, investigating the role of adolescents' social media use in parenting stress is important.

Social media use among adolescents is very common; 96.8 percent of Dutch adolescents in the age of 12-25 used the Internet for social media purposes in 2019 (Centraal Bureau voor de Statistiek. 2019). Another study among Dutch youth showed that 9.1 percent of the 21.043 students that participated reported problematic social media use (Mérelle et al., 2017). There is a distinction between the intensity of social media use (ISMU) and problematic social media use (PMSU). ISMU is defined as the amount of time spending on social media (Van den Eijnden, et al., 2016). PSMU can be described as the overly concern about social media and devotion of so much time and effort to social media that it conflicts with other important life areas (Shensa et al., 2017). Adolescents who are problematic social media users tend to have symptoms of addiction to social media use and this is significantly different from adolescents who just have a high intensity of social media use. Higher intensity

of social media use does not directly mean that it is also problematic, although it tends to be true for the other way around (Van den Eijnden, et al., 2016). Also, the study by Boer et al. (2020) shows that intense social media use among adolescents is seen as normative behaviour (when living in a country where more people use social media intensively), while problematic social media use causes risks of lower well-being. Considering the fact that ISMU and PSMU are two related, yet different concepts, they might act differently in relation to parenting stress. However, literature on this relationship is scarce. To have a better understanding if and which aspect of social media use is playing a role in parents' levels of parenting stress, a distinction is made between the intensity of social media use and problematic social media use.

Parents play an important role in their children's social media use (Nikken & Schols, 2015). One important factor which may play a role in parenting and adolescents' social media use is parental self-efficacy. According to Bandura's self-efficacy theory (1977), parents who believe that they can positively influence their children's behaviour (having more self-efficacy), are more likely to use effective parenting practices. With the upcoming of new technologies, another specific form of parental self-efficacy arose: Internet-specific parental self-efficacy (Internet-specific PSE). Internet-specific PSE can be defined as the extent to which parents feel that they can influence their children's internet-related behaviour (Glatz et al., 2018). Internet-specific parental self-efficacy is taken as a moderator in this study in order to find out if and how it can play a role in the relationship between adolescents' social media use and parenting stress.

Up to now, little is known about whether and under what circumstances adolescents' social media use relates to parents' level of parenting stress. As described above, one of the recourses of parents may be the level of confidence they have in their ability to influence their child's behavior, i.e. parental self-efficacy (Glatz et al., 2018). In order to contribute to filling the gap in the literature, this study investigates the relationship between adolescents' social media use and parenting stress and the moderating role of Internet-specific parental self-efficacy. Especially investigating the role of Internet-specific parental self-efficacy is relevant for parents and practitioners in order to reduce parenting stress.

Adolescents' intensity of social media use and parenting stress

The intensity of social media use has not been studied much in relation to parenting stress specifically. As stated before, social media can have a lot benefits for adolescents. For example, Van den Eijnden et al. (2018) found that the intensity of social media use has a positive effect on perceived social competence. Social media use can help adolescents in

maintaining their social relations, which can take away some stress that parents experience from their children's social media use. On the other hand, a lot of studies have suggested that intense social media use increases mental health issues, such as depression and suicidal thoughts (Twenge et al, 2017), and lowers school performances (Al-Menayes, 2015). All these possible negative effects of social media use may cause parenting stress among parents (Deater-Deckard, 2006). Moreover, Sorbring (2012) found that the more time parents think their children (aged between 13 and 15) spend on the Internet, the more they worry. They especially worry about their children losing friends, becoming inactive or being exposed to improper information. Furthermore, parents who find their children more skilful in using the Internet are more worried about their children's Internet use (Sorbring, 2012). In line with these latter findings, it is hypothesized that a higher intensity of social media use is related to more parenting stress.

Adolescents' problematic social media use and parenting stress

A growing concern of parents related to their children's social media use is that their children might become addicted. Although problematic social media use is not mentioned in the DSM-V (APA, 2013), it is argued that it can be considered as an addiction (Ryan et al., 2014). Problematic social media users feel bad when social media use is prohibited. Moreover, they feel a loss of control, which can affect their school, social and mental well-being in a negative way (Boer et al, 2020). According to theory of generalised problematic Internet use (Caplan, 2010), people who prefer to communicate in an online environment are more at risk for mental health problems, because of their compulsive use (Ryan et al., 2014). Problematic social media use is mainly focused on online communication, therefore this theory can substantiate why problematic social media use is a risk factor for adolescents' mental health.

The relationship between adolescents' PSMU and parenting stress is unknown. Nevertheless, as seen in research about parenting stress in relation to other kinds of addiction, such as drug addiction, it appeared that parents with children who are addicted to drugs experience very high levels of stress (Choate, 2015). Furthermore, Stockdale & Coyne (2020) showed that excessive video game use among adolescents can lead to depression and parenting stress among parents. Since problematic social media use can be considered as an addiction, the expectation is that it has the same effect on parents as with other compulsive behaviour. In line with this, it is hypothesized that higher levels of adolescents' problematic social media use is related to more parenting stress.

The moderating role of Internet-specific parental self-efficacy

Building upon the previous discussed empirical findings, The Family Stress Theory (Hill, 1949) can help in understanding how adolescents' social media use may relate to parenting stress and how Internet-specific parental self-efficacy can play a role. The theory consists of four elements, which are presented in a model: ABC-X. The A factor is the stressor, which creates change in the family system, which could be social media use of adolescents. B is the factor that represents resources or strengths. C refers to the meaning that parents give to the situation and X is the outcome factor, in this case parenting stress. A, B and C are determining the outcome factor X and after adaptations are made in order to reduce the outcome, factor X influences in turn the factors A, B and C (Hobfoll et al., 1992).

As mentioned before, parents are important when it comes to their children's social media use (Nikken & Schols, 2015). Parents who have more self-efficacy, are more likely to use effective parenting practices (Bandura, 1977). Moreover, more parental self-efficacy is in general related to less parenting stress, because parents who are feeling competent in their parenting have less reason to stress or worry (Bloomfield & Kendall, 2012). Parents who have more Internet-specific PSE are also more likely to use parenting strategies to mediate their children's Internet use. When parents feel they can control their children's social media use, this can reduce doubts and worries (Glatz et al., 2018). High levels of Internet-specific parental self-efficacy can thus be seen as a strength of parents, which is referred to as a source (B) in the theoretical model of Hill (1949).

In conclusion, Internet-specific PSE can be an important factor when it comes to intervening in adolescent's social media use and reducing parenting stress. Based on the previous discussed findings, we expect that higher levels of Internet-specific PSE buffers the relationship between higher levels of adolescents' (problematic) social media use and parenting stress.

Current study

Since the relationship between social media use of children on their parents' parenting stress has not been studied much, the aim of this study is trying to understand this relationship. Moreover, the moderating role of parents' Internet-specific self-efficacy is also addressed. Therefore, the research question of this study is '*What is the relationship between adolescents' problematic social media use/intensity of social media use and parenting stress among parents of 9-18 year old adolescents, and is this relationship moderated by Internet-specific parental self-efficacy?*'. Based on the previous discussed findings and theories, the hypotheses of this study are as following (see Figure 1 for an overview):

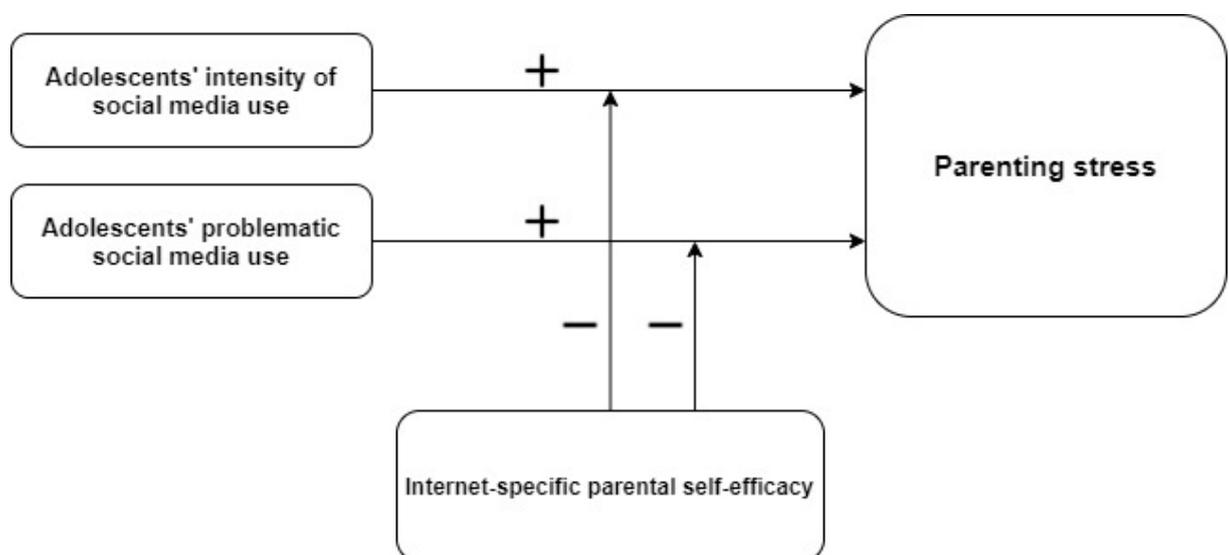
H1: Higher intensity of social media use among adolescents is related to more parenting stress.

H2: More symptoms of problematic social media use among adolescents is related to more parenting stress.

H3: Higher levels of internet-specific parental self-efficacy buffer the relationship between higher levels of adolescents' (problematic) social media use and parenting stress.

Figure 1.

Schematic overview of the research



Methods

Sample

The sample consists of 397 parents and 396 adolescents. The mean age of parents is 46.6 years ($SD = 5.3$) and 42% of the parents is male. The mean age of the adolescents is 14.4 years ($SD = 2.0$) and 48% is a boy. The majority of the parents who participated in the study was higher educated (HBO or university), namely 69.8%. Most of the parents were born in The Netherlands, namely 93.5%.

Procedure and design

This cross-sectional study makes use of data from the first wave of the Digital Family project (DiFa). DiFa consists of four waves, in which the first wave is conducted from the end of April until the beginning of July 2020 in The Netherlands. Data is collected through online questionnaires among parents and their children, who were recruited through various ways

(e.g. advertisements on social media, door-to-door flyer distribution and word of mouth). Participants received an information letter in which was described what the purpose of the study is, what the study consists of, how long the questionnaire was going to take and how privacy is maintained. Moreover, before answering the questionnaire, participants had to give their consent on the informed consent letter. Participants received a compensation for their participation in the form of a gift voucher. The study procedures were approved by the Ethics Committee of the Faculty of Social and Behavioral Science at Utrecht University (FETC20-192).

Measures

Social media use

A distinction is made between the intensity of social media use (ISMU) and problematic social media use (PSMU). *ISMU* is defined as how much adolescents are using social media and is measured among adolescents by using the scale developed by Van den Eijnden et al. (2018). This scale includes five items; two items assessing passive social media use, three items assessing active social media use. The answers to the questions about passive social media use are measured using a 7-point Likert scale, in which 1=never/less than once a day/week and 7=more than 40 times a day/week. The answers to the questions about active social media use are also measured according to a 7-point Likert scale, in which 1=less than once a day and 7=more than 80 times a day. Before answering the questions, adolescents were first provided with the following definition of social media: 'The term social media refers to social network sites (Facebook, Instagram, Twitter), and instant messengers (Whatsapp, Snapchat, Facebook messenger). An example item is 'How many times a day do you check social network sites (e.g., Instagram, Facebook, YouTube, Pinterest, Discord or Twitter)?'. The intensity of social media use is measured by the sum of all the answers to the five different items. Higher scores indicate higher intensity of social media use. Cronbach's alpha was 0.775.

PSMU is reported by adolescents using the Social Media Disorder scale (Van den Eijnden et al., 2016). This measurement consists of nine items which reflect the nine symptoms of addiction to social media use. Those entail loss of control, preoccupation, problems, tolerance, withdrawal symptoms, coping/escapism, deception, displacement and conflict. An example item is 'During the past year, have you often felt bad when you could not use social media?'. These nine items are dichotomous: 1=no and 2=yes. The items are recoded afterwards, as such that 0=no and 1=yes. This variable is made dichotomous, because it was not normally distributed. So, a score of one (yes) on one or two items is seen as not

being problematic, whereas a score of one on more than two items is seen as being problematic. The reliability of this scale is $\alpha=0.655$.

Parenting stress

Parenting stress reflects the stress that parents have about raising their child. This concept is measured among parents using five items of the Dutch version of the Parenting Stress Index (De Brock, Vermulst, Gerris & Abidin, 1992). Items were rated on a scale of one (totally disagree) to five (totally agree). An example is: 'I notice that I am not able to take care of my children as good as I expected'. Higher sum scores indicate higher levels of parenting stress. The reliability of the parenting stress scale is $\alpha=0.881$.

Internet-specific parental self-efficacy

Internet-specific PSE is defined as the extent to which parents believe that they can influence their children's Internet-related behaviour and is measured among parents based on the Internet-specific PSE scale of Glatz et al. (2018). It consists of two questions and the answers are scaled from one to nine (in which 1='nothing' and 9='a great deal'). The questions are about to what extent parents think they have an influence on the time their children spend online and on what the child does online. Higher sum scores indicate having higher Internet-specific parental self-efficacy. The reliability of this scale is measured through the correlation between the two items, which is 0.658.

Control variables

Data collection took place during a period in which the Coronavirus was present and participants experienced a (partial) lockdown in The Netherlands. The Coronavirus and the circumstances could also have led to stress among parents. Therefore, stress among parents because of the Corona-virus is included as a control variable in this study. Corona related parenting stress is measured among parents with the following question: 'My role as a parent is more stressful because of the Corona crisis.'. The answer options are scaled from one to five (1=totally disagree and 5=totally agree). A higher score on this question indicates having more parenting stress because of the Corona crisis. Besides taking corona as a control variable, gender (1=male) of parents and gender (1=boy) of adolescents is also included as control variables in this study.

Data analysis

The dataset was built so that it provided information about parents and one or, if they had, two of their children. Because of the complexity of the dataset, it is decided to only use adolescent 1 instead of adolescent 1 and 2. There were some missing values in the dataset. Based on the descriptive statistics is decided to leave 18 parents and 19 adolescents out of the

analysis because these participants did not give (enough) answers to the items. The 18 parents did not answer any question on the parenting stress scale, the Internet-specific parental self-efficacy scale and they did not answer the Corona related parenting stress question. For the 19 adolescents there were lacking answers to the questions about demographics and PSMU, so on the basis of that they were excluded from the dataset. On the items of passive and active social media use of adolescents, there were 29 and 26 missings respectively, among those were also the 19 adolescents that did not answer the PSMU. The remaining 10 and 7 adolescents respectively who only did not answer the questions on passive and active social media are not deleted from the data set, pairwise deletion was used for the analysis. In total 415 parents and adolescents participated in the questionnaire, after cleaning the dataset and controlling for missing values 397 parents and 396 adolescents were included in this study.

Before data could be analysed, some assumptions had to be checked. First the descriptive statistics were analysed and the variables were checked for a normal distribution. Based on the skewness, Kurtosis and the histograms the variables parenting stress, intensity of social media use and Internet-specific parental self-efficacy were found to be normally distributed. PSMU was not normally distributed. Last, based on collinearity diagnostics between all relevant variables, multicollinearity did not exist. For the data analysis a multivariate linear regression analysis was conducted with parenting stress as the dependent variable. In step one of the model the control variables, gender of parents, gender of adolescents and corona related parenting stress, were added. In the second step, the independent variables PSMU and ISMU were added to the model. In the third and last step, the moderation effect is tested by adding interaction terms in step 3 as well as the moderator Internet-specific parental self-efficacy. Before the interaction terms were computed, all variables were centered. Because of the expected contribution of Corona related parenting stress, all previous steps were repeated excluding Corona related parenting stress as a control variable.

Results

Descriptive statistics and correlations

The mean, SD and correlations between all variables are depicted in Table 1. Corona related parenting stress is strongly and positively related to parenting stress, which indicates that having more parenting stress caused by corona is associated with having more parenting stress. Moreover, ISMU is strongly and negatively related to ISPSE. Parenting stress is positively correlated with ISMU, PSMU and ISPSE, as well as to corona related parenting

stress.

Table 1. Descriptive Statistics and Pearson Correlations

Variable	%/M (SD)	1	2	3	4	5	6
1. Gender (% male)	Parents 42 %	–	.09	.02	.00	.04	.07
(% boys)	Adolescents 48 %	–	-.12*	.01	.11*	.18**	-.12*
2. Corona related parenting stress	2.50 (1.13)		–	.44**	.04	.07	.00
3. Parenting stress	8.81 (3.44)			–	.12*	.16**	-.19**
4. ISMU	18.30 (5.93)				–	.21**	-.26**
5. PSMU	.40 (.49)					–	-.12*
6. Internet-specific PSE	10.83 (3.46)						–

Note: ISMU: intensity of social media use. PSMU: problematic social media use. PSE: parental self-efficacy.

*** p<.001. ** p<.01. * p<.05 (two-tailed).

The contribution of ISMU and PSMU to parenting stress

The results of the multiple regression analysis of parenting stress on adolescents' social media use are shown in Table 2. In the first step of the analysis, control variables were included in the model. Only corona related parenting stress was significantly related to parenting stress ($\beta = .45, p < .001$). The control variables accounted for 19.2% of the variability in parenting stress ($R^2 = .19, F(2,359) = 29.63, p < 0.01$).

To test whether ISMU and PSMU predict parenting stress, ISMU and PSMU were added in the second step. The results showed that ISMU among adolescents did not and PSMU did significantly predict parenting stress This indicates that having more symptoms of PSMU among adolescents predicts more parenting stress among parents ($\beta = .72, p = .04$). By adding the independent variables in the second step, the explained variance in parenting stress increased by 1.9% ($R^2 \text{ change} = .02, F \text{ change} (2,357) = 4.35, p = 0.14$).

The moderating role of Internet-specific parental self-efficacy

In the third step of the analysis, the interaction terms and ISPSE are added to the model to test whether ISPSE was a moderator. Both interaction effects were not significant,

which indicates that ISPSE did not moderate the effect of ISMU ($\beta = .09, p = .07$) and PSMU ($\beta = -.24, p = .81$) on parenting stress.

Analysis without corona related parenting stress

Since corona related parenting stress was strongly related to parenting stress, another multivariate linear regression was conducted without corona related parenting stress as a control variable. The analysis without corona related parenting stress did not differ from the analysis with corona related parenting stress in such that the same effects were found.

Table 2. Multiple Linear Regression Analysis of ISMU and PSMU on Parenting Stress

Variabele	B	SE B	β
Model 1			
Gender parents	-.20	.33	-.03
Gender adolescents	.46	.33	.07
Corona related parenting stress	1.38	.15	.45**
Model 2			
Gender parents	-.20	.33	-.03
Gender adolescents	.26	.33	.04
Corona related parenting stress	1.34	.15	.44**
ISMU	.05	.03	.08
PSMU	.72	.34	.10*

Note: Model 1: $R^2=.19, F(2,359) = 29.63, p<0.01$. Model 2: $R^2=.21, F(2,357) = 19.85, p<0.001$

R^2 change model 1 = .20. R^2 change for model 2 = .02.

^a 0 = no, 1 = yes.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

The aim of this study was to investigate the relationship between adolescents' social media use (intensity and problematic use) and parenting stress and whether this relationship was influenced by Internet-specific parental self-efficacy. The results showed that adolescents' problematic social media use and not the intensity of use was significantly linked to parenting stress. In addition, the level of Internet-specific parental self-efficacy did not moderate the relationship between social media use of adolescents and parenting stress.

Contrary to our hypothesis, the intensity of social media use was not significantly related to parenting stress. Literature suggested that a higher intensity of social media use (ISMU) among adolescents was related to more parenting stress among parents (Deater-Deckard, 2006; Sorbring, 2012). However, not much research is available, nor longitudinal studies. The lack of relationship between ISMU and parenting stress may be explained by the finding that for some adolescents the use of social media has positive effects and for other negative effects (Boer et al., 2020). This may therefore also differentially relate to parents' level of stress; most parents may observe that more use of social media help their adolescents in their social relations whereas others may see it doesn't. Another explanation can be found in the fact that previous studies have included the intensity of use only, and not relative to problematic use. So, intensity of social media use may have been related to parenting stress when it was added in the model without problematic social media use. However, more research on the relation between the intensity of social media use and parents' stress is needed.

Whereas intensity of social media use was not, a higher level of problematic social media use among adolescents was related to more parenting stress. This is in line with other research about parenting stress among parents who have adolescent children with drug addiction (Choate, 2015). As the literature suggests, problematic social media use is a different concept than intense social media use (Boer et al., 2020; Boer et al., 2021). The literature on problematic social media use is more consistent about its negative effects on adolescents, whereas the literature on intense social media use is still inconclusive. It is therefore also plausible that problematic social media use is more strongly associated with adolescents' well-being than intense social media use (Boer et al., 2020). Moreover, in countries with higher prevalence of social media use, intense social media use is seen as normative behaviour, whereas problematic social media use is not (Boer et al., 2020). PSMU has been characterized by compulsive usage whereby much time and effort is devoted to social media use that it impairs school performances, social activities and personal relationships (Shensa et al., 2017). For parents it is harder to intervene in this more addiction like social media use than it is in intense social media use. Because of the negative effects of problematic social media use on adolescents and parents, and its subsequent more compulsive use, parents might have a hard time to deal with PSMU and therefore have higher levels of parenting stress about PSMU.

The relationship between adolescents' social media use (the intensity as well as problematic use) and parenting stress was not moderated by Internet-specific parental self-

efficacy. Apparently it is not the parents' confidence that is of influence on this relationship. It is possible that the relationship between social media use of adolescents and parenting stress depend more on individual characteristics of the adolescent, such as sensation seeking or impulsivity traits (Thomsen et al., 2018). Another possible explanation for this result can be found by looking at methodology. Internet-specific parental self-efficacy was measured by only two items that are formulated in the same way. Future research should use a scale with more items to increase construct validity. Perhaps future research may also investigate the moderating role of parental self-efficacy in general instead of Internet-specific, because of the fact that general self-efficacy and task-specific self-efficacy are different concepts (Chen et al., 2004). Moreover, future research could also investigate other kinds of self-evaluations, for example self-esteem, which is a more overall evaluation of the self (Chen et al., 2004).

Limitations and strengths

The present study used data from a large sample to investigate a relevant and highly understudied topic of research. Although it is not possible to draw any causal conclusions, because this study is not longitudinal, it is easy to replicate this study due to precise descriptions of the analyses. Since a second measurement wave is inbound, this study is a fundamental start which can be built upon. This study addresses a new field of research that has not been studied much before, so it contributes to filling the gap in the literature. However, beside these strengths, a few limitations should be mentioned.

One limitation is that the Internet-specific parental self-efficacy measurement only consisted of two items, a more comprehensive validated scale is needed in order to find more reliable results. However, the correlation between the two items was not excellent, it was acceptable.

A general problem that could have occurred within this study is that participants, despite the anonymity of the survey, could have answered differently than how they actually feel or behave. Self-report scales can always lead to biases (Donaldson & Grant-Vallone, 2002), but given the time and money another method was not feasible. However, topics discussed in the survey are not seen as very sensitive, so the expectation is that this possible bias is minimal.

Due to limited time, the data of adolescent 2 was not included in the analyses of the current study. Therefore, this study could not control for the social media use of siblings. If the data for adolescent 2 was included, it might have resulted in different results, for example, the social media use of siblings could have been a mediator, moderator or confounder of the

social media use of adolescent 1. Moreover, the design of the study is cross-sectional, so no causal conclusions can be drawn. A recommendation for future research is to measure and include social media use of all children in the family. Furthermore, future research could use the second wave of data in order to do longitudinal analyses.

Practical implication and conclusion

More insight into the relationship between adolescents' social media use and parenting stress among parents has been given in this study. Also the role of Internet-specific parental self-efficacy was examined. The results imply that there is a difference between the intensity of social media use and problematic social media use in relation to parenting stress. Problematic social media use is associated with more parenting stress while the intensity of social media use is not. This implies that focusing on the prevention and reduction of problematic social media use is more important. A suggestion for future research is to examine whether adolescents' problematic social media use influences parenting stress over time and to investigate other moderators to find out what could buffer the possible negative effect of adolescents' problematic social media use on parents' stress levels. Furthermore, future research should focus on a more comprehensive scale of parental self-efficacy in relation to social media use instead of general Internet use. The finding that problematic social media use is related to parenting stress has some implications for the design of interventions based on social media use among adolescents. It seems that focussing on problematic social media use is important for its direct effect on adolescents' well-being and the well-being of their parents, but also for the indirect impact that it has on other family members, such as siblings. Policy makers and professionals working on reducing parenting stress should take this into account.

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