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To share or not to share? Adolescents' self-disclosure about peer relationships on Facebook: An application of the Prototype Willingness Model

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Abstract

Adolescents are the most fervent users of social network sites, hereby disclosing a lot of personal information. In this study, we used the Prototype Willingness Model to examine whether the sharing of personal information about peer relationships follows a rational and intended pathway, or a more impulsive unconscious decision-making pathway. Data from a sample of 1314 adolescents ($M = 16.68$, $SD = 1.16$), who completed a written survey, were analyzed using Structural Equation Modelling in Mplus, to assess the predictive power of the reasoned pathway (consisting of the attitude and subjective norm of friends, parents and teachers), and the social-reaction pathway (consisting of the prototype favorability and prototype similarity). Results showed the unique importance of the reasoned pathway in predicting adolescents' disclosing behavior, with attitude as the strongest predictor. Also, subjective norm of the peer and parents showed a positive relationship with intention to disclose personal information about peer relationships. Contrary to our expectations, subjective norm of the parents did not influence the intention to self-disclose. Nevertheless, the social-reaction pathway (prototype similarity and prototype favorability) also significantly contributed to the prediction of the disclosing behavior. In sum, adolescents' self-disclosure on social network sites are mostly the result of a rational, deliberated process, but can be influenced by a more emotional spontaneous response to a given online situation. Therefore, policy makers, practitioners or parents might stress the possible opportunities and risks that disclosing personal information can entail, so adolescents themselves develop a more critical attitude towards sharing their information online.

Keywords

Prototype Willingness Model; Adolescents; Social network sites; Self-disclosure.

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1. Introduction

Social network sites (SNS) have become a large, growing phenomenon on the Internet over the past several years, and it seems as they are here to stay. Millions of people across the globe have joined different SNS, with adolescents as the leading, most ardent users (De Souza & Dick, 2009; Rideout, Foehr, & Roberts, 2010). Since its founding in February 2004, Facebook, which has over 829 million daily active users (Facebook Inc., 2014), stands at the forefront of the social media revolution. It has become an imperative part of many users' daily lives, crossing the barriers between the offline and online world (Chang & Heo, 2014).

1.1. Self-disclosure

SNS revolve around users' self-disclosures and the connections they make with other users. Ellison and boyd (2013) discerned three specific aspects of a social network site as a networked communication platform: "Firstly, participants *have uniquely identifiable profiles* that consist of user-supplied content, content provided by other users, and/or system-provided data. Secondly, they can *publicly articulate connections* that can be viewed and traversed by others. Thirdly, participants can consume, produce, and/or interact with *streams of user generated content* provided by their connections on the site" (Ellison & boyd, 2013, p. 158). Thus, SNS are only as good as the content their users share (Hilsen & Helvik, 2014). With its feature to connect to people, SNS encourage users to reveal a great amount of contact and personal information (e.g., school, location, address), part of which is obligatory (e.g., first and last name, email) (Lewis, Kaufman, & Christakis, 2008). Moreover, sharing an extended amount of information about the self (such as thoughts and feelings) is mandatory in order to reap the benefits derived from SNS (Ellison, Vitak, Steinfield, Gray, & Lampe, 2011). When users disclose personal information about their feelings and activities, it augments the signals given to others about the self. This could help establish common ground with online contacts

and induce peer feedback (Lampe, Ellison, & Steinfield, 2007). Consequently, users might disclose more personal information than they originally intended (Taddicken & Jers, 2011).

In general, self-disclosure refers to the process of making the self known to others (Jourard & Lasakow, 1958, p. 91). In the context of SNS, self-disclosure can be redefined as the amount of information shared on a user's profile (e.g., personal data such as contact details) as well as in the communication process with others (e.g., posting a status update) (Krasnova & Veltri, 2011). Much of this revealed information can be visible to a vast audience, depending on a user's privacy settings. This enables the observation of another user without direct communication. Therefore, the decision about whom to accept as a friend on SNS is a crucial component of the users' ability to have control over their personal information (Ellison et al., 2011). Nevertheless, even though a variety of privacy features is available, many adolescents prefer the standard Facebook settings which facilitate that wall posts, comments, photographs, and status updates are readily available to all members of the users' network (Carr, Schrok, & Dauterman, 2012).

1.2. Adolescents' Self-disclosure

SNS may play an important role during adolescence, as young people may use SNS to attain important developmental goals, such as identity construction and the formation and maintenance of friendships and romantic relationships (Altman & Taylor, 1973; Buhrmester & Furman, 1987; Ellison et al., 2011; Taddicken & Jers, 2011; Taddicken, 2014). Before the emergence of SNS, Collins and Miller (1994) found that adolescents who are prone to self-disclosure, consistently feel less lonely and have higher levels of self-esteem and well-being than their peers who are unable to self-disclose. This has also been confirmed to be accurate in the online world (Burke, Marlow, & Lento, 2010; Ko & Kuo, 2009). However, teens are sharing more information about themselves on SNS than they did in the past (Madden et al.,

2013). Therefore, scholars are expressing several concerns about the use of SNS, and in particular about the disclosure of personal information by adolescents (Ellison et al., 2011). Especially, as personal information and sometimes intimate disclosures can be misused in the context of cyberbullying (Veenstra, Vandebosch, & Walrave, 2012) or have an adverse impact on their online reputations and future college and job opportunities (Van Ouytsel, Walrave, & Ponnet, 2014).

In addition, adolescents show a higher tendency to engage in risk-taking behavior (Albert & Steinberg, 2011), and seem more prone to self-disclose in SNS than adults. Moreover, adolescents' decision making processes are more stimulated by short-term rewards than long-term perspectives, and they are less inclined to evaluate potential risks (Albert & Steinberg, 2011; Taddicken & Jers, 2011). Also, the presence of peers on SNS augments the allure of immediate rewards, and a reduced focus on the potential costs (Albert & Steinberg, 2011). Moreover, by sharing personal information online, adolescents might instantly wish to achieve a more positive and pronounced self-presentation, hereby transgressing the traditional social norms of privacy (Jordán-Conde, Mennecke, & Townsend, 2014).

Until today, most studies directed on the self-disclosure of adolescents on SNS, adopted a more empirical and not a theoretical approach. In most studies, a broad, general measure was used to investigate the concept of self-disclosure (Chen & Sharma, 2013; Christofides, Muise, & Desmarais, 2011; Krasnova, Spiekermann, Koroleva, & Hildebrand, 2010; Sheldon, 2013; Wang & Stefanone, 2013). More particularly, previous studies focused on the disclosure of contact information in a SNS user's online profile (e.g., day of birth, telephone number, address) (Gross & Acquisti, 2005; Liu, Ang, & Lwin, 2013; Taddicken, 2014). When the timeline was launched in 2011, Facebook became organized around a stream of constantly updated content, minimizing the role of the individual user's profile (Ellison & Boyd, 2013; Wilson, Gosling, & Graham, 2012). The importance of profile information

decreased, and the ongoing disclosure through status updates, comments and wall posts became the most prominent form of communication. To the best of our knowledge, no previous studies have investigated how much adolescents disclose about specific topics that are central in adolescents' lives. In this study, we will focus on the disclosure about peer relationships, as relationships and the social environment in which they develop, are key in adolescents' identity formation process (Brechtwald & Prinstein, 2011; Brown, 1999).

More specifically, the aim is to examine the predictors of adolescents' self-disclosure behavior on Facebook, focusing on the public ongoing communication about peer relationships through status updates, comments and/or wall posts. By using a theoretical basis for this research, we can establish a clearer picture of the relative importance of individual and social factors that can influence their self-disclosure. It can be interesting to closely examine adolescents' self-disclosure on Facebook for several reasons: Practitioners may gain insight into this population most at-risk for potentially damaging self-disclosing behavior on SNS. Moreover, based on previous research on teens' offline self-disclosure, the subject of peer relationships has been perceived as a topic of great importance during adolescence (Magno, 2009; Miller, Berg, & Archer, 1983; West & Zingle, 1969). In addition, Facebook is highly relevant to examine, because of the amount of self-disclosure that is often displayed through this medium (Hollenbaugh & Ferris, 2014).

1.3. Prototype Willingness Model

Given the rapid development of SNS and their important role in adolescents' exploration of identity, sexuality, and intimacy, a risk-based approach to online self-disclosure can be expanded by including adolescents' social and developmental context (Reich, Subrahmanyam, & Espinoza, 2012). To gain a deeper understanding of the possible factors influencing adolescents' disclosing behavior, the present study utilizes the Prototype

The PWM framework consists of two pathways that predict risk behavior; a heuristic social reaction path and a reasoned path (see Figure 1). In the reasoned path, attitudes and subjective norms towards the behavior are antecedents of decisions or behaviors that involve deliberation through intention (Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008), as outlined in the Theory of Reasoned Action (Fishbein & Ajzen, 1975). The theory states that attitudes towards a behavior are considered to be overall favorable or unfavorable evaluations of the behavior in question. Subjective norms are perceptions of social pressures to perform or not perform a behavior (Ajzen, 1991, p. 188). Both are stated as direct predictors of an individual's intention to perform a certain behavior (Fishbein & Ajzen, 1975). It has been argued that when adolescents age, the relationship between attitude and behavior becomes stronger, because they are able to reach a higher level of reasoning (Kohlberg & Candee, 1984; Rholes & Bailey, 1983, p. 104). When individuals develop through adolescence, this process results in a more robust motivation to establish consistency between attitudes and behaviors (Kohlberg & Candee, 1984). Moreover, Youn (2005) found that if older adolescents perceive the benefits to outnumber the costs related to self-disclosure, they are more inclined to provide personal information online. Accordingly, in the present study, we hypothesize (H):

There is a positive relationship between adolescents' attitude towards sharing personal information about peer relationships and their intention to share personal information about peer relationships on Facebook (H1).

Children establish a normative framework in their lives through significant others (e.g., friends, family, teachers) (Albert & Steinberg, 2011). During adolescence, however, teens develop a more autonomous sense of identity by becoming more independent of their parents, while still not being ready to be completely emotionally self-reliant (Ponnet, Van Leeuwen, &

Wouters, 2014). Adolescents try to ‘fill the void’ by turning to their peers (Bornstein, Vandell, & Rook, 2010). Thus, peer influence increases, and the adolescent becomes more open to peer feedback and support. Peer relationships intensify and their own identity develops through this process (Brown, 1999). Adolescents may also engage in more risky behavior than adults do, considering they are much more responsive to the influence of their peers, who are equally driven to risk-behavior (Gardner & Steinberg, 2005). Research also supports the normative influence that peers have in the online environment. Baumgartner, Valkenburg and Peter (2011) found that adolescents’ engagement in different forms of online risky sexual behavior, was influenced by peer norms. Livingstone (2008) indicated that peer norms influence young people’s activities on SNS, and Lewis, Kaufman and Christakis (2008) stated that students are more likely to have a private profile if their friends and roommates also have a restricted profile. In addition, Heirman and Walrave (2012) concluded that adolescents’ cyberbullying behavior is influenced by the opinion of significant others. We state:

The more positive the subjective norm of the friends, the higher their intention to share personal information about peer relationships on Facebook (H2a).

Next to the peer relations, the parent-child relationship is also recognized as a central element in adolescence (Brown & Bakken, 2011). Although adolescents slowly become more independent, they are still in a state of checks and balances with all the significant others in their lives, like their parents and teachers (Williams & Merten, 2008). Previous research has shown that these significant others (Blanton, Gibbons, Gerrard, Conger, & Smith, 1997; Brown, Mounts, Lamborn, & Steinberg, 1993) are perceived by adolescents to have a negative subjective norm towards their risk-behavior. Consequently, we predict:

The more negative the subjective norm of the parents (H2b) and teachers (H2c), the lower their intention to share personal information about peer relationships on Facebook.

Furthermore, the PWM states that intention is pronounced as the most immediate predictor of an individual's behavior. It encapsulates a person's motivation to act in a particular manner, and how much time or effort he or she is prepared to extend in order to perform the behavior (Ajzen, 1991, p. 199). Intention is stated to be the strongest predictor of actual behavior, but only when the behaviour is volitional (Ajzen, 1991). In the online context, the relationship between intention and risk behavior has been observed in previous research (Heirman & Walrave, 2012; Walrave, Heirman, & Hallam, 2013). We propose the following hypothesis (H):

Intention is a positive predictor of sharing personal information about peer relationships on Facebook (H3).

Besides the reasoned pathway, the PWM includes a social pathway that refers to decisions that are not necessarily planned or thought out. The three main components of this pathway are: First, the positive or negative images individuals have of the prototype of a person performing a (risk) behavior. Second, the prototype similarity, and third, an individuals' willingness to perform a behavior. The model assumes that risky behaviors are mostly conducted publicly and socially (Gibbons, Gerrard, & Lane, 2003). Therefore, adolescents have a clear image of the specific type of person engaging in the particular behavior, also called prototype (Gibbons & Gerrard, 1995). Because adolescents are highly image-conscious, these prototypes can have a significant impact upon their own behavior. According to the PWM, they evaluate the prototype of a certain behavior and compare their own image with that prototype. If the prototype perception is positively evaluated and the

similarity with the prototype is high, this will result in a greater openness, or willingness, to engage in the risk behavior (Gibbons & Gerrard, 1995, p. 306). Previous research has established a significant relationship between adolescents' evaluation of the prototype, prototype similarity and willingness to perform several risk behaviors (e.g. smoking, substance use) Gibbons et al., 2004). In this study, the 'image' adolescents have of a typical Facebook user who discloses personal information about their peer relationships may influence their willingness to disclose personal information. In other words, we expect that:

Prototype favorability (H4) and Prototype similarity (H5) have a positive relationship with willingness to disclose personal information about peer relationships on Facebook.

According to the model, this reactive pathway also includes factors that are related to intention as well, namely attitude and subjective norm. Generally, a positive attitude will not only have a positive effect on intention, but will also be positively associated with more willingness to engage in the risk behavior (Gibbons et al., 1998).

Attitude towards sharing personal information about peer relationships on Facebook is positively related to willingness to share personal information about peer relationships on Facebook (H6).

In addition, subjective norm will also influence willingness to disclose personal information about peer relationships on SNS. Specifically, the perception that significant others (e.g., peers) may engage in the behavior themselves, and would not disapprove of involvement in the behavior, is positively associated with the willingness to engage in the risk behavior (Gibbons et al., 1998). We predict:

The more positive the subjective norms of the friends, the higher their willingness to share personal information about peer relationships on Facebook (H7a).

Similarly, when one perceives that significant others (e.g., parents or teachers) would disapprove or wouldn't engage in the behavior themselves, this will have a negative impact on an individual's willingness.

The more negative the subjective norms of the parents (H7b) and teachers (H7c), the lower their willingness to share personal information about peer relationships on Facebook.

The PWM states that willingness does not involve planning or consideration of a behavior or its consequences, and thus is independent from intention (Gibbons et al., 1998; Ravis et al., 2006). Although an individual may not have the intention to engage in a certain risky behavior, there might be circumstances under which they are willing to take the risk (Gerrard et al., 2008; Gerrard, Gibbons, Stock, Lune, & Cleveland, 2005; Hukkelberg & Dykstra, 2009). Once adolescents find themselves in situations where risky behaviors are facilitated, they don't make a reasoned decision, but rather let their willingness determine their behavior (Gerrard et al., 2008). Thus, the two constructs intention and willingness are interconnected. We hypothesize:

Willingness is positively associated with the intention to share personal information about peer relationships on Facebook (H8) and sharing personal information about peer relationships on Facebook (H9).

In sum, some adolescents make a deliberate comparison with the image they have of a person their age performing a specific behavior, because they are considering engaging in this behavior. Others find themselves in a certain situation where the image is more spontaneously compared, as a result of an opportunity to perform that behavior derived from that situation. Consequently, two pathways from prototype similarity and favorability to behavior can be discerned: one through intention, the other through willingness (Gibbons & Gerrard, 1995). For young adolescents more than for older adolescents and young adults, risk images frequently represent goal states in some way. They have higher tendencies to socially compare themselves, so the image may be more impactful during that younger age period, especially regarding risk behavior (Gibbons & Gerrard, 1995).

2. Materials and methods

2.1. Participants

As part of a large-scale study about adolescents' Facebook use, a sample of 1314 secondary education students was selected from 103 classes dispersed over 11 schools in February 2014. The study was conducted among adolescents in the last years of secondary education. A non-probability sampling method was used to recruit the respondents. An introductory letter and informational flyer were sent to 18 schools through personal contacts of the research team. A positive response to cooperate on this study was received from 11 schools from four provinces of the Dutch-speaking part of Belgium (i.e., Flanders). Formal consent from the school's principal and parental consent was sought prior to the study. The self-administered questionnaire was conducted during school time in the presence of a researcher, who explained the purpose and procedure of the study. Beforehand, students were assured their responses were anonymous and confidential, and that they could withdraw their

participation at any given time. The mean age was 16.78 years ($SD = 1.16$) with 46.7% ($n = 610$) boys, and 53.3% girls ($n = 695$).

2.2. Measures

A questionnaire was developed to assess the constructs of the Prototype Willingness Model. We applied these measures to examine adolescents' disclosure of personal information about their peer relationships and all measures were pretested to ensure validity and reliability. A short written and oral introduction was given, explaining the respondents that all questions were related to public displays of personal disclosure (e.g., status updates, comments and/or wall posts).

2.3. Attitude

Attitudes were measured by asking "For me, disclosing personal information about peer relationships is..." using five semantic differential items ranging on a five-point scale: (1) "Bad – Good", (2) "Advantageous – Disadvantageous", (3) "Harmful – Harmless", (4) "A bad idea – A good idea", (5) "Pleasant – Unpleasant". Items two and five were reversed scored so a high value indicated a favorable attitude towards disclosing personal information. The scale was reliable ($\alpha = .81$).

2.3.1. Subjective norm

Subjective norm of friends, parents and teachers was measured with two items each: "I think my [friends/parents/teachers] would not mind that I share personal information about my peer relationships on Facebook", and "My [friends/parents/teachers] would approve that I share personal information about my peer relationships on Facebook". The six items were assessed using a six-point Likert scale with item responses ranging from 1 = *strongly disagree*

to 6 = *strongly agree*. All scales were reliable, with $\alpha = .79$ for friends, $\alpha = .90$ for parents and $\alpha = .85$ for teachers.

2.3.2. Prototype

The respondents were presented with a short introduction explaining the definition of a prototype: “Many adolescents share personal information about their peer relationships through status updates, comments, and wall posts. I would like to know what you think about them. I don’t suggest anyone in particular, just someone from the same age that shares a lot of personal information about peer relationships on Facebook. Can you state which characteristics you find suitable?” They were then asked to rate the favorability of the image using six adjectives: “Smart”, “Cool”, “Confident”, “Sympathetic”, “Popular”, and “Sweet”, each followed by a seven-point Likert scale ranging from 1 = *not at all* to 7 = *totally*. The resulting construct was reliable ($\alpha = .83$).

2.3.3. Prototype similarity

Prototype similarity was assessed with a single item: “How similar do you think you are to somebody who discloses personal information about peer relationships on Facebook?” scored on a six-point scale, ranging from 1 = *not at all* to 6 = *totally*.

2.3.4. Willingness

This construct was measured with a description of a hypothetical scenario: “Suppose you are on Facebook and you see that a lot of your friends are sharing personal information about peer relationships in their status updates, comments or wall posts. What would you do?” This statement was followed by four options to proceed in the situation (e.g., I would do the same and share personal information about peer relationships.) scored on a six-point Likert

scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. The internal consistency of the items proved to be good ($\alpha = .92$).

2.3.5. Intention

The intention to disclose personal information about peer relationships was measured using four items, such as “I want to share personal information about my peer relationships on Facebook” scored on a six-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. The reliability of the scale was good ($\alpha = .87$).

2.3.6. Disclosing information about peer relationships on Facebook

This construct was measured by two items along a seven-point scale, such as “Disclosing personal information about my peer relationships on Facebook is something I do...”. Response options ranged from 1 = *never* to 7 = *always*. High scores on these items suggest that the respondent has disclosed a certain amount of personal information about peer relationships on Facebook. This scale was adequately reliable ($\alpha = .76$).

2.4. Data Analysis

Structural equation modelling (SEM) was applied to the collected data using Mplus 6.11. to examine the relationships among the Prototype Willingness constructs (Muthén & Muthén, 2012). The analyses were performed using the following approach. First, a measurement model was built to test whether the observed variables reliably reflect the hypothesized latent variables in the research model. Then we added the gender and age of the adolescents in our model and examined the necessity to include them into our analyses. Thereafter, we estimated a structural model with attitude, subjective norm of friends, parents and teachers, prototype favorability and prototype similarity as predictor variables and intention, willingness and the self-disclosing behavior as endogenous variables.

The model fits of the measurement and path models were evaluated according to several fit indices. Given that the χ^2 is almost always significant and not an adequate test of the model fit (Kline, 2011; Timothy A. Brown, 2012), we also report the Comparative Fit Index (CFI) (Bentler, 1990), and Root Mean Square Error of Approximation (RMSEA) (Steiger, 1990). The CFI ranges from 0 to 1.00, with a cut-off of .95 or higher indicating that the model provides a good fit and .90 indicating that the model provides an adequate fit (Byrne, 2001; Hu & Bentler, 1999). RMSEA values below .05 indicate a good model fit, and values between .06 and .08 indicate an adequate fit (Ponnet, 2014).

3. Results

Almost half of the respondents (48.9%; $n = 633$) indicated that they never disclosed personal information about their peer relationships on Facebook. One out of three adolescents (35.9%; $n = 464$) reported that they seldom disclosed personal information about their relationships. Furthermore, 11.1% of the respondents ($n = 144$) said to disclose sometimes, while 4.1% ($n = 53$) shares personal information about peer relationships on a more regular basis. Other descriptives of the variables are presented in Appendix A. Table 1 displays the correlations between the research constructs used in the model. The results show positive significant correlations between attitude and intention ($p < 0.001$), as well as the subjective norm (friends, parents, and teachers) and intention (each respectively $p < 0.001$), and willingness and intention ($p < 0.001$). Furthermore, a significant association between prototype similarity and willingness ($p < 0.001$) and between prototype favorability and willingness ($p < 0.001$) was found. Finally, our results indicate significant correlations between intention and behavior ($p < 0.001$), and willingness and behavior ($p < 0.001$).

Table 1. Correlations Between the Research Constructs

	1	2	3	4	5	6	7	8	9
1 Attitude	-								
2 SN friends	.32***	-							
3 SN parents	.32***	.50***	-						
4 SN teachers	.24***	.36***	.44***	-					
5 Prototype favorability	.36***	.25***	.20***	.13***	-				
6 Prototype similarity	.34***	.23***	.19***	.12***	.38***	-			
7 Willingness	.31***	.17***	.20***	.13***	.36***	.41***	-		
8 Intention	.47***	.37***	.36***	.22***	.31***	.51***	.45***	-	
9 Behavior	.33***	.21***	.20***	.09**	.26***	.60***	.39***	.57***	-

Note.

SN: subjective norm; ** $p < .01$, *** $p < .001$.

3.1. Measurement Model

The measurement model provided a good fit for the data $\chi^2(296) = 896.22, p < .001$; CFI = .96, RMSEA = .042 (CI: .039 - .045). All variables were treated as latent constructs, with exception of the single-item measures. All factor loadings are significant and above .50. We subsequently included the age and gender as covariates in the analyses and examined the relationships between the age and gender of the adolescent and the study variables.

The age of the adolescent is significantly associated with subjective norm of friends ($\beta = -.05, p = .039$), prototype similarity ($\beta = .07, p = .008$), intention ($\beta = .07, p = .002$), and behavior ($\beta = .06, p = .025$), suggesting that older adolescents perceive their friends to be slightly less positive towards sharing personal information. However, they perceive themselves to be more similar to the prototype, and are more intended to share personal information about peer relationships. The gender of the adolescent was significantly related with subjective norm parents ($\beta = -.22, p < .001$), subjective norm of the teachers ($\beta = -.16, p < .001$), and prototype similarity ($\beta = .13, p < .001$), suggesting that girls believe they are more similar to the prototype than boys, and that the norms of these significant others about sharing personal information, are perceived by girls as less positive. Gender was also significantly related to intention ($\beta = .11, p < .001$), and behavior ($\beta = .17, p < .001$),

suggesting that female adolescents have a higher intention to self-disclose, and are in fact also disclosing more personal information about peer relationships on Facebook. Our structural model (as presented in Figure 2) has been adjusted for the influence of these variables.

3.2. Structural Model

The results of the structural model are presented in Figure 2. The results of the fit statistics indicate an adequate model fit: $\chi^2(377) = 1678.90, p < .001, CFI = .93, RMSEA = .052$ (C.I. 90%: 0.049-0.054).

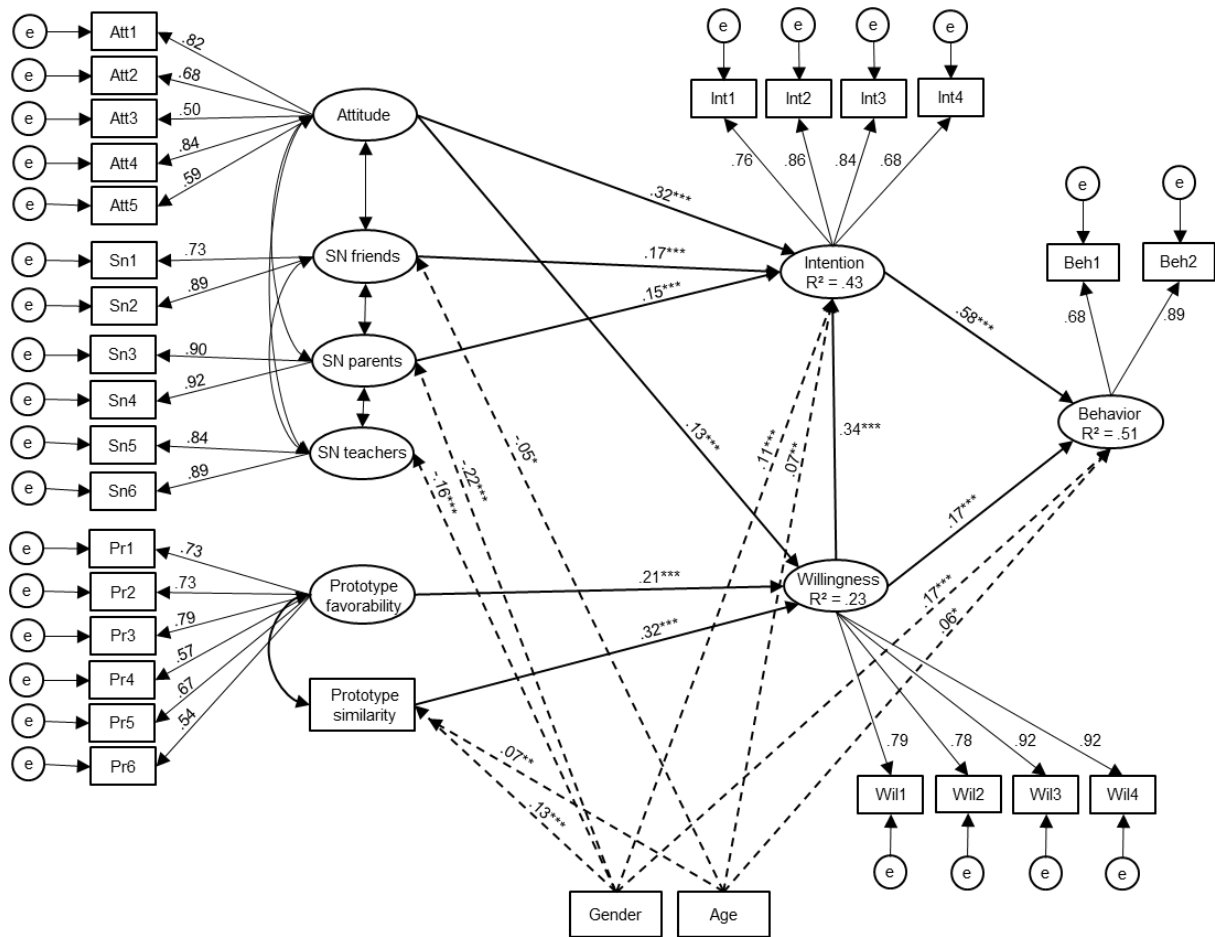


Figure 2.

The PWM model applied to adolescents' self-disclosing behavior about peer relationships on SNS.

Note. All reported coefficients are standardized values, adjusted for the influence of covariates. Non-significant paths are not shown. Lines are dashed or full for reasons of clarity. * $p < .05$; ** $p < .01$; *** $p < .001$.

Our analyses reveal that attitude, subjective norm (friends and parents) and willingness, together with the covariates gender and age, explain 43.2% of the variance in intention. In addition, attitude, prototype and prototype similarity assess for 23.0% of the variance in willingness. Intention, willingness, age and gender account for 51.0% of the variance in adolescent's disclosing behavior on Facebook.

The most important predictor of adolescent's relationships disclosure on Facebook is intention ($\beta = .58, p < .001$) (H3), accompanied by a significant contribution of willingness ($\beta = .17, p < .001$) (H9). Furthermore, the intention to disclose on Facebook is mostly influenced by willingness (H8) and attitude (H1) ($\beta = .34, p < .001$ and $\beta = .32, p < .001$ respectively), along with subjective norm of the friends ($\beta = .17, p < .001$) (H2a), and parents ($\beta = .15, p < .001$) (H2b). Thus, participants who have a more positive attitude towards self-disclosing, discerned more social pressure from their friends and parents, and those who are more willing to self-disclose, are likely to have a higher intention to reveal personal information about their peer relationships. Contrary to our expectations (H2c), the subjective norm of the teachers was not significantly associated with intention ($\beta = -.02, p = .630$).

Furthermore, prototype similarity ($\beta = .32, p < .001$) is the strongest predictor of adolescents' willingness to disclose personal information about peer relationships on SNS (H5), followed by prototype favorability (H4) and attitude (H6) ($\beta = .21, p < .001$ and $\beta = .13, p < .001$ respectively). Thus, adolescents perceiving the prototype to be positive and resembling the self, and those who have a more favorable attitude towards self-disclosing, are more willing to reveal personal information about peer relationships on Facebook. Contrary to our expectations, subjective norm of the friends ($\beta = -.03, p = .478$) (H7a), parents ($\beta = .07, p = .092$) (H7b) and teachers ($\beta = .02, p = .528$) (H7c) were not significantly associated with willingness to disclose personal information about peer relationships on Facebook.

4. Discussion

The use of SNS, and more particularly self-disclose online, has become common practice in the past couple of years, especially for adolescents. Despite the potential benefits that derive from sharing personal information, it can also entail several risks (Lenhart & Madden, 2007; Valkenburg & Peter, 2011). However, questions remain on which aspects fuel adolescents' online self-disclosure. So, it is important to determine which factors predict the self-disclosing behavior of adolescents on Facebook.

The current research offers a theoretical framework, the PWM, to examine the decision-making process of adolescents while disclosing personal information about peer relationships. The present study reveals that both the rational and the more spontaneous pathway of the PWM have a significant impact upon the self-disclosing behavior. However, the results indicate that adolescents' self-disclosing behavior on Facebook is mostly influenced by their intention to share, i.e., their rational decision-making. A possible explanation for this result is that adolescents become more effective at evaluating the consequences associated with certain risk behaviors, such as the adverse effects of drinking or smoking, and thus are able to rationally outweigh the potential benefits and the costs (Gibbons et al., 2004). In other words, willingness might be a better predictor of risky behavior than intention, but mostly only until middle adolescence (Gibbons et al., 2004).

Our study demonstrates that in addition to willingness to disclose information, attitude towards self-disclosure is the strongest predictors of intention. This finding suggests that older adolescents are more likely to follow their own subjective evaluations concerning the disclosure of personal information about peer relationships. Brown, Eicher and Petrie (1986) state that adolescents experience the social influence to be less impactful during later stages of adolescence, which is substantiated by our research. Contrary to our predictions, however, perceived parental norms were positively related with the intention to disclose personal

information. As the internet has become such an integrated part of our lives, this might be the result of the fact that norms of information sharing are changing (Madden et al., 2013).

During the last years, adults have become more prominent users of Facebook (Duggan & Smith, 2013). As they become more fervent users, parents might be sharing more information themselves, and thus setting an example and giving the impression towards their children that sharing of personal information is allowed by them.

Future research could explore the potential effect of parents by incorporating a measure of parental SNS use. Together with the positive influence of the subjective norm of the friends, our findings support previous research that states that parents and peers as opposing influences on adolescents is a popular myth (Brown & Bakken, 2011). The non-significance of the subjective norm of the teachers was another unexpected result that suggests that, based on the present study's results, teachers are not influencing the self-disclosing behavior of adolescents on Facebook. One possible explanation might be that adolescents do not associate their teachers with the use of Facebook, and more specifically their personal self-disclosures. In contrast to their parents, teachers might consciously want to keep a low profile on Facebook, and refrain from accepting students as their "friends". Thus, as adolescents weigh the pros and cons of disclosing personal information online about their peer relationships, they might not consider what their teachers would think of this behavior or if they would disclose personal information themselves.

Regarding the covariates, female adolescents were found to have a higher intention to self-disclose and to actually share more personal information about peer relationships on Facebook. Girls' scores on subjective norm of the parents and teachers, indicate a less favorable perceived subjective norm compared to boys, suggesting that girls perceive important others to be less positive towards sharing personal information on Facebook than boys. Prototype similarity was positively influenced by gender, stating that girls feel that they

resemble the prototype of someone who shares personal information on Facebook about peer relationships more than boys. These results are in line with previous research that states that in general girls disclose more offline (Miller et al., 1983), and online (Schouten, Valkenburg, & Peter, 2007).

The results of this study have several implications that warrant considerations, particularly towards practitioners and policymakers. Numerous prevention and intervention campaigns in schools aim to inform adolescents about the motivations and consequences the sharing of personal information (Barnard-Wills, 2012; Insafe, 2012). However, the results of our study suggest that teachers do not have a significant influence on students' intention to share personal information. Consequently, traditional teacher-centered methods might not be effective in informing adolescents about the opportunities and risks of their social networking use. Prevention and intervention campaigns focusing on the role of peers, and the influence they have on each other, can be a new way of sharing important information about the opportunities and potential dangers of self-disclosure. Although peer education has been utilized mostly in the field of health promotion (Damon & Phelps, 1989), it might bring a new perspective on influencing adolescents' opinion and intentions toward the sharing of personal information. Next to the social norms of peers, the social norms of parents seem to influence the self-disclosing behavior of their children. Further research could explore the role that parents can play in educating their children about responsible Facebook use. Initiatives might focus on educating parents on how to have productive conversations with their children about their internet use. Research in the field of sexual education has shown that parent-child conversations about sex can reduce early sexual activity and ensure safer sex practices (Aspy et al., 2007). Further research could translate this knowledge into e-privacy related programs, designed to enhance the communication between parent and child about the safe use of social network sites and the internet in general.

4.1. Limitations and Suggestions for Future Research

Despite the overall support of the proposed model, this study also has some limitations. As a result of the cross-sectional nature of this research, causality cannot be inferred. The current study builds on existing research on self-disclosure and the theoretical model PWM, but it should be noted that it is possible that the act of self-disclosure itself can have an impact on the attitudes or other antecedents of the surveyed adolescents. A longitudinal design would be valuable to confirm whether or not the causal relation between the different aspects of the PWM can be supported.

Furthermore, respondents were recruited through a convenience sample, which might limit the generalizability of the results. Alternative participant recruitment and data collection strategies may be needed to minimize sampling bias in future studies. In addition, the use of a self-reported questionnaire can be seen as a shortcoming as well as a strength of the present study. A pencil and paper survey allows the respondents to report their own views and perception, but it could result in a non-representative view of reality. In-depth focus groups on the actual self-disclosures may provide a more profound understanding of this behavior. A content analysis of Facebook messages, status updates and wall posts might provide a more clear and structured overview of the disclosing behavior of adolescents.

The results of our study also hold important implications for future research. Future studies may investigate other important disclosure topics (such as family, school or health) to examine whether there are differences in the decision-making process of the sharing of different topics on Facebook. Age might also have an influence on the relative predictive power of intention and willingness of the self-disclosing behavior of adolescents. A comparative study between different adolescent age groups may be helpful in shedding light on the differences in decision-making between these groups. Finally, these results might serve as an inspiration for qualitative research, dissecting the different motives that influence and

the perceptions adolescents' have of the antecedents that influence the sharing of personal information about peer relationships on Facebook.

5. Conclusion

In this research, the PWM framework has proven to be a valuable perspective from which to examine the decision-making process of older adolescents to disclose personal information on Facebook about their peer relationships. The findings suggest that older adolescents are more prone to rationally weigh the risks and benefits before they share information, more than spontaneously share due to a certain inviting context they might find themselves in. Thus, practitioners should focus on raising adolescents' awareness about the risks of sharing personal information, as well as provide additional information for parents to encourage them to discuss the potential risks.

6. Bibliography

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APPENDIX A

Descriptives of the Study Variables

	M	SD
<i>Attitude</i>		
Att1. Bad – Good	1.76	.95
Att2. Advantageous – Disadvantageous	1.60	.93
Att3. Harmful – Not Harmful	1.89	1.02
Att4. A bad idea – A good idea	1.57	.93
Att5. Pleasant – Unpleasant	2.24	.96
<i>Subjective norm Friends</i>		
Sn1. I think my (girl)friends would not mind that I share personal information about my peer relationships on Facebook	4.26	1.29
Sn2. My (girl)friends approve that I share personal information about my peer relationships on Facebook	4.17	1.20
<i>Subjective norm Parents</i>		
Sn3. I think my parents would not mind that I share personal information about my peer relationships on Facebook	3.12	1.42
Sn4. My parents approve that I share personal information about my peer relationships on Facebook	3.07	1.37
<i>Subjective norm Teachers</i>		
Sn5. I think my teachers would not mind that I share personal information about my peer relationships on Facebook	3.95	1.40
Sn6. My teachers approve that I share personal information about my peer relationships on Facebook	3.54	1.33
<i>Prototype favourability</i>		
Pr1. Smart	2.71	1.23
Pr2. Cool	2.80	1.40
Pr3. Confident	3.61	1.40
Pr4. Sympathetic	3.67	1.75
Pr5. Popular	3.63	1.45
Pr6. Sweet	3.12	1.70
<i>Willingness</i>		
Wil1. I would do the same and share personal information about my peer relationships	1.86	1.03
Wil2. I would react and share personal information about my peer relationships	1.95	1.04
Wil3. I would also share personal information about my peer relationships	1.74	.96
<i>Intention</i>		
int1. I am prone to sharing personal information about my peer relationships on Facebook	2.40	1.30
Int2. There is a chance that I share personal information about my peer relationships on Facebook	3.22	1.38
Int3. I want to share personal information about my peer relationships on Facebook	2.58	1.32
Int4. I think it's not impossible that I share personal information about my peer relationships on Facebook	3.49	1.39
<i>Behavior</i>		
Beh1. Did you share personal information about your peer relationships during the last two months on Facebook?	.64	.91
Beh2. Disclosing personal information about my peer relationships on Facebook is something I do...	1.11	.94

