The Influence of Parents on Adolescents' Social Media Use and Attitude

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Abstract

The social media use among adolescents is increasing, and parents try to influence the consequences of social media on their children. According to the Theory of Planned Behaviour, behaviour is determined by intentions to show the behaviour. These intentions are in turn determined by a person's attitude, subjective norm and perceived behavioural control. Elaborating on this theory, the current study tested the influence of perceived parental social media use and attitude on the social media use and attitude of adolescents. Adolescents ($N = 80$) aged 10 to 15 completed a self-created survey, assessing their own social media use and attitude, as well as the perceived parental social media use and attitude. Furthermore, the openness of the communication style of parents towards their children about social media was also taken into account. Support was found for the influence of adolescents' social media attitude on adolescents' social media use, as well as for the influence of parental social media attitude on parental social media use. Furthermore, support was found for the influence of perceived parental social media use in terms of hours on adolescents' social media use in terms of hours. However, no more significant influences of parents on adolescents were found. So in short, our study shows that social media attitude indeed does predict social media use, and that parents have a partial influence on their adolescents. However, since our participants were young, the results of this study might have been influenced by the participants' age. Moreover, we did not study parents directly, so that might have influenced our results as well.

Keywords: adolescents, social media use and attitude, perceived parental social media use and attitude, communication style, Theory of Planned Behaviour

Summary in Dutch

Het gebruik van social media onder adolescenten is verhoogd en ouders proberen tevens invloed uit te oefenen op de eventuele gevolgen van het social media gebruik op hun kinderen. Volgens de Theory of Planned Behaviour wordt gedrag bepaald door de intentie om het gedrag te uiten. Deze intenties worden bepaald door houding, subjectieve norm en waargenomen gedragscontrole. De huidige studie ging uit van de Theory of Planned Behaviour, door te onderzoeken of het door adolescenten waargenomen ouderlijke social media gebruik en de door adolescenten waargenomen houding van ouders ten opzichte van social media hun eigen social media gebruik en houding kunnen voorspellen. Adolescenten ($N = 80$) van 10 tot 15 jaar hebben een zelf ontwikkelde vragenlijst ingevuld, waarbij ze hun eigen social media gebruik en houding hebben beoordeeld, evenals het waargenomen social media gebruik en de houding van hun ouders. Daarbij is de openheid in communicatie

over het gebruik van social media tussen ouders en hun kind ook in het onderzoek meegenomen. Het onderzoek kan bevestigen dat het social media gebruik van adolescenten invloed heeft op hun social media houding, evenals de invloed van het waargenomen ouderlijke social media gebruik op de waargenomen ouderlijke social media houding. Daarbij bevestigt het onderzoek dat het waargenomen ouderlijke social media gebruik uitgedrukt in uren, invloed heeft op het social media gebruik van adolescenten uitgedrukt in uren. Echter blijkt het dat er verder geen significante invloeden zijn van ouders op hun kinderen. Kortom, het onderzoek toont aan dat de social media houding een voorspelling kan doen op het social media gebruik. Daarbij blijkt het dat ouders op verschillende gebieden een rol kunnen spelen in het social media gebruik en de social media houding van adolescenten. Daarentegen waren de participanten jong van leeftijd, wat mogelijk de resultaten heeft beïnvloed. Bovendien zijn de ouders indirect onderzocht, wat ook een invloed op de resultaten kan hebben.

Sleutelwoorden: adolescenten, social media gebruik, social media houding, waargenomen ouderlijke social media gebruik en houding, communicatiestijl, Theory of Planned Behaviour

The Influence of Parents on Adolescents' Social Media Use and Attitude

The percentage of social media use among adolescents is increasing, and research about adolescents' use of social media has grown as well (Radovic, Gmelin, Stein, & Miller, 2017). Social media encompass blogs, collaborative projects (e.g. Wikipedia), content communities (e.g. YouTube), virtual game worlds (e.g. World of Warcraft), virtual social worlds (e.g. Second Life) and Social Network Sites ([SNS] Kaplan & Haenlein, 2010). SNS can be defined as online platforms that establish communication between various users via computer or mobile devices (Boyd & Ellison, 2007). Thus, SNS are an integral part of social media (Mangold & Faulds, 2009).

Social media use can be conceptualized as the amount of hours engaged in social media, combined with the contents of these social media (Baker & White, 2010; Top, 2016). European research showed that 70% of adolescents from Greece, Spain, Poland, the Netherlands, Romania, and Iceland aged 14 to 17 use social media (Tsitsika, et al., 2014). In comparison, Lenhart (2015) showed that more than 75% of American adolescents aged 13 to 17 use social media. Regarding social media use in amount of hours, 40% of European adolescents spend two or more hours a day on SNS, which can be labeled as heavier SNS use, whereas 25% of young Canadian adolescents use SNS for more than two hours every day (Sampasa-Kanyinga & Lewis, 2015; Tsitsika, et al., 2014). When using social media, adolescents tend to multitask (Lee, 2014; Len-Ríos, Hughes, McKee, & Young, 2016). They often spend their time on different platforms, for several activities such as interacting with their peers, blogging, sharing pictures, chatting, creating videos, playing games and exploring the web (Banyai et al., 2017; George & Odgers, 2015; Lenhart, 2015). Besides talking to peers in school, the main way of daily communication by young adolescents goes through text messaging (Lenhart, 2015). So in short, they tend to use social media mainly for communication with their peers (Barker, 2009).

Studies show that adolescents' social media use is associated with several problems, such as poor self-rating of mental health, emotional problems and sleep problems (Kross et al., 2013; Lemola, Perkinson-Gloor, Brand, Dewald-Kaufmann, & Grob, 2015; Ophir, 2017; Sampasa-Kanyinga & Lewis, 2015; Woods & Scott, 2016; Xanidis & Brignell, 2015). Furthermore, nowadays adolescents are prone to online peer victimization and cyberbullying, which can be a predictor of depressive symptoms (Frison & Eggermont, 2016; Rose & Tynes, 2015). In contrast, research shows that social media can be associated to several positive factors as well, such as increased social support and social capital, increased self-esteem, safe identity experimentation and increased opportunity for self-disclosure (Best, Manktelow, & Taylor, 2014; Lin et al., 2016; Radovic et al., 2017;

Valenzuela, Park, & Kee, 2009). Parents try to influence the social media use of their children in order to decrease negative outcomes of social media use and increase the positive consequences (Bjelland et al., 2015; Buijzen, 2007; Livingstone & Helsper, 2008). However, the question remains to what extent parents have a significant influence on young adolescents' SNS use.

In order to answer this question, we will start by finding out what influences the adolescents' social media use. Baker and White (2010) used the Theory of Planned Behaviour to study the SNS use of 13- to 16-year old Australian adolescents. The Theory of Planned Behaviour was developed by Ajzen (1991) and states that an individual's intentions are the proximal determinants of their behaviour. This means that the higher the motivation of a person to exert certain behaviour, the more that person exhibits that specific kind of behaviour. According to Ajzen (1991), this intention is determined by three constructs: attitude, subjective norm and perceived behavioural control. Attitude can be defined as the overall evaluations of the behaviour, subjective norm encompasses the perceptions of social pressure of "important referents" (such as parents and peers) to show or not show the behaviour, and perceived behavioural control is the amount of control the person perceives to have over the behaviour. So, Baker and White (2010) tested this Theory of Planned Behaviour by handing out a questionnaire to 160 Australian students aged 13 to 16 years. A number of 139 participants completed a follow-up questionnaire one week later. Their SNS use was measured, as well as SNS attitude, subjective norm, perceived behavioural control, intention, group norm and self-esteem. The last two factors were encompassed in the study as an elaboration on the Theory of Planned Behaviour. First of all, they found that the adolescents' intentions to use SNS was indeed a significant predictor of their reported SNS use. Secondly, they found that attitude was a significant predictor of the intention to use SNS. So, the way these adolescents looked at SNS influenced the way they used SNS. Knowing this, it would be interesting to not just focus on the adolescents' social media use (ASMU), but also on the adolescents' social media attitude (ASMA). However, Baker and White (2010) also found that subjective norm and perceived behavioural control significantly predicted the SNS intentions of these adolescents. Furthermore, their added variable of group norm was also a significant predictor of their SNS intentions. Self-esteem provided no significant results in their study. According to Baker and White (2010), these results suggest that adolescents are not just influenced by their parents, but by their friends' social media use and attitude and the amount of control over their social media use and attitude as well. This brings up the question even more to what extent parents have an influence on the social media use of their adolescent children.

As mentioned before, parents feel the responsibility to teach their children how to use their social media and to protect them from the possible negative consequences (Bjelland et al., 2015; Buijzen, 2007; Livingstone & Helsper, 2008). Since ASMU is influenced by ASMA, but also by subjective norm and perceived behavioural control, it would be interesting to focus on adolescents' views on parents' social media use and attitude (Baker & White, 2010). This perceived parental social media use (PPSMU) and perceived parental social media attitude (PPSMA) might influence the ASMU and ASMA. Unfortunately, to our findings no such research has yet been done. The current study aims to fill this gap in the literature by looking at the PPSMU and PPSMA.

However, there have been studies about the agreement between parents and adolescents on social media use and content. For example, research shows that an open communication style between parents and adolescents can lead to more agreement about social media (Buijzen, Rozendaal, Moorman, & Tanis, 2008; Byrne & Lee, 2011). Also, several studies show that an open communication style results in less excessive internet use among adolescents (Clark, 2009; Van den Eijnden, Spijkerman, Vermulst, Van Rooij, & Engels, 2010). All these results indicate that when parents are more open towards their children about their social media use and attitude, it could result in more similar social media attitudes between parents and adolescents. However, the relationship between an open communication style and the agreement about social media seems to be stronger for girls than for boys (Buijzen et al., 2008). All these results are interesting, because this could mean that an open communication style leads to a more realistic perception of the parental social media use and attitude among adolescents, which in turn might influence their own social media attitude and use. This would mean that parents might have an influence on ASMU by using an open communication style. Since this specific influence of communication style has not yet been studied, we will take this into account as well.

Although the current study focuses on young adolescents aged 10 to 15, it is important to be aware of age as a moderator for parents' influence on ASMA. After all, research shows that parents tend to intervene more in the SNS use of their children when these children are younger (Top, 2016). Furthermore, there also seems to be an influence of gender in the way adolescents use social media: girls are more likely to use SNS than boys, whereas boys are more likely to play video games than girls (Lenhart, 2015).

Combining all the mentioned studies, our main research question will be: What is the influence of perceived parental social media use and attitude on early adolescents' social media use and attitude? In order to get a nuanced answer to this question, we will study the PPSMU and PPSMA, as well as the ASMU and ASMA. Based on the literature, we expect

PPSMU and PPSMA to have a small but significant influence on ASMU and AMSA, since adolescents aged 10 to 15 are still dependent on the parents, but are also influenced a lot by their peers (Aral & Walker, 2011). However, the influence of PPSMU and PPSMA on ASMU and ASMA will probably not be the same for everyone: we expect PPSMU, PPSMA, ASMU and ASMA to correspond more when parents use a more open communication style (Buijzen et al., 2008; Byrne & Lee, 2011). Because of this, we anticipate that the influence of the PPSMU and PPSMA on the ASMU and ASMA will be bigger when adolescents rate the parental communication style as being high than when they rate it as being low. Finally, we expect that PPSMU and PPSMA to have more influence on the ASMU and ASMA when the adolescent is younger, and that they will have more influence on girls' social media use and attitude than on boys' social media use and attitude.

Method

Participants

A convenience sample of (N=80), 52 primary school adolescents, 5 high school (VMBO) adolescents, 7 high school (HAVO) adolescents and 16 high school (VWO) adolescents (48.75% male, 50.00% female) aged 10 to 15 years (M = 12.28 years, SD = 1.50) participated in this study. The home situation among the adolescents was as follows: 3 adolescents had no siblings, 23 were the oldest child, 11 were the middle child, and 42 were the youngest child. Among the participants there was one adolescent who did not answer the questions about gender and home situation, which explains the missing 1.25% in these questions.

Study design

The main focus of this study was on the influence of perceived parental social media use (PPSMU) and perceived parental social media attitude (PPSMA) on adolescents' social media use (ASMU) and their social media attitude (ASMA). The research was quantitative and exploratory: a self-created survey was used, because, to our knowledge, this subject has not been studied before. The survey can be found in Appendix 1. The questions in this survey were based on the aforementioned studies, in order to increase the validity of the survey. The questions are elaborated on below.

Data were collected at a primary school, a high school and through acquaintances. The survey was either handed out to the adolescents at school or online via Smart Survey. In order to maintain the participants' anonymity and confidentiality, each survey was numbered, so there would be no direct links back to the participants' identities.

The children completed the questionnaire individually at school or at home. A number of 47 primary school adolescents completed the questionnaire at school. Because

these 47 primary school adolescents were in a supervised group, they were not able to communicate with each other about the questions in the survey. Consequently, they were inclined to answer the questions individually and more truthfully. Unfortunately, this direct control over the adolescents was not possible for the rest of the participants, who completed the questionnaire at home. This could decrease the reliability. However, there were audit questions to increase the validity and reliability.

The completion of the questionnaires by the adolescents was considered their consent to participate. Beforehand, either verbal or written instructions were given to the participants. They were able to complete the questionnaires at their own pace and to stop the participation at any time.

Measurements

ASMU was operationalized as the number of hours spent on social media every day. It was assessed using an 8-point interval scale ("How many hours a day do you use social media?": 1 '*0 minutes a day*' to 8 '*5 hours a day or more*'). However, since the amount of hours spent on social media would not give us much information about what exactly the participants are doing during this time, 7 items about the purpose of their social media use (ASMUpurpose) was included as well (e.g. "I use social media to keep in touch with my family" and "I use social media to share my life experiences with others", on a 9-point Likert scale 1 *Strongly agree* to 9 *Strongly disagree*). For ASMUpurpose, an exploratory factor analysis was conducted on items 7, 8, 9, 10, 11, 12 and 13. After removing item 12 the reliability was sufficient (α = .70). Furthermore, a question was added to find out how often adolescents check their social media, because this would give us more information about their social media use when combined with the aforementioned question about the number of hours spent on social media each day ("How often do you check social media each day?": 1 *Never* to 6 *More than 15 times a day*).

The ASMA was assessed by five items using a 9-point Likert scale (e.g. "Social media has a bad influence on me" and "Overall, I believe social media have a positive effect on my life": 1 *Strongly agree* to 9 *Strongly disagree*). For ASMA, an exploratory factor analysis was conducted on items 14, 17, 18 and the reversed item 15 (15n). However, the reliability was insufficient for these items together. After removing item 18 and 15n, the reliability of ASMA was acceptable (α = .69).

Since our research also involved how adolescents viewed the parents' social media use and attitude, questions about the PPSMU and PPSMA were involved in the study, too. For all of these questions, an extra answer option "I don't know" was added to each item, because the adolescents might not exactly know how their parents think about or use social

media. The PPSMU in terms of hours was assessed using an 8-point interval scale ("How many hours a day do your parents use social media?": 1 *0 minutes a day* to 8 *5 hours a day or more*). Moreover, to measure the purpose of parents social media use (PPSMUpurpose), the same 9-point Likert scale questions were added that were used for measuring ASMUpurpose (e.g. "My parents use social media to keep in touch with their family" and "My parents use their social media whenever they are bored": 1 *Strongly agree* to 9 *Strongly disagree*)). For PPSMUpurpose, an exploratory factor analysis was conducted on items 20, 21, 22, 23, 24, 25 and 26. After removing item 25, the reliability seemed sufficient (α = .75).

PPSMA was assessed by four items using 9-point Likert scales (e.g. "My parents spend too much time on social media" and "My parents should spend more time on other activities besides social media": 1 *Strongly agree* to 5 *Strongly disagree*). For PPSMA, an exploratory factor analysis was conducted for items 29, 30, 31, and the reversed item 28 (28n). Since the reliability appeared insufficient, item 28n was removed, which improved the reliability (α = .73).

To measure the openness of the communication style between the parents and adolescents, five items were used with 9-point Likert scales (e.g. "I know how my parents think about social media" and "My parents talk to me about the positive and negative consequences social media can have": 1 *Strongly agree* to 5 *Strongly disagree*). These five items were computed into one factor and the reliability of this factor was measured. The reliability appeared to be sufficient (α = .74), so we were able to add this factor to our further analyses.

Statistical analyses

The influence of PPSMA and PPSMU on ASMU. Different analyses have been used in order to answer the influence of PPSMU on ASMUhours and ASMUpurpose. A multiple regression was used to examine ASMU, in terms of hours, predicted by PPSMA and PPSMU, in terms of hours and purpose. The variable ASMUhours, item 5, was entered as dependent variable. The variables PPSMA, PPSMUhours and PPSMUpurpose were entered as independent variable. In addition, a standard multiple regression was used to measure ASMUpurpose predicted by PPSMA, PPSMUhours and PPSMUpurpose. The variable ASMUpurpose was entered as dependent variable. The variables PPSMA, PPSMUhours and PPSMUpurpose, were entered as independent variable. The exploratory factor analysis was used to identify interrelationships between the different purposes of using social media.

The influence of PPSMA and PPSMU on ASMA. In order to answer the influence of PPSMA on ASMA another standard multiple regression was conducted. The variable
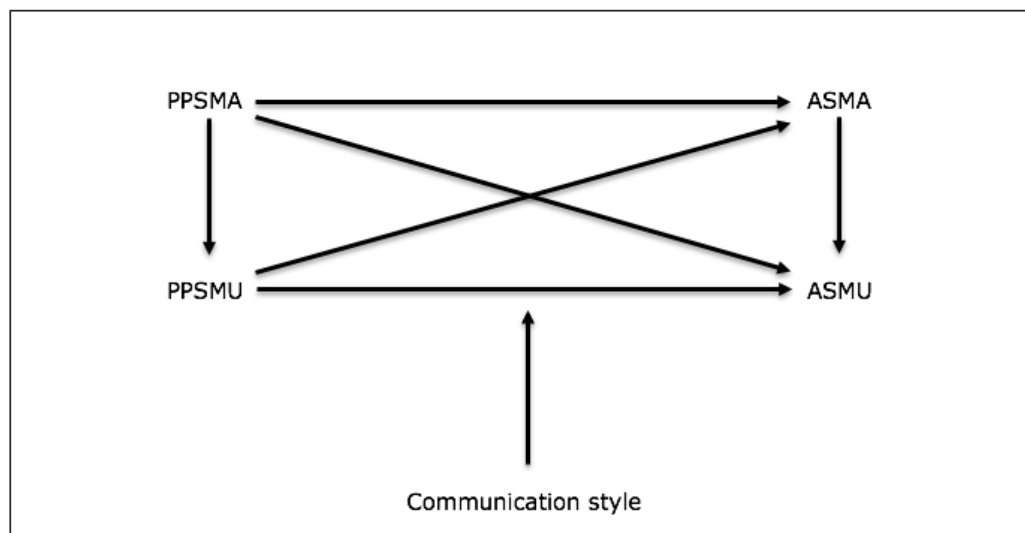
Figure 1. Measurement Model of Influences

ASMA was entered as dependent variable, whereas the variables PPSMA, PPSMUhours and PPSMUpurpose were entered as independent variables. The exploratory factor analysis was used to identify interrelationships between the different attitudes of social media.

       The influence of communication style on ASMU and ASMA. To answer if there was an influence of communication style on ASMU and ASMA, a hierarchical multiple regression was used. At first the variable ASMUhours was entered as dependent variable, whereas the variables PPSMA, PPSMUhours and PPSMUpurpose, were entered as independent variable at Step 1. The variable communication style was entered as independent variable at Step 2. The same hierarchical multiple regression was used on dependent variables ASMUpurpose and ASMA.

       The hypotheses will be accepted if the results of the simple and multiple regressions are significant. The influence of the PPSMU and PPSMA will be regarded as significant when $p < .05$.

Results

Descriptive statistics

       The frequency, percentage, valid percentage, and cumulative percentage of gender, home situation and educational level are reported in Table 1. These statistics show that gender was nearly equal in our sample (48.8% male, 50.0% female, 0.2% missing). Most participants were still in primary school (65%), which explains the low average age (M = 12.27, SD = 1.5). With a percentage of 52.5%, more than half of the participants were the youngest at home (3.8% was only child, 28.7% were the oldest child and 13.9% was a

middle child). The descriptive statistics of the items from the questionnaire are reported in Tables 2, 3 and 4 in Appendix 2.

Table 1

Descriptive Statistics 'Gender, Home Situation and Level of Education'

	Frequency	Percent	Valid Percent	Cumulative Percent
Gender				
Boy	39	48.8	49.4	49.4
Girl	40	50.0	50.6	100.0
Home situation				
Only child	3	3.8	3.8	3.8
Oldest child	23	28.7	29.1	32.9
Middle child, or one of them	11	13.8	13.9	46.8
Youngest child	42	52.5	53.2	100.0
Level of education				
VMBO; year 1-3	5	6.3	6.3	6.3
HAVO; year 1-3	7	8.8	8.8	15.0
VWO; year 1-3	16	20.0	20.0	35.0
Primary school; year 7-8	52	65.0	65.0	100.0
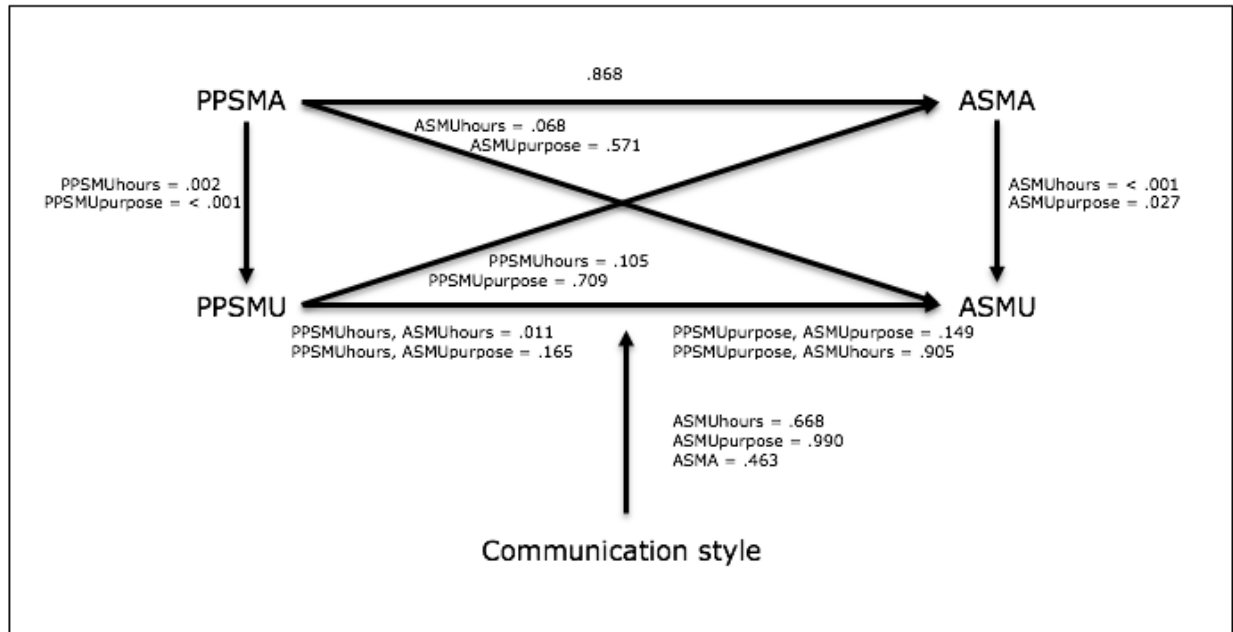
Note. PPSMUhours = perceived parental social media use in terms of hours; PPSMUpurpose = perceived parental social media use in terms of purpose; PPSMA = perceived parental social media attitude; ASMUhours = adolescents social media use in terms of hours; ASMUpurpose = adolescents social media use in terms of purpose; ASMA = adolescents social media attitude

Figure 2. Measurement Model of Significant Influences.

ASMA and ASMU

The results of the analyses mentioned hereafter are displayed in figure 2. A simple regression showed that ASMUhours can be predicted by ASMA, $F(1, 78) = 23.414$, $\Delta R^2 = .23$, $b = .48$, $t = 4.83$, $p < .001$. Furthermore, results show that ASMA can predict ASMUpurpose, $F(1, 78) = 5.072$, $\Delta R^2 = .06$, $b = .24$, $t = 2.25$, $p = .027$. This shows that ASMA can significantly predict ASMU. So, adolescents who tend to score high on ASMA, thus have a more positive attitude towards social media, tend to spend more time on social media.

PPSMA and PPSMU

A simple regression showed that the influence of PPSMA on PPSMUhours was significant, $F(1, 57) = 10.59$, $\Delta R^2 = .16$, $b = .4$, $t = 3.25$, $p = .002$. Additionally, another simple regression showed that PPSMA had a significant influence on PPSMUpurpose as well, $F(1, 72) = 15.93$, $\Delta R^2 = .18$, $b = .43$, $t = 3.99$, $p < .001$. This suggests that there was a significant influence of PPSMA on PPSMU. This means that parents who tend to score high

on PPSMA, thus have a more positive attitude towards social media, tend to spend more time on social media.

The influence of PPSMA and PPSMU on ASMA

Several simple regressions were conducted, showing that ASMA could not significantly be predicted by PPSMA, nor by PPSMUhours or PPSMUpurpose. Furthermore, the variables PPSMA, PPSMUhours and PPSMUpurpose were all used together in a multiple regression analysis, to see whether the combination of these variables could predict ASMA. However, the multiple regression analysis showed that ASMA could also not be significantly predicted by PPSMA, PPSMUhours and PPSMUpurpose used together.

The influence of PPSMA and PPSMU on ASMU

Two simple regression analyses showed that ASMUhours could not significantly be predicted by PPSMA, nor by PPSMUpurpose either. However, the results did show that ASMUhours could be significantly predicted by PPSMUhours, $F(1, 60) = 6.93$, $\Delta R^2 = .10$, $b = .32$, $t = 2.63$, $p = .011$. Several simple regressions were conducted to examine the predictors of ASMUpurpose as well. However, neither PPSMA, PPSMUhours, nor PPSMUpurpose appeared to be significant predictors of ASMUpurpose.

In order to measure the possibility of the influence of PPSMA, PPSMUhours and PPSMUpurpose on ASMU, two multiple regression analyses were conducted. The first multiple regression analysis showed that the variables together were a significant predictor of ASMUhours, $F(3, 55) = 6.01$, $\Delta R^2 = .25$, $p = .001$. However, the second analysis resulted in an insignificant influence of the variables together on ASMUpurpose.

The influence of gender and age

A multiple regression analysis was conducted to measure the influence of gender on ASMUhours. In model 1, PPSMA, PPSMUhours and PPSMUpurpose were used together, and gender was added in model 2, in order to find out what the extra explained variance was for gender. $\Delta R^2(\text{model1}) = .25$ was significant ($p = .29$) and relevant ($\Delta R^2 = .25 > .05$). $\Delta R^2(\text{model2}) = .02$, which was insignificant and irrelevant.

Moreover, a multiple regression analysis was conducted to measure the influence of age on ASMUhours. So, in this case, age was added in model 2, in order to discover what the extra explained variance was for age. $\Delta R^2(\text{model1}) = .25$ was significant ($p = .29$) and relevant ($\Delta R^2 = .25 > .05$). $\Delta R^2(\text{model2}) = .13$, which was significant ($p = .002$) and relevant ($\Delta R^2 = .13 < .05$).

The influence of communication style

A multiple regression analysis was conducted to measure the influence of communication on ASMA. In model 1, PPSMA, PPSMUhours and PPSMUpurpose were used

together, and communication style was added in model 2, in order to find out what the extra explained variance was for communication style. ΔR^2(model1) = .07 was insignificant, but it was relevant (ΔR^2 = .07 > .05). ΔR^2(model2) < .001, which was both insignificant and irrelevant.

Furthermore, the influence of communication on ASMUhours was measured. ΔR^2(model1) = .25 was significant (p = .001) and relevant (ΔR^2 = .25 > .05). However, ΔR^2(model2) = .003 was neither significant nor relevant.

Finally, the influence on ASMUpurpose was measured. ΔR^2(model1) = .11 was not significant, but it was relevant (ΔR^2 = .11 > .05). ΔR^2(model2) < .001 was insignificant and irrelevant.

Discussion

The current study tested whether adolescents' social media use and attitude could be predicted by PPSMA and PPSMU, and whether this would be influenced by the openness of the communication style between the parents and adolescents. We expected that PPSMU and PPSMA would have a small but significant influence on ASMU and ASMA, and that this influence would be bigger when parents used a more open communication style. Additionally, we expected PPSMU and PPSMA to have more influence on ASMU and ASMA when the adolescents were younger and when they were girls. Overall, the results of the study provided little support for our hypotheses.

First of all, we tested the Theory of Planned Behaviour, which, in this case, suggested that a person's attitude towards social media influences this person's social media use (Azjen, 1991; Baker & White, 2010). According to our results, ASMA could significantly be predicted by ASMU, and PPSMA could significantly be predicted by PPSMU. This confirms the Theory of Planned Behaviour.

As for the rest of the model, there were only two more significant predictors of ASMU and ASMA. First, PPSMUhours significantly predicted ASMUhours. Since the participants in our study were young (M=12.27) and most of them (65.0%) were still in primary school, it is possible that the parents of these adolescents still had several rules about the amount of hours the adolescents were allowed to use social media. After all, parents tend to intervene in the social media use of their adolescents more often when these adolescents are younger (Top, 2016). This would confirm our expectation that parents have more influence on the social media use of adolescents when these adolescents are younger. Second, even though PPSMA and PPSMUpurpose alone did not significantly predict ASMUhours, PPSMA, PPSMUhours and PPSMUpurpose used together significantly predicted ASMUhours. This suggests that adolescents' time spent on social media can be influenced by what they

directly perceive from their parents. Considering the Theory of Planned Behaviour, it is possible that PPSMA and PPSMUpurpose might be influencing ASMU indirectly, through PPSMUhours (Azjen, 1991; Baker & White, 2010). So, the ASMU is influenced mainly by what is directly perceivable for the adolescents. However, the results might be different when parental reports of their own social media use and attitude are taken into account. Nonetheless, in this case, one would expect PPSMUhours to have a significant influence on ASMA as well, since ASMU can be predicted by ASMA. Strangely, ASMA could not be predicted by PPSMUhours, so further research is recommended.

However, the rest of the researched model only provided insignificant results. This might be because the present data was only based on adolescents' reports and did not include the parental reports. Several studies found discrepancies between parents and adolescents' and found that they tend to have different perceptions of the same concept (Buijzen, Rozendaal, Moorman, & Tanis, 2008). Knowing this, it would be wise to keep in mind that the adolescents' perception of ASMU, ASMA, PPSMA, PPSMU and communication style may differ from the parents' perception on these concepts. Based on these results we recommend future research on these topics to also take parents' perception into account.

Moreover, in this study only adolescents aged 10 to 15 completed the survey. However, their age might have negatively influenced the results of the research, especially considering the questions the adolescents had to fill in about their parents. Many adolescents answered "I don't know" on these questions, which suggests that they did not understand these questions or that they did not have a clear perspective on the parental social media use and attitude. This theory can be confirmed by the significant influence of age we found. The older the adolescents were, the more their own social media use was influenced by PPSMA and PPSMU. This suggests that when adolescents are older, they might understand their parents better and the perceived parental influence is bigger. Because of this, future research on the influence of PPSMA and PPSMU on ASMA and ASMU should look into adolescents aged 15 to 18, since older adolescents might have a more realistic view on the social media attitude and use of their parents than younger adolescents.

Another reason our results were not significant could be that peers have a big influence on ASMU (Baker & White, 2010). As mentioned before, the Theory of Planned Behaviour states that attitude is not the only construct that determines the intention to show certain behaviour; subjective norm and perceived behavioural control also influence this intention. First, the influence of subjective norm suggests that adolescents are influenced by their peers' social media use and attitude. Thus, future research should not just look at parents, but at adolescents' peers as well. Second, the influence of perceived

behavioural control would suggest that adolescents need to feel some kind of control over their behaviour in order to show this behaviour. However, adolescents aged 10 to 15 might not have much control over their behaviour yet, since young adolescents have more constraints in their internet use than older adolescents (Wang, Bianchi, & Raley, 2005). So, future research should look at the perceived behavioural control of adolescents, but also, as mentioned earlier, focus on older adolescents.

Finally, gender did not have a significant influence on the relationship between PPSMA, PPSMU and ASMUhours. This contradicts the aforementioned studies that suggested that the parental influence was bigger for girls than for boys (Buijzen et al., 2008). This can be explained by the fact that gaming was included in the questionnaire. As mentioned before, the main difference between boys and girls in social media use can be found in what they do with social media (Lenhart, 2015). However, we only took into account the amount of time spent on social media and the reasons why they used their social media that way. Also, the differences grow bigger as adolescents grow older. This suggests that the fact that the participants were young might have affected the results for gender as well.

So, in conclusion, the present research demonstrated support for the application of the Theory of Planned Behaviour in the context of social media use by adolescents: Adolescents' social media use can be predicted by their social media attitude. Furthermore, the amount of time spent on social media each day by the adolescents can also be predicted by the amount of time they think their parents spend on social media. However, neither the parental attitude towards social media nor the parental social media use in terms of purpose significantly influenced the adolescents' social media attitude or use. Based on the results of this preliminary study, future research should continue to look into the Theory of Planned Behaviour by studying older adolescents and by studying the parents directly as well. This could improve our current understanding of the parental influence on adolescents' social media use and attitude, which might help parents in teaching their adolescent children to cope with social media.

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Appendix 1 - Survey

Vragenlijst social media gebruik en attitude van ouders en adolescenten
Inleiding
Hartelijk dank voor je deelname! Wij zijn Tessa Gutker, Michelle Rijkers en Lisanne Mak, studenten Pedagogische Wetenschappen aan de Universiteit Utrecht. Voor onze studie doen wij een onderzoek naar jongeren (10 tot 15 jaar) hun social media gebruiken en hoe zij en hun ouders hierover denken. Onder "social media" verstaan wij alle online forums, zoals consumentenwebsites, chatrooms, blogs en "social network sites" (bijvoorbeeld Facebook, Twitter en WhatsApp).
We willen je vragen om deze lijst naar eigen inzicht en zo waarheidsgetrouw mogelijk in te vullen. We zullen zo zorgvuldig mogelijk met jouw antwoorden omgaan. Dat betekent dat de antwoorden alleen voor onze ogen bestemd zijn. Naast ons zal hoogstens, en alleen indien nodig, de docent nog antwoorden in kunnen zien. We zullen de vragenlijsten nummeren, zodat jouw identiteit verder anoniem kan blijven.

Tessa Gutker, Lisanne Mak en Michelle Rijkers

Algemene vragen
Vraag 1: Wat is je leeftijd?   _____

Vraag 2: Wat is je geslacht?
o Man
o Vrouw

Vraag 3: Hoe ziet jouw thuissituatie eruit?
o Ik ben enig kind.
o Ik ben het oudste kind.
o Ik ben het middelste kind, of één van de middelste kinderen.
o Ik ben het jongste kind.

Vraag 4: Wat voor opleiding doe je?
o VMBO; klas 1, 2 of 3
o HAVO; klas 1, 2 of 3
o VWO; klas 1, 2 of 3
o Basisschool; groep 7 of 8

Vragen over de adolescent
Vraag 5: Hoeveel uur per dag besteed je ongeveer aan social media (alle digitale media, zoals blogs, vlogs, WhatsApp, Facebook, Twitter en online games)?
o 0 minuten per dag
o 30 minuten per dag
o 1 uur per dag
o 2 uur per dag
o 3 uur per dag of meer
o 4 uur per dag
o 5 uur per dag
o Meer dag 5 uur per dag

Vraag 6: Hoe vaak per dag bekijk je je social media?
o Nooit
o 1 keer per dag
o 2 tot 4 keer per dag
o 5 tot 10 keer per dag
o 10 tot 15 keer per dag
o Meer dan 15 keer per dag

Vul voor de volgende dertien stellingen in in hoeverre deze op jou van toepassing zijn, met 1 – helemaal niet en 9 – helemaal wel.

Vraag 7: Ik gebruik social media om contact te houden met mijn familie.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 8: Ik gebruik social media om contact te houden met mijn vrienden.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 9: Ik gebruik social media om op de hoogte te blijven van alles wat er gebeurt.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 10: Ik gebruik social media om mijn levenservaringen te delen met anderen.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 11: Ik gebruik social media om informatie op te zoeken voor bepaalde vragen (voor bijvoorbeeld huiswerk).
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 12: Ik gebruik social media wanneer ik mij verveel.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 13: Ik gebruik social media om nieuwe vrienden te maken.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 14: Ik besteed te veel tijd aan social media.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 15: Ik vind dat social media over het algemeen een positief effect hebben op mijn leven.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 16: Ik check social media voordat ik ga slapen.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 17: Ik zou meer tijd moeten besteden aan andere activiteiten dan aan social media.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vraag 18: Social media hebben een slechte invloed op mijn leven.
 o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Vragen over de ouders

Vraag 19: Hoeveel uur per dag besteden jouw ouders ongeveer aan social media?
o 0 minuten per dag
o 30 minuten per dag
o 1 uur per dag
o 2 uur per dag
o 3 uur per dag of meer
o 4 uur per dag
o 5 uur per dag
o Meer dag 5 uur per dag
o Dat weet ik niet

Vul voor de volgende twaalf stellingen in in hoeverre jij denkt dat deze op jouw ouders van toepassing zijn, met 1 – helemaal niet, 9 – helemaal wel, en X – ik weet het niet.

Vraag 20: Mijn ouders gebruiken social media om contact te houden met hun familie.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 21: Mijn ouders gebruiken social media om contact te houden met hun vrienden.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 22: Mijn ouders gebruiken social media om op de hoogte te blijven van alles wat er gebeurt.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 23: Mijn ouders gebruiken social media om mijn levenservaringen te delen met anderen.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 24: Mijn ouders gebruiken social media om informatie op te zoeken voor bepaalde vragen (voor bijvoorbeeld werk).
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 25: Mijn ouders gebruiken social media wanneer zij zich vervelen.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 26: Mijn ouders gebruiken social media om nieuwe vrienden te maken.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 27: Mijn ouders nemen hun smartphone of laptop mee naar hun slaapkamer.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 28: Ik denk dat social media over het algemeen een positief effect hebben op het leven van mijn ouders.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 29: Mijn ouders zouden meer tijd moeten besteden aan andere dingen dan aan social media.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

Vraag 30: Social media hebben een slechte invloed op het leven van mijn ouders.
o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9 | o X

<u>Vraag 31</u>: Mijn ouders besteden te veel tijd aan social media.
  o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9   │ o X

Overige vragen
Vul voor de volgende 5 stellingen in in hoeverre jij denkt dat deze op jou en jouw ouders van toepassing zijn, met 1 – helemaal niet, en 9 – helemaal wel.
<u>Vraag 32</u>: Mijn ouders praten met mij over social media.
  o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

<u>Vraag 33</u>: Ik weet goed hoe mijn ouders over social media denken.
  o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

<u>Vraag 34</u>: Mijn ouders praten regelmatig met mij over de positieve en negatieve gevolgen die social media kunnen hebben.
  o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

<u>Vraag 35</u>: Ik ga naar mijn ouders toe als ik vragen heb over social media.
  o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

<u>Vraag 36</u>: Ik weet goed hoe mijn ouders over mijn social media gebruik denken.
  o 1   o 2   o 3   o 4   o 5   o 6   o 7   o 8   o 9

Appendix 2 - Descriptive statistics of items from questionnaire

Table 2

Descriptive Statistics Adolescents Age, ASMUhours, ASMUpurpose and ASMA

	N	Minimum	Maximum	Mean	Std. Deviation
Age	80	10	15	12.27	1.50
ASMUhours	80	30	310	158.25	78.77
ASMUpurpose					
Item7	80	1	9	5.54	2.29
Item8	80	1	9	7.04	2.20
Item9	80	1	9	5.99	2.25
Item10	80	1	9	4.25	2.47
Item11	79	1	9	5.11	2.39
Item13	79	1	9	2.91	2.40
ASMA					
Item14	80	1	9	5.26	2.48
Item15new	79	1	9	4.34	2.24
Item16	80	1	9	5.13	3.05
Item17	80	1	9	5.17	2.58
Item18	80	1	7	2.36	1.66

Note. ASMUhours = adolescents' social media use in terms of hours. ASMUpurpose = adolescents' social media use in terms of purpose. ASMA = adolescents' social media attitude.

Table 3

Descriptive Statistics Perceived Parental Information, PPSMUhours, PPSMUpurpose, PPSMA

	N	Minimum	Maximum	Mean	Std. Deviation
PPSMUhours	62	0	300	118.55	67.94
PPSMUpurpose					
Item20	67	3	9	7.16	1.68
Item21	68	3	9	6.87	1.67
Item22	66	1	9	6.30	2.48
Item23	65	1	9	3.48	2.44
Item24	60	1	9	5.80	2.42
Item26	58	1	7	1.83	1.37
PPSMA					
Item28new	53	1	9	4.55	2.08
Item29	69	1	9	3.36	2.35
Item30	67	1	7	1.97	1.46
Item31	70	1	9	3.26	2.06

Note. PPSMUhours = perceived parental social media use in terms of hours. PPSMUpurpose = perceived parental social media use in terms of purpose. PPSMA = perceived parental social media attitude.

Table 4

Descriptive Statistics Perceived Communication Style between Adolescents and Parents

	N	Minimum	Maximum	Mean	Std. Deviation
Question32	79	1	9	3.66	2.41
Question33	80	1	9	4.78	2.83
Question34	80	1	9	3.91	2.74
Question35	80	1	9	3.78	2.91
Question36	80	1	9	5.23	2.78