

Alcohol, Sex and Smoking: Adolescents on Facebook and Their Self-presentation Behavior

Aylin Ilhan^a and Isabelle Dorsch^{a}*

^aDepartment of Information Science, Heinrich Heine University

Universitätsstraße 1, Düsseldorf, Germany

**Corresponding Author: isabelle.dorsch@hhu.de*

ABSTRACT

Nowadays, information and knowledge services, such as social networking services (SNSs) like Facebook, support self-presentation. What information production and reception behavior do adolescents exhibit on Facebook regarding image posts on alcohol, sex and smoking? Referring to the risks that uploaded pictures jeopardize the social recognition, parents are often afraid that their children send pictures that are sloppy, embarrassing or violate ethical principles. We investigated the online behavior of adolescents on Facebook related to the photo motives alcohol, sex and smoking. The evaluated data are based on a questionnaire finished by 199 participants aged between 13 and 20 years. The majority of the young users would not publish pictures with reference to sexuality, alcohol and drugs, but would more easily accept such images published by other.

Keyword: Information behavior, Adolescents, Facebook, Images, Sexting.

1. Introduction

With the upcoming of social networking services (SNSs) not only the way of communication, but also the information production behavior (e.g., posting) as well as the information reception behavior (e.g., reading posts) of the users changed. In the past years, Facebook has attracted much attention as one of the most popular SNSs having 1.86 billion monthly active users (December 2016) (Facebook, 2016). Just as you can find different types of cultures in society (for example youth culture), there are different types in SNSs, too. Each individual of an online community – for example Facebook in this case study – gets the opportunity to network with people and to present him- or herself by posting pictures of vacations, friends, selfies (self-portraits), activities (celebrating, eating, doing sports) and perhaps also images containing sexual or naked content as well as images with alcohol or drugs shown. The users get the chance to create an online identity, but are also faced with the task to decide if their posted content corresponds to their ethical concept. The governance of SNSs is affected by a complex

and diffuse nature of ethical responsibility (Light & McGrath, 2010). For adolescents and young adults the ethic concept plays an important role for advertisement (e.g. nudity or alcohol in ad campaigns). But such ethical principles are not limited to advertisement. They also exist within SNSs (Dubihlela & Dubihlela, 2011). Young adults and their Facebook photo publication behavior around alcohol was also investigated in several studies (Lyons, Goodwin, Griffin, McCreanor, & Barnes, 2016; Moreno, Christakis, Egan, Brockman, & Becker, 2012; Egan & Moreno, 2011). In respect to ethical principles, Hanewinkel, Tanski and Sargent (2007) as well as Petrilli, Beccaria, Prina and Rolando (2014) focused on cultural and ethical aspects regarding images depicting alcohol. Likewise, Dubihlela and Dubihlela (2011) address alcohol, but also nudity relating to advertisements. Tello (2013) conducted a content analysis about the violation of ethical principles regarding privacy and personal data and images. She founds “that the contract signed by each user allows Facebook to collect data about people without their knowledge” (Trello, 2013, p. 211). She recommends that the user should be self-aware regarding their privacy settings.

It is also important to consider critical aspects referring to the mentioned methods of self-presentation. Users of SNSs and electronic devices get the possibility to send messages with sexually oriented content. This phenomenon is called “sexting” – a combination of the terms *sex* and *texting* (Livingstone & Görzig, 2012, p. 151). Lenhart (2009, p. 3) defined “sexting” as an action that includes “creating, sharing, and forwarding of sexually suggestive nude or nearly nude images by minor teens.” The problem of sexting is that not everyone realizes its potential danger. For some people sexting is not important, whereas other associate sexting with a slutty behavior (Lenhart, 2009). Parents are often frightened that their children could practice sexting. Especially Facebook becomes more and more integrated in everyday society, so “it becomes necessary to monitor and examine the platform’s positive and negative impacts on society” (Wilson, Gosling, & Graham, 2012, p. 204). Sarabia and Estévez (2016) observed 100 Facebook profiles of Spanish adolescents aged 14 to 21. In 60% of the profiles erotic and sexualized content like photos or text were found. Moreover the half of profiles descended female users. Profiles of male users also contained female images depicting sexual content (Sarabia & Estévez, 2016).

A distinct awareness and knowledge about privacy and risks in social media, but also to be in touch with electronic devices could enhance the self-presentation and the behavior of oneself. The way presenting oneself in online communities is relevant for one’s image perceived by the society. People accept a friends’ request depending on how charming the profile picture is (Wang, Moon, Kwon, Evans, & Stefanone, 2010). As quick, as the self-presentation can illustrate a positive image of someone, it could compromise the living and work environment of the portrayed person. Self-presentation

within an online community has influence on the offline work environment. Research findings by DiMicco and Millen (2007) point out that one of the participant adapted a critical attitude towards the effect of self-presentation on Facebook with regard to the work environment. Subsequently he “removed all photos of himself involving ‘drinking alcohol’” (DiMicco & Millen, 2007, p. 386). In each community, there exist standards that ensure the acceptance or rejection of individuals. Furthermore, Huang et al. (2013) found out that there exist different behavior types in the online and offline community. Following Huang et al. (2013) the online behavior of friends can significantly influence one's own behavior. Interestingly, participants are “more likely to report that they smoke [...] and use alcohol [...]” when someone of their social environment posted similar pictures (Huang et al., 2013, p. 511). Therefore, manner and content of self-presentation in online communities are dependent on the social environment. People aspire to belong to a community and to present themselves. The dual-factor model of FB use designed by Nadkarni and Hofmann (2012) includes these two social needs. Services like uploading pictures and networking with friends support the self-presentation and creation of online-identity. Facebook “leaves itself open to the possibility that its users display their idealized, rather than accurate, selves through their profiles” (Nadkarni & Hofmann, 2012, p. 246). A further participant of DiMicco’s and Millen’s study (2007, p. 385) does not delete pictures, showing him “drinking alcohol (including directly out of a beer keg) and attending numerous college parties.” He is aware of the fact that his manager could see these pictures, but in his opinion it does not jeopardize his career. These pictures represent his private life and do not reflect his work attitude.

Self-presentation connotes users’ disclosure information (e.g. in online communities) about themselves. The disclosure of information through self-presentation of adolescent depends on three aspects: habit, perceived control and information related benefits (Beldad & Koehorst, 2015). Beldad and Koehorst (2015) investigated that disclosed information of their participants does never happen without thinking about possible aftereffects. In addition to this, Vanderhoven, Schellens, Valcke and Reas (2014) found in their study that the volume of pictures, presenting critical content, is small. Based on Vanderhoven et al. (2014) “alcohol abuse, partying, or nudity” are identified as content with critical effects. Self-presentation in SNSs is not only an active process of the self-presented person. By actions such as tagging, friends could upload pictures of someone and tag them. “23% are tagged in pictures of themselves partying, 13% in pictures in which they use alcohol and 16% in pictures of themselves in swim [or] underwear, while these pictures can be seen by friends-of-friends” (Vanderhoven, 2014, p. 5).

The community, for example the family environment, could have a huge influence to the behavior of SNS users, too. The social environment enlightens users of Facebook about the privacy settings. Privacy constitutes an important aspect of Facebook. Users

should be aware about the download possibilities. If privacy settings are missing, every user could download a posted picture. The time of being online influences the awareness of privacy settings (Boyd & Hargittai, 2010). This outcome is similar to the results of Debatin, Lovejoy, Horn and Hughes (2009). The effect of being intimate with privacy leads to protect the profile by distributing access possibilities. In contrast: If there is a missing lack of awareness referring to privacy settings, the protection of the profile is much less (Debatin et al., 2009).

Photo publication behavior of young users is an interesting aspect of self-presentation in online communities. With SNSs such as Facebook, adolescents get the chance to create an online identity. How important are pictures showing alcohol, sexual content or drug/smoking use?

This study is part of a research project on (Dorsch & Ilhan, 2016) and provides a first analysis of the photo publication behavior of adolescent Facebook users. It has been shown that portrait, party and couple pictures as well as pictures depicting no persons like for example nature, animals or material motives, are more frequently used for Facebook (Dorsch & Ilhan, 2016).

The following six research questions (RQs) should enable interesting findings referring to self-presentation via pictures and to the awareness of privacy settings of adolescents:

- RQ1: Are there age differences between the adolescent Facebook users regarding to the use of photo motives depicting alcohol, sex or smoking?
- RQ2: Are there gender differences between the adolescent Facebook users regarding to the use of photo motives depicting alcohol, sex or smoking?
- RQ3: Do the adolescent Facebook users have a homogenous attitude related to photo publication behavior?
- RQ4: Are adolescent Facebook users aware about the privacy settings Facebook serves?
- RQ5: Does the willingness relating to sexting differentiate with regard to the age groups' self-presentation activity and their friends' use?
- RQ6: Does the willingness relating to sexting differentiate with regard to genders' self-presentation and their friends' use?

To answer these research questions the following model in Figure 1 was developed. It is made up of seven different dimensions. Considering the first dimension d1 User it represents the adolescents (13-20 years old) of SNSs. As in the model presented, it is the aim to analyze such users' Behavior (d2 Use) within the Online Community Facebook (d3). The users' behavior contains the Photo Publication Behavior (d4) of adolescents. It focuses on four types of Facebook pictures. All are analyzed referring to the Picture Category (d5), Privacy (d6) and Sexting (d7).

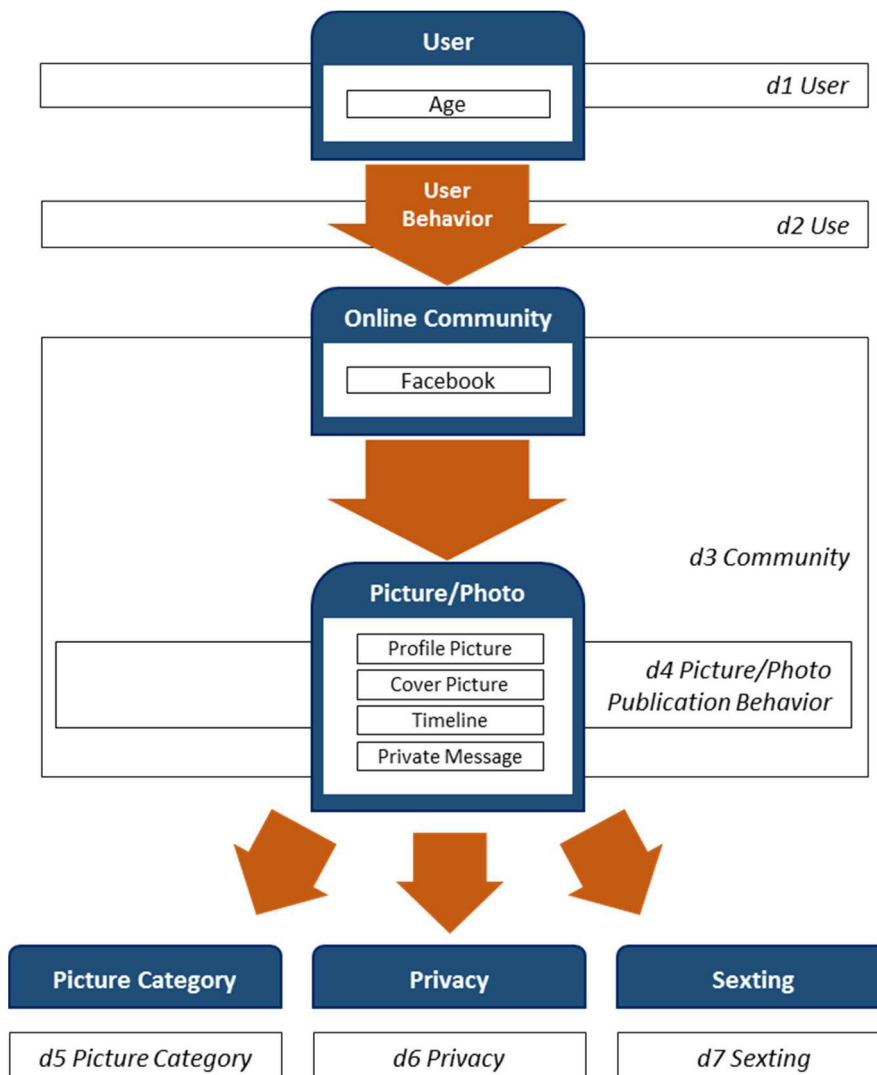


Figure 1. Research model

2. Methods

Altogether there exist the three main sections Picture Categories, Survey and Data. The methodology is divided into them. For the Picture Categories a distinction is made between Types of Facebook Pictures and a General Picture Category. Both are essential to analyze pictures on Facebook.

Types of Facebook Pictures contains all possible picture types a Facebook user can upload. Overall four subcategories (SCs) can be derived:

- SC1: Profile Picture
- SC2: Cover Picture
- SC3: Timeline
- SC4: Private Message








A used picture for a Facebook profile is called Profile Picture. It is displayed in the profile, beside comments and during chat conversations. A thumbnail of it can be seen by everyone. Likewise, the Cover Picture belongs to the profile. It is displayed on the top and also visible for everyone. All pictures a profile owner posted on the own Facebook page are Timeline photos. Private Message photos could only be seen by the recipient(s) of the message. As the name implies, they were send in a private message by a profile owner.

A Facebook content analysis by Shelton and Skalski (2014) served as basis for the general picture category. Among others they analyzed the Facebook photo behavior of college students between 17 to 28 years and created therefore 11 categories. In total three categories from Shelton and Skalski (2014) were taken over for this study (category 1-2 and 6 in Table 1). Since the boundaries – in particular for very young teens – in terms of homosexuality and friendship between girls or between boys are rather fuzzy Shelton's and Skalski's category regarding to Physically/Sexually/Suggestive Contact (here category 2) were limited to heterosexual content. In order to expand the study to further relevant thematic areas concerning the topic sex, 3 new categories (3-5) were established.

The definition of the general picture categories is followed by the selection of suitable prototype pictures representing their respective category (Table 1). They show an adolescent male or female or a group in a scenario corresponding to the category description. Depending on the gender a picture can generate different effects. People could consider a picture of a girl in a bikini differently than a boy in a swimming trunks. For that reason, an adolescent female and a male prototype picture was chosen for the categories 1, 3 and 6. Only one prototype picture was necessary for category 2, because it always represent a male and a female person together. Generally, the number of prototype pictures should be as low as possible to keep the survey compact. For ethical reasons, the adolescent participants should not see any nude pictures. Therefore, the categories 4 and 5 got no prototype picture but an explanation in written form. All mentioned prototype pictures with their associated questions were included in the online survey.

The online survey was created during the time period December 2014 - April 2015 and conducted from April 2015 - July 2015. Spreading of the survey took place on Facebook via Facebook groups (postings), private messages on Facebook, and the Facebook timeline of private persons as well as Facebook pages. Additionally, it was promoted on other Internet services and sites and with the help of institutions and three schools. The survey was available in German and Turkish language, because the cultural aspect was also a point of investigation. Due to the sample size of Turkish participants, it could not be evaluated representative.

Table 1. General picture categories

Category	Prototype Picture
<p>1. Alcohol Shown</p>	<p>1.a:  CC I woke Up Today</p> <p>1.b:  CC Peter Burgess</p>
<p>2. Physically/ Sexually/ Suggestive Contact (hetero- sexual)</p>	<p>2:  CC Eleazar</p>
<p>3. Sexiness</p>	<p>3.a:  CC HotlantaVoyeur</p> <p>3.b:  CC Richard Kang</p>
<p>4. Naked – Head and Full Body</p>	<p>No Pictures, only the following descriptions:</p> <p>4.a: Here would be a picture of a boy/a man who is completely naked. His face can be seen in the picture.</p> <p>4.b: Here would be a picture of a girl/a woman who is completely naked. Her face can be seen in the picture.</p>
<p>5. Naked – Without Head but Full Body</p>	<p>No Pictures, only the following descriptions:</p> <p>5.a: Here would be a picture of a boy/a man who is completely naked. His face is not visibly in the picture.</p> <p>5.b: Here would be a picture of a girl/a woman who is completely naked. Her face is not visibly in the picture.</p>
<p>6. Drug Use Shown</p>	<p>6.a:  CC Nadja Tatar</p> <p>6.b:  CC DLSimaging</p>

Three Turkish native speakers translated the German version into Turkish. The questionnaire was pre-tested by six persons. It consists of questions regarding to the prototype pictures that represents a category, the picture uploading behavior, security and privacy settings and demographical and cultural information.

In total 199 out of 488 survey participants could be taken into account for the data analysis. Since some participants did not complete the survey and/or they did not be in accordance with the target group of adolescents between 13-20 years, 278 participants could not be considered for the survey. In the next step, eleven further participants had to be excluded, too.

Reasons are for example that some of them indicated partly to use pictures showing nudity for profile picture, cover picture and/or the timeline. But they contradicted themselves by choosing this answer in an incomprehensible way and/or by stating to be rather buttoned than liberal. Since it could not be trusted on statements like these conspicuous participants were removed. A total of 199 survey participants' answers were analyzed.

3. Results

The age classes of the 199 fully answered questionnaires distributed as follows: There are 24 participants, which are between 13 and 14, 35 between 15 and 16, 49 between 17 and 18 and 91 between 19 and 20 years old. 156 participants are female and 43 male.

RQ1: Are there age differences between the adolescent Facebook users regarding to the use of photo motives depicting alcohol, sex or smoking?

The acceptance of friends' photo motive use is in nearly every case higher than one's own self-presentation use as Table A1 (see appendix) shows. Across all age groups the adolescent Facebook users prefer the category Physically/Sexually/Suggestive Contact (heterosexual) (category 2) the most. In contrast nude pictures (category 4 and 5) are at least preferred. For motives depicting alcohol, sexiness, drugs or nudity a higher self-usage for private message pictures as for all other types of Facebook pictures is reported. A reverse pattern exists for Physically/Sexually/Suggestive Contact (heterosexual). This may indicate the hypothesis adolescents generally send critical picture motives via private message to a selected group/person, while they tend to show couple photos rather in a more public space. Certainly we assumed higher values for private message photos of more critical categories, because the content cannot be seen by everyone.

Table 2 illustrates the general picture category ranking according to the non-usage of any Facebook picture type. The majority of the adolescents would not use pictures of the categories: Naked, Sexiness, Alcohol Shown and Drug Use Shown. Thereby the last

three categories lay close together whereas for the categories representing nudity an almost total denial exists. It can be agreed that the top 5 categories consist of motives rather tending to affect the image in a negative way. Only motives of the category Physically/Sexually/Suggestive Contact (heterosexual) are accepted. Looking at the distribution by age it becomes apparent that the 19-20 aged are more open for publishing pictures containing alcohol and drugs. The 13-14 years old do not use those pictures.

Table 2. Photo categories an adolescent Facebook user would *not* use

Rank	Rejection for Self-Presentation	%
1	Naked – Head and Full Body Naked – Without Head and Full Body	98%
3	Sexiness	85%
4	Alcohol Shown	84%
5	Drug Use Shown	83%
6	Physically/Sexually/Suggestive Contact (heterosexual)	31%

RQ2: Are there gender differences between the adolescent Facebook users regarding to the use of photo motives depicting alcohol, sex or smoking?

The analysis of RQ2 shows that there are gender differences (Table A2). Males are more minded to use photo motives regarding to alcohol, sex and smoking for the profile picture than females. Whereas 14% of the participated males would use pictures that include Drug Use Shown, 4% of the participated females would do this. Gender differences are also noticeable related to the order of the three categories Drug Use Shown, Alcohol Shown and Sexiness. The second commonly used category within the three mentioned categories is Alcohol Shown by the males and Sexiness by the females. It is also conspicuous that 10% of the participated males would use photo motives regarding to alcohol and only 1% of the participated females would do this. A similar case is also recognizable by the category Sexiness. Whereas 9% of the surveyed males would use pictures with sexy content, 2% of the surveyed females would do this. In respect of all six categories, the category Physically/Sexually/Suggestive Contact (heterosexual) is also here the most preferred type for profile picture.

Male's willingness to send pictures of the category, Naked – Head and Full Body, Naked – Without Head and Full Body and Sexiness, is higher than the female's willingness. Related to the friend's use of such pictures the tolerance of the participated females is referring to the category sexiness higher than of the male's tolerance.

Moreover, males would not upload pictures of the categories Naked – Head and Full Body, Naked – Without Head and Full Body as profile picture, cover picture or in the timeline, but they would send such pictures in private messages.

RQ3: Do the adolescent Facebook users have a homogenous attitude related to photo publication behavior?

With their profile pictures 80% of all participants want to create a positive public image on Facebook. Based on this, Facebook enables to represent the positive aspects of the own identity. Over half of the asked participants (66%) think always about their pictures, before they upload them on Facebook. Several adolescents think about the presentation of them. They are aware of the services for self-presentation such as the upload function of pictures, but they do not use it improvident, because only 3 respondents (2%) answered they would never reflect about their photos, before they upload them on Facebook. For 18-42 years old participants Burkell et al. (2014) indicate comparable findings.

Figure 2 shows that 66% of 197 participants always reflect before they upload a picture. Only 2% did not do this. Furthermore, 80% of the participants want to create a positive image by uploading their picture. We have two variables, the reflection frequency (ordinal scaled) and the positive image (dichotomous). We calculated the rank-biserial correlation, called also spearman-rho coefficient (r), between these two variables. The spearman-rho correlation coefficient is significant ($r=.180^*$, $p=.011<0.05^*$). This weak but positive significant correlation shows that participants, who want to create a positive image do frequently reflect a picture before the uploading process and vice versa.

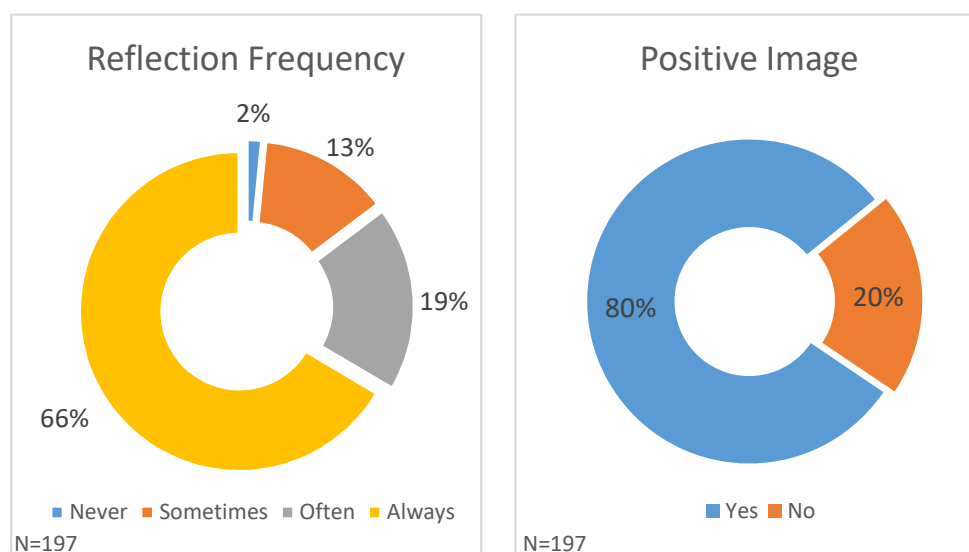


Figure 2. Adolescents' photo reflection behavior before uploading (left) and their intention for creating a positive image (right) on Facebook

Furthermore, the results show (Figure 3) that females tend only a little bit more to create a positive image (81% of 154 female participants and 74% of 43 male participants). The frequency of reflection, differentiate into female and male looks similar. While female participants tend to reflect more frequently (71% are reflecting always) only half of the male participants (51%) would do this too. Afterwards, we analyzed the association between gender and reflection frequency using the spearman-rho coefficient r . The analysis shows that the correlation is positive significant ($r=.211^{**}$, $p=.003<0.05$). Therefore, it stands to reason that female participants of this study are moving to reflect stronger if they should upload a picture on Facebook. Based on our data, there is no significant association between the gender and the aim to create a positive image.

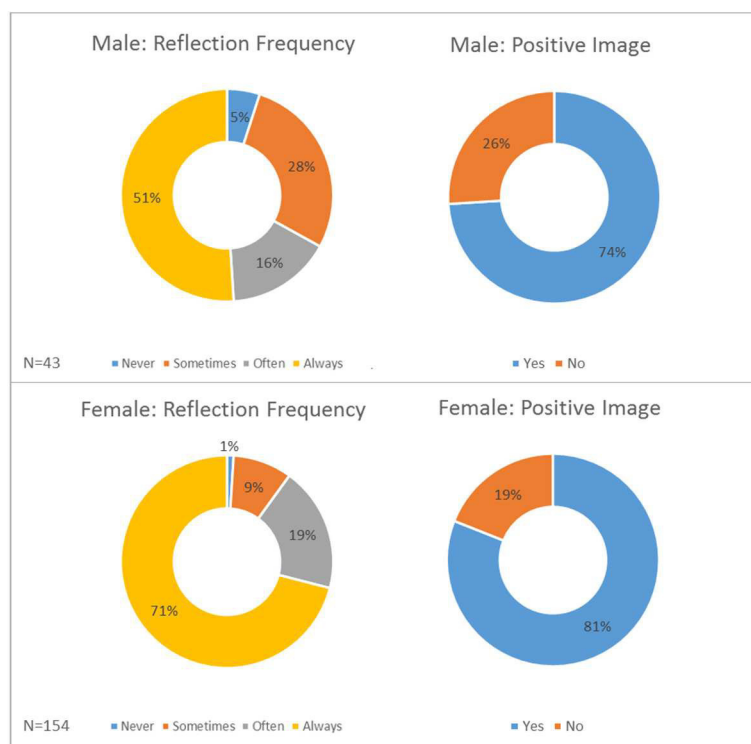


Figure 3. Adolescents' photo reflection behavior before uploading (left) and their intention for creating a positive image (right) on Facebook separated by gender

What about the upload interval? It is irregular as can be seen from Figure 4. 24% of the participants never send pictures by private message and 16% of the participants never upload picture on their timeline.

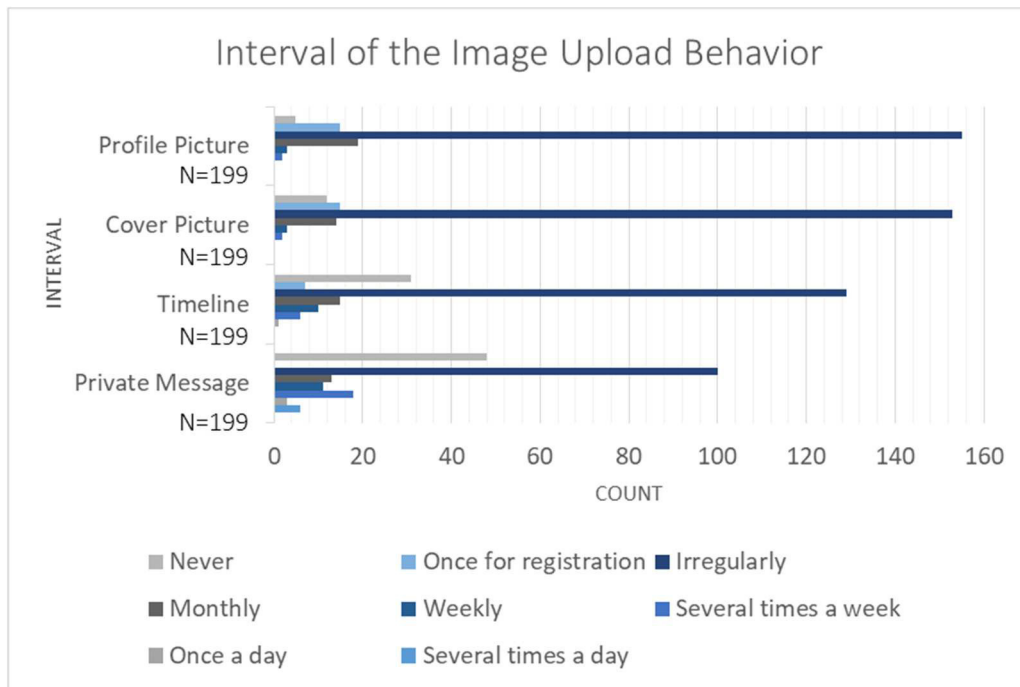


Figure 4. Adolescents’ picture upload behavior on Facebook

RQ4: Are adolescent Facebook users aware about the privacy settings Facebook serves?

On Facebook friends can download a user’s photo. Half as much are conscious about the download possibility. The missing awareness of download possibilities exists strongest for the private message. 17% of the asked participants did not know that the chat partner could download the sent pictures. In respect to creating an online identity or rather a platform for self-presentation privacy settings enables to disclose or cover some information as for example pictures for an audience. This finding corresponds with the study of Beldad and Koehorst (2015). They figured out that the disclosure of personal information is influenced by the habit and perceived control. Furthermore “the finding that respondents’ perception of control over their personal information also determines information disclosure seems to suggest that respondents do not just habitually and blindly share information without taking into account the possible negative consequences of disclosure” (Beldad & Koehorst, 2015, p. 192).

What about the awareness of possibilities to change privacy settings on Facebook? With 154 participants round about three quarters received information about privacy settings itself. Among friends and family privacy control is mentioned, too. To the contrary in school or education, training or in a seminar 15 participants obtained such information. Based upon this, privacy control has not broadly reached schools. However, only 13 respondents are not informed about this topic.

RQ5: Does the willingness relating to sexting differentiate with regard to the age groups' self-presentation activity and their friends' use?

Sexting refers to sending or receiving nude or seminude pictures (Lenhart, 2009, p. 3). All age groups behave very similarly concerning Sexiness (category 3). There are only around 3%-4% of teens who are willing to present themselves in a sexy posture in their profile pictures, cover pictures, or in their timeline. An acceptance of viewing others' Sexiness images, however, is higher (between 11% and 13% for all age groups). For private messages, it is different. In this case, 11% of all teens send sexy photos to friends, and 23% accept sexy photos from others in private messages. Only 2% of all participants state they send pictures in private messages showing themselves fully nude (regardless of whether their heads are cropped out of the image). Not a single teen admitted to behaving accordingly concerning all other picture types.

RQ6: Does the willingness relating to sexting differentiate with regard to genders' self-presentation and their friends' use?

It is striking that in nearly all cases, the tolerance for other users' photo choices in publications is higher than for one's own self-presentation of certain image types. Of the participants, 15% of adolescent boys would rather send pictures of themselves in boxer shorts than pictures in which they were either nude with head showing (6%) or nude with head cropped (5%). As well, it is interesting that 11% of adolescent girls (consequently, fewer than boys) would rather send pictures of themselves in bikini. That 26% of adolescent girls would tolerate friends sending such pictures, however, is somewhat surprising. In contrast, only 16% of boys would find it acceptable if friends sent pictures from the category Sexiness. In sum, girls are more tolerant than boys are regarding pictures expressing sexiness.

4. Conclusion

With the aim of assessing the importance of ethical aspects of youth culture's picture publication behavior in online communities as Facebook, the study focuses on four main aspects: self-presentation, participants' tolerance referring to friends' picture publication behavior, privacy settings and sexting. The research model with its different aspects and dimensions provides the outcome of this study:

1. Generally, the results show that participants' tolerance of friends' pictures is higher as their own self-presentation.
2. Males are little bit more willing to upload or send picture motives related to alcohol, drug and sexiness than females.
3. The adolescents behave responsible with pictures showing nudity. Beside all six picture categories pictures depicting nudity are used fewest of all. This

applies for all four picture categories on Facebook. Pictures showing nudity are not only the least used pictures they are also at least affect participants' tolerance referring to friends' photos.

4. Asked adolescents see the online self-presentation as a serious aspect. This becomes apparent with their purpose to create a positive image. The attitude to generate a positive image by profile pictures is assignable to over 80% of the asked adolescent participants.
5. Adolescents first reflect the content of a picture before uploading it. This could be seen as an indicator for serious attitude presence in online communities like Facebook. These findings are equal to the adult asked participants of Burkell, Fortier, Wong and Simpson (2014). The results show that a regular uploading behavior does not exist.
6. The most of our participants are conscious about privacy settings in Facebook. Only 7% of the adolescent participants did not know something about the privacy settings. Interestingly 78% get information about privacy settings by Facebook itself. The social environment school and its aspects as education, training and seminar provide only to 8% an information tool.
7. More than 90% of the asked adolescent participants are aware about the profile, cover and timeline picture download possibilities. The awareness of download possibilities regarding to private message is with 83% a bit smaller.
8. The top five placed not used categories of the youth culture in this study are: Naked – Head and Full Body (98%), Naked – Without Head and Full Body (98%), Sexiness (85%), Alcohol Shown (84%), Drug Use Shown (83%). The willingness to upload pictures of for example Sexiness amounts to 15%. That uploading pictures of such critical categories rarely occurs is also comparable with the outcome that “[t]he amount of risk represented in pictures and videos is not very high” (Vanderhoven et al., 2014, p. 5). Nevertheless, this should not be understood as a normal case. It is partly refuted by Burkell et al. (2014, p. 980): “[A]mong younger participants, for example, images of drinking and partying (if not too excessive) are essentially de rigueur, although older participants choose not to post such images and even those who do post such images indicate that they might choose to delete them in the future.”
9. Contrary to expectations, this study did not find any significant results for sexting behaviors related to age or gender.

Concerning the outcomes with regard to the self-presentation of the participants and their friends it could be supposed, that everybody is responsible for his own self-presentation in the online community. Based on the results it could also be assumed that someone more disputes with his own self-presentation than others. As a consequence,

it is not surprising, that Facebook users are more tolerant with respect to the selective and use of pictures of their friends in Facebook. Therefore, the reason is that it is not their own self-identity. Overall, adolescent Facebook users predominantly neither prefer alcohol, sex and drugs for their photo motives nor for photos by other. What could be the next step? To build on these results further research should be done to incorporate the offline environment. Young (2013, p. 7) pointed in her study out that “[t]he participants highlighted the value of Facebook to present aspects of their identity but acknowledged that their audience requires this to be done in an authentic way to present a self that aligns with the way they are perceived offline.” The study of Young refers to adult Facebook users, but this consideration could possibly also be applied to adolescent Facebook users.

It would be interesting to extend the research model for further studies. Also culture can influence the self-presentation (Kuo, Tseng, Tseng, & Lin, 2013) and the acceptance of photos by others. Are there cultural differences (Baran & Stock, 2015b) in terms of the youth cultures’ photo publication and acceptance behavior? Do adolescent Facebook users from different cultures present themselves in the same way? In this study only the use of Facebook was considered. Depending on the country, the favored used SNSs can change. For example, the domestic SNS in Russia is VKontakte (Baran & Stock, 2015a) instead of Facebook. Consequently the publication behavior of Russian teens on VKontakte must be investigated. As well it is questionable, if Facebook is the right community for adolescents to exchange photos depicting critical motives like alcohol, sex or smoking (and possible other drugs). Maybe they do not use and accept those categories on Facebook, because they consider Facebook not as an adequate platform for such content. It is questionable, if the use and acceptance receives a higher value for other platforms and Apps (e.g. Instagram, WhatsApp, Snapchat etc.). Cargile found in their study that 5 of 15 participants “admitted to using Snapchat for sexual purposes” (Cargile, 2015, p. 241). The count of participants who did this was much less than she did accept. One of her participant was 19 years aged and the other 14 were in the twenties. The approach is of quantitative nature. The application of qualitative methods can deepen it. Further research should include personal interviews for a better understanding of picture self-presentation and acceptance of the SNSs youth culture on Facebook. It should also be distinguished between different picture motive nuances of one general picture category. For example, the category alcohol shown could be sub-categorized into different “intensive” drinks (beer, (sparkling) wine, liquor, etc.).

REFERENCES

- Baran, K. S., and Stock, W. G., Facebook has been smacked down. The Russian special way of SNSs: V Kontakte as a case study, *Proceedings of the 2nd European Conference on Social Media (ECSM 2015)*, Porto, Portugal, Reading, UK: Academic Conferences and Publishing Limited, July 9-10, 2015a.
- Baran, K. S., and Stock, W. G., Acceptance and quality perceptions of social network standard and non-standard services in different cultures, in C. Stephanidis (Ed.), *HCI International 2015 – Posters' Extended Abstracts. HCI International 2015*, Los Angeles, CA, USA, August 2-7, 2015b. Proceedings Part II, Chur, Switzerland, Springer (Communications in Computer and Information Science; 529), 2015, pp. 65-70.
- Beldad, A. D., and Koehorst, R., It's not about the risks, I'm just used to doing it: Disclosure of personal information on facebook among adolescent dutch users, in G. Meiselwitz (Ed.), *Social Computing and Social Media. 7th International Conference, SCSM 2015*. Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2-7, 2015, Proceedings, Cham, Switzerland, Springer (Lecture Notes in Computer Science; 9182), 2015, pp. 185-195.
- Boyd, D., and Hargittai, E., 2010. Facebook privacy settings: Who cares?, *First Monday*, 15 (8).
- Burkell, J., Fortier, A., Wong, L. L. Y. C., and Simpson, J. L., 2014. Facebook: Public space, or private space?, *Information, Communication & Society*, 17 (8), 974-985.
- Cargile, T., Snapchat and ethics?, in P. Syverson (Ed.), *New Media, New Ethics?*, self-published, 2015.
- Debatin, B., Lovejoy, J. P., Horn, A. K., and Hughes, B. N., 2009. Facebook and online privacy: Attitudes, behaviors, and unintended consequences, *Journal of Computer-Mediated Communication*, 15 (1), 83-108.
- DiMicco, J. M., and Millen, D. R., Identity management: multiple presentations of self in facebook, *Proceedings of the 2007 International ACM Conference on Supporting Group Work*, Sanibel Island, FL, USA, November 4-7, 2007.
- Dorsch, I., and Ilhan, A., Photo publication behavior of adolescents on facebook, in K. Knautz, and K. S. Baran (Eds.), *Facets of facebook*, Berlin, Boston, De Gruyter Saur, 2016.
- Dubihlela, J., and Dubihlela, D., 2011. Youth attitudes towards advertisements depicting nudity and alcohol: Ethical dilemmas in advertising, *South African Journal of Psychology*, 41 (2), 207-217.
- Egan, K. G., & Moreno, M. A., 2011. Alcohol References on Undergraduate Males' Facebook Profiles, *Am J Mens Health*, 5 (5), 413-420.

- Facebook, 2016. *2016 Annual Report*. Retrieved from <http://d1lge852tjjqow.cloudfront.net/CIK-0001326801/bc7a177c-abb0-4b3c-a11b-ee67c656c2e1.pdf>
- Hanewinkel, R., Tanski, S. E., and Sargent, J. D., 2007. Exposure to alcohol use in motion pictures and teen drinking in Germany, *International Journal of Epidemiology*, 36 (5), 1068-1077.
- Huang, G. C., Unger, J. B., Soto, D., Fujimoto, K., Pentz, M. A., Jordan-Marsh, M., and Valente, T. W., 2013. Peer influences: The impact of online and offline friendship networks on adolescent smoking and alcohol use, *Journal of Adolescent Health*, 54 (5), 508-514.
- Kuo, F. Y., Tseng, C. Y., Tseng, F. C., and Lin, C. S., 2013. A study of social information control affordances and gender difference in facebook self-presentation, *Cyberpsychology, Behavior, and Social Networking*, 16 (9), 635-644.
- Lenhart, A., Teens and sexting. How and why minor teens are sending sexually suggestive nude or nearly nude images via text messaging, *Pew Internet & American Life Project*, Washington, D.C., 2009.
- Light, B., and McGrath, K., 2010. Ethics and social networking sites: a disclosive analysis of facebook, *Information Technology & People*, 23 (4), 290-311.
- Livingstone, S., and Görzig, A., Sexting: the exchange of sexual messages online among european youth, in S. Livingstone, L. Haddon, and A. Görzig (Eds.), *Children, Risk and Safety Online: Research and Policy Challenges in Comparative Perspective*, Bristol, UK, The Policy Press, 2012.
- Lyons, A. C., Goodwin, I., Griffin, C., McCreanor, T., & Barnes, H. M., 2016. facebook and the fun of drinking photos: Reproducing gendered regimes of power, *Social Media + Society*, 2 (4), 1-13.
- Moreno, M. A., Christakis, D. A., Egan, K. G., Brockman, L. N., & Becker, T., 2012. Associations between displayed alcohol references on facebook and problem drinking among college students, *Arch Pediatr Adolesc Med*, 166 (2) 157-163.
- Nadkarni, A., and Hofmann, S. G., 2012. Why do people use facebook?, *Personality and Individual Differences*, 52 (3), 243-249.
- Petrilli, E., Beccaria, F., Prina, F., and Rolando, S., 2014. Images of alcohol among italian adolescents. Understanding their point of view, *Drugs: Education, Prevention and Policy*, 21 (3), 211-220.
- Sarabia, I., and Estévez, A., 2016. Sexualized behaviors on Facebook, *Computers in Human Behavior* 61, 219-226.
- Shelton, A. K., and Skalski, P., 2014. Blinded by the light: Illuminating the dark side of social network use through content analysis, *Computers in Human Behavior*, 33 (1), 339-348.

- Tello, L., 2013. Intimacy and «extimacy» in social networks. Ethical boundaries of facebook, *Comunica*, 21 (41), 205-213.
- Vanderhoven, E., Schellens, T., Valcke, M., and Raes, A., 2014. How safe do teenagers behave on facebook? An observational study, *PLoS ONE*, 9 (8), 1-9.
- Wang, S. S., Moon, S. I., Kwon, K. H., Evans, C. A., and Stefanone, M. A., 2010. Face off: Implications of visual cues on initiating friendship on facebook, *Computers in Human Behavior*, 26 (2), 226-234.
- Wilson, R. E., Gosling, S. D., and Graham, L. T., 2012. A review of facebook research in the social sciences, *Perspectives on Psychological Science*, 7 (3), 203-220.
- Young, K., 2013. Managing online identity and diverse social networks on facebook, *Webology*, 10 (2), 1-18.

APPENDIX

Table A1. Photo publication behavior of adolescent Facebook users by age.

Category	Age Class	General Picture Category								
		Profile Pict.		Cover Pict.		Timeline		Priv. Mess.		Never
		S	O	S	O	S	O	S	O	S
1. Alcohol Shown	13-14	2%	8%	4%	8%	0%	8%	13%	13%	85%
	15-16	1%	6%	1%	7%	6%	7%	12%	13%	85%
	17-18	1%	3%	1%	3%	4%	5%	10%	11%	90%
	19-20	4%	7%	5%	7%	18%	16%	14%	23%	75%
	Total	2%	6%	3%	6%	7%	9%	12%	15%	84%
2. Physically/Sexually /Suggestive Contact (heterosexual)	13-14	50%	71%	50%	75%	17%	63%	21%	42%	33%
	15-16	52%	71%	36%	66%	24%	60%	27%	46%	33%
	17-18	49%	61%	49%	59%	43%	61%	43%	53%	24%
	19-20	40%	57%	34%	58%	40%	62%	39%	51%	33%
	Total	48%	65%	42%	65%	31%	61%	32%	48%	31%
3. Sexiness	13-14	6%	21%	6%	19%	2%	15%	11%	23%	87%
	15-16	3%	7%	1%	7%	0%	10%	11%	17%	86%
	17-18	1%	8%	2%	7%	3%	9%	9%	26%	88%
	19-20	5%	14%	2%	11%	11%	18%	13%	26%	80%
	Total	4%	13%	3%	11%	4%	13%	11%	23%	85%
4. Naked – Head and Full Body	13-14	0%	0%	0%	0%	0%	0%	4%	10%	96%
	15-16	0%	0%	0%	0%	0%	0%	3%	3%	97%
	17-18	0%	2%	0%	2%	0%	2%	0%	4%	100%
	19-20	0%	0%	0%	0%	0%	0%	2%	3%	98%
	Total	0%	1%	0%	1%	0%	1%	2%	5%	98%
5. Naked – Without Head and Full Body	13-14	0%	0%	0%	0%	0%	0%	4%	4%	96%
	15-16	0%	0%	0%	0%	0%	0%	1%	1%	99%
	17-18	0%	2%	0%	2%	0%	2%	1%	10%	99%
	19-20	0%	0%	0%	0%	0%	0%	3%	3%	97%
	Total	0%	1%	0%	1%	0%	1%	2%	5%	98%
6. Drug Use Shown	13-14	8%	29%	13%	29%	6%	29%	6%	29%	81%
	15-16	1%	3%	1%	3%	3%	3%	13%	10%	87%
	17-18	3%	10%	2%	11%	5%	17%	10%	20%	87%
	19-20	9%	17%	8%	16%	13%	20%	15%	23%	77%
	Total	5%	15%	6%	15%	7%	17%	11%	21%	83%

Table A2. Photo publication behavior of adolescent Facebook users by gender.

S: self-presentation; O: presentation of others.

Category	Gender	General Picture Category								
		Profile Pict.		Cover Pict.		Timeline		Priv. Mess.		Never
		S	O	S	O	S	O	S	O	S
1. Alcohol Shown	Male	10%	9%	12%	9%	20%	15%	16%	17%	76%
	Female	1%	5%	1%	5%	7%	10%	12%	17%	84%
	Total	6%	7%	6%	7%	14%	12%	14%	17%	80%
2. Physically/Sexually /Suggestive Contact (heterosexual)	Male	42%	49%	37%	42%	40%	49%	28%	35%	33%
	Female	46%	66%	41%	67%	34%	65%	38%	53%	31%
	Total	44%	57%	39%	55%	37%	57%	33%	44%	32%
3. Sexiness	Male	9%	12%	6%	10%	15%	13%	15%	16%	74%
	Female	2%	13%	2%	10%	4%	14%	11%	26%	86%
	Total	6%	12%	4%	10%	9%	13%	13%	21%	80%
4. Naked – Head and Full Body	Male	0%	0%	0%	0%	0%	0%	6%	7%	94%
	Female	0%	1%	0%	1%	0%	1%	1%	4%	99%
	Total	0%	0%	0%	0%	0%	0%	3%	5%	97%
5. Naked – Without Head and Full Body	Male	0%	0%	0%	0%	0%	0%	5%	6%	95%
	Female	0%	1%	0%	1%	0%	1%	2%	4%	98%
	Total	0%	0%	0%	0%	0%	0%	3%	5%	97%
6. Drug Use Shown	Male	14%	17%	9%	17%	13%	17%	18%	22%	73%
	Female	4%	13%	5%	13%	7%	18%	11%	21%	84%
	Total	9%	15%	7%	15%	10%	18%	14%	21%	78%