University of Twente

Bachelor Thesis

Positive Psychology and Technology

The impact of online dating and self-objectification on mental well-being

Johanna Lüke

July 2020

1. Supervisor: Dr. M.E. Pieterse
2. Supervisor: Dr. A.Z. Bosch

Table of Contents

Abstract

This study aims to investigate if frequent online dating might lead to self-objectifying behaviour and therefore, to lower mental well-being. Body shame and body satisfaction were included as moderators, as these are a part and associated with self-objectification. A cross-sectional survey was conducted to look at the participant's mental well-being, their frequency of online dating, self-objectification as the mediator and body shame and body satisfaction as moderators. Participants (N =125) were mostly undergraduate students (aged 18 to 54 years, M_{age} = 23 years, SD = 4,59). A moderated mediation analysis with PROCESS was conducted, but this moderated mediation could not be found. However, it was found that body shame moderated the relation between self-objectification and mental well-being. The results implicate that the frequency of online dating alone might not be a relevant factor that leads to self-objectifying behaviour, but that other moderators could be of interest.

Introduction

Today, we can stay inside to find a potential partner, welcome to the 21st century, where online dating gets more and more popular. By using online dating platforms or websites, one might find a romantic partner who possibly has the ideal characteristics to become the perfect match (Toma, 2015). This concept of dating websites already presented positive results as more than one-third of American couples, who married between 2005 and 2012, met online (Cacioppo, Cacioppo, Gonzaga, Ogburn, & Vander Weele, 2013).

While in the 1990s, online dating was still seen as an act of desperation, today, there may be more than one reason to make use of it. Next to the usual ways of meeting people like meeting at a bar, through work or friends, online dating becomes a more popular starting point in finding a partner (Valkenburg & Peter, 2007). First, people who face difficulties to meet new partners, due to time pressure or their social networks get the opportunity to find suitable partners with less time effort and more options (Toma, 2015). There is constant access to online websites which makes it less difficult to get in contact with new people individually and without the support of friends (Valkenburg & Peter, 2007). Second, it offers the user a higher control over self-presentation, which gives the power to decide how the user wants to be perceived by the potential partners (Toma, 2015). Another motivation to participate in online dating is the possibility to find casual sex partners in a short distance (Sumter, Vandenbosch, & Ligtenberg,

2017). This helps to satisfy sexual needs, especially in young adults. At first women reported to use online dating platforms for casual sex but looked for long-term relationships in the end, while men were more interested in casual sex (Botnen, Bendixen, Grøntvedt, & Kennair, 2018; Sumter et al., 2017). In some studies, it was shown that intimate online relationships can have a positive effect on mental well-being in the form of that people reported better moods and that they felt less lonely and supported than having no relation (Toma, 2015). Despite the positive aspects regarding the different motivations of users to engage in online dating, there is the question what kind of negative impact online dating can have on the mental health and well-being of its users. Therefore, the different effects of online dating on mental health are considered. Although one leading factor for the general human health and mental well-being are intimate relationships (Lomanowska & Guitton, 2016) and online technologies offer to increase connection and stimulate peoples' openness to share personal and intimate information with other users, there is reduced personal contact (Toma, 2015). Moreover, are online dating platforms like Tinder associated with antisocial behaviour like fraud and violation of privacy (Duncan & March, 2019). Furthermore, particularly women experienced harassment and objectification on Tinder, which could have negative consequences on the mental well-being such as feelings of guilt, shame and depression.

This paper focuses on one of these moderating factors, objectification, particularly on self-objectification, that might have a negative effect on mental well-being when people use online dating. When taking a step back from online dating and looking at the general usage of social network sites (SNS), people desire to be liked by others and therefore a certain self-presentation is needed (Lyu, 2016). To explain why people make use of self-presentation, especially in online settings, one can use the self-presentation theory (SPT) (Chua & Chang, 2016; Mascheroni et al., 2015). Ellison (2006) and Hall, Park, Song and Cody (2010) found that people look for a balance between their true self, where they make use of a real self-presentation and their ideal self, where they form a desired self-presentation. Another factor for self-presentation is the motive of being liked by others and to gain an amount of positive feedback in form of *likes* (e.g. Instagram and Facebook) from the other users (Sherman, Payton, Hernandez, Greenfield, & Dapretto, 2016). When a persons' concerns about making a positive impression online are high and they consciously change parts of their characteristics (like filters on a picture, lying about weight), is it called strategic misinterpretation (Hall, Park, Song & Cody, 2010). Doing this, the user has a certain control and power over his or her self-description and can make sure that others perceive him or her in a desired and positive way which also works as a protector against possible rejections online. In previous studies it was noticed that

people use strategic self-presentation to gain self-esteem and support from others on social media sites. An example is the social media platform Instagram with over 700 million profiles in 2017 (Yakar, Jacobs, & Agarwal, 2020), here people can upload pictures of themselves and get attention in form of likes and comments from other users (Chua & Chang, 2016). Lyu (2016) found that especially women, make use of different applications for their pictures in order to adapt their appearance according to the sociocultural standard beauty ideals and to get the desired feedback. In the western culture, women's bodies are often objectified which means that they are reduced to the way they look and that they need to be sexually attractive (Calogero, Tantleff-Dunn, & Thompson, 2011; Frederickson & Roberts, 1997). The structure of online dating platforms is comparable with SNSs in terms of presenting the self by uploading pictures, where the pressure to be considered attractive seems even higher, in order to find a potential partner (Toma, 2015). Therefore, it is assumed that women transfer these objectified ideals in their behaviour like editing their pictures from social media sites to online dating sites. For example, making them look thinner in order to become closer to the western beauty ideals of thinness. Using different strategies of self-presentation like modifying the own appearance on social media sites it is associated with self-objectification (Gioia, Griffiths, & Boursier, 2020). The objectification theory helps to understand what can happen to people psychologically and behaviourally when they are exposed to a culture where especially the objectification of a woman's body is omnipresent (Frederickson & Roberts, 1997; Moradi & Huang, 2008). Objectification is when a person is depersonalized and perceived by others as an object (Haslam, 2006; Heflick & Goldberg, 2014). Whereas, when a person is only valued and given worth for his or her appearance rather than for individual abilities it is called sexual objectification (Calogero et al., 2011; Frederickson & Roberts, 1997). Particularly young girls and women are exposed to objectifying comments and tend to internalize this perception from others of their own bodies, which is called self-objectification. Literature described that self-objectification can have a damaging impact on mental health (Frederickson & Roberts, 1997). According to their review, some of these factors are general shame, appearance anxiety, a drive for thinness, inability of task performance or an increased negative mood. Furthermore, are anxiety, body shame, a positive attitude toward cosmetic surgery and eating disorder seen to be correlated to self-objectification. Not only women experience self-objectification as young males also show lower self-esteem, more negative moods and eating disorders. Concentrating and following mainly accounts of fitness and model influencers on SNSs like Instagram might also lead to a more objectified perspective of the own body (Cohen, Newton-Johan, & Slater, 2017). When the body is seen as an object one can take two parts into account: (a) body

surveillance – looking at the own body from the perspective of an external person and (b) body shame – feeling ashamed when the body does not fit in line with the cultural beauty standards (Frederickson & Roberts, 1997). Body surveillance is associated to be more present when people are using social media more frequently and also predicts higher levels of body shame. (Gioia et al., 2020). While

body shame is described as the perception of failing to meet the cultural beauty ideals another factor might be worth to be considered (Frederickson & Roberts, 1997). Body satisfaction seems to be closely related to body shame, as body dissatisfaction is the degree of having a negative view of the own physical appearance (Franchina & Lo Coco, 2018).

When looking at the way how people try to adapt to the western beauty ideals, it has been shown that women tend to stress their body parts and sexual function online, by using for example seductive, sexy and suggestive poses or showing more skin in the uploaded pictures and selfies, where selfies serve as an extra show-off for self-presentation (Aubrey & Frisby, 2011; Chua & Chang, 2016). Bell, Cassarly and Dunbar (2018) investigated that a third of female Instagram users upload objectified pictures of themselves using beforementioned poses. While self-objectification is largely attributed to women, males also experience an increase in self-objectifying behaviour when using social media platforms (Gioia, Griffiths, & Boursier, 2020). Furthermore, it was argued that the level of self-objectification might have an influence on posting these pictures and that objectified self-images got more positive feedback than other images (Bell et al., 2018). In another study about young females it was found that they would like to be perceived as beautiful and sexy, which is why they might be more open to use social media like Instagram in a self-objectified way (Tolman & McClelland, 2011). In an online dating context, users tend to use deception, where women were more likely to stress their physical appearance and men tended to adjust their status and income (Hitsch, Hortaçsu, & Ariely, 2010). Furthermore, women concealed their true weight, but users also reported that pictures they post where mostly accurate, because of the wish for a future interaction (Toma, 2015). Furthermore, regarding to online dating, there is an increased likelihood of ideal self-presentation when trying to attract a potential partner (Guadagno, Okdie, & Kruse, 2012). One study showed that an attractive appearance was important for women and men. Men with a high income, which stands for a higher status, were more likely to get in contact with potential partners. In addition to that, short men and overweight women were not as successful to be contacted and to receive emails (Hitsch et al., 2010). Which might be an explanation for the fact that women and men deceive others to be considered as attractive. On Tinder for example, one of the most popular dating apps in the world, one has to upload pictures and others to swipe

right if they perceive you as attractive (Newall, 2015; Smith, 2015). There is the promise made that there will not be rejection as one will only get a match if both parties swiped right (Tinder). This means that a user cannot receive a direct rejection, as the persons you swiped right will never know that you liked them, unless they liked you too. In short, a person can only get in contact with you when both parties swiped right and are attracted to each other, which excludes that a user is personally rejected. Nevertheless, the use of Tinder can be described as an "objectifying process" that might cause mental health problems such as "body consciousness and psychological distress" (Newall, 2015; Smith, 2015). Pictures of potential matches are suggested to the individual user and based on a brief look at these pictures, it is decided whether they are attracted to their counterpart.

It was discussed that people tend to use self-presentation on other social media sites (Chua & Chang, 2016; Mascheroni et al., 2015). They do this because of the inner desire to become their ideal self and to gain positive feedback from other online users (Hall et al., 2010; Ellison, 2006). In order to achieve this, people make use of the so-called strategic misinterpretation, they lie about certain aspects of their appearances for example about their body weight (Hall et al., 2010). By doing this they hope to impress other users and to gain more self-esteem. Lyu (2016) found that especially women make use of appearance modifications to come closer to the common beauty standards in the western society. Using this kind of self-presentation is associated with self-objectification. (Gioia, Griffiths, & Boursier, 2020). Self-objectifying behaviour can have negative consequences such as mental disorders (Frederickson & Roberts, 1997). Body surveillance and body shame were introduced as two different parts of self-objectification. While body surveillance is the objectified view of the own body and was described to predict body shame, is body shame the feeling to fail the cultural beauty ideals. Because these concepts seem to be closely related in the context of research with social media sites, where people post objectified pictures of themselves online and make use of strategic misinterpretation, this study is aiming to find out what impact self-objectification might have on the general mental well-being of online dating users. The structure of online dating platforms is quite similar, in terms of presenting the self by uploading pictures, where the pressure to be considered attractive seems even higher, in order to find a potential partner (Toma, 2015). Online dating was described as an "objectifying process" on Tinder, which might cause psychological distress (Newall, 2015; Smith, 2015) and self-presentation on social media is associated with self-objectification (Gioia, Griffiths, & Boursier, 2020). But there is not yet enough research on how frequent online dating might influence self-objectification and if this

would have an impact on mental well-being. Body shame and body satisfaction were included to see whether there might be a moderating effect

Research Question

This study aims at answering the following question:

1. What impact do self-objectification, body shame and body dissatisfaction have on the general mental well-being of online dating users?

Additionally, two hypotheses are formulated regarding the research question:

1. High frequency of online dating levels is associated with higher self-objectification which leads to lower mental well-being, but only in people who experience high levels of body shame

2. High frequency of online dating levels is associated with higher self-objectification which leads to lower mental well-being, but only in people who experience high levels of body dissatisfaction

Method

Design

After the approval of the BMS Ethics Committee (200344) a cross-sectional survey design was employed. The collected data was part of a larger study, thus was an individual focus chosen. This study investigated frequency of online dating, self-objectification, well-being, body shame and body satisfaction.

Participants

There were 264 participants, but the number was reduced to 125 (N =125) participants, (aged 18 to 54 years, M_{age} = 23 years, SD = 4,59) who were German (70,4 %), Dutch (9,6 %) or with another national background (20%). The number of participants was reduced due to missing cases and because there were participants who never used online dating platforms. Next to distributing a link to potential participants of researcher's personal contacts, the online portal, SONA systems was used to find participants. SONA systems is an online portal to apply for studies and available for students of the University of Twente. Therefore, many participants were undergraduate students from the University of Twente. Data collection occurred from the 5th April until 30th April 2020.

Materials

Being part of a larger study, the materials consisted of an informed consent and different questionnaires. These questionnaires were filled out on the platform 'Qualtrics'. In total there were 63 items to be filled in on a computer which took approximately 25 minutes. The study was conducted in English and an internet connection was needed. Participants were asked to report their demographics (*age, gender, nationality and sexuality)* and whether they have used online dating. Frequency of online dating, self-objectification, well-being, body shame and body satisfaction were of interest for this study. Next to these concepts were self-esteem, rejection, self-compassion, body image concerns and sociocultural attitudes towards appearance reported.

Measurements

Independent Variable

The main independent variable *frequency of online dating* included a question (Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013) where the participants had to indicate how often they used their chosen online dating platform currently, in the past or never. To asses this a scale from 0 = *never,* then 1 = *once a month, 2 = 2-3 times a month, 4 = once a week, 4= 2-3 times per week, 5= 4-5 times per week, 6 = 2-3 times per day, 7 = 4-6 times per day, 8 = once an hour* to 9 = *2 or more times per hour* was used..

MHC-SF

In order to test the general well-being of the participants the MHC-SF was used, and it was determined whether the participants were flourishing or languishing (Keyes, 2008). The short form includes 14-items that measured the emotional, social and psychological well-being of the participants (e.g. "satisfaction in life" or "self-acceptance"). They could respond to each item with one of these answers: *"never, once or twice, about once a week, about two or three times a week, almost every day, every day".* The scores of the MHC-SF range from 0 to 5, where the total score can range from 0 to 70 points. The higher the score the higher is the well-being of the participant. In this study, not the total score was used but it was determined whether someone is flourishing, languishing or on a moderately mentally healthy level. To be classified with flourishing participants need to score 4 or 5 on items 1-3 and at least 6 times on items 4-14. To be classified with languishing participants need one score of 1 or to on items 1-3 and 1 or 2 at least 6 times on items 4-14. Internal consistency for the MHC-SF in Keyes evaluation was .89 and in this study the Cronbach's alpha was .90.

Objectified Body Consciousness Scale (OBCS)

To measure if participants view themselves from an objectified perspective and concentrate only on their bodies looks, instead of how it feels, the eight-item *body surveillance* scale from the OBCS was used (McKinley & Hyde, 1996). The internal consistency (α) was .89. Participants were asked to respond from 1 (*strongly disagree*) to 7 (*strongly agree*). The total score consisted of the mean of all reversed eight items, except for item 5 which is not reversed

and participants with a higher score indicated a higher level in body surveillance. The internal consistency Cronbach's alpha was .64 in this study.

Body-satisfaction scale

To find out how much participants were satisfied with certain parts of their body (e.g. their "*face*", "*nose*" or "t*ummy*") the body-satisfaction scale with 16-items was used (Slade, Dewey, Newton, Brodie, & Kiemle,1990). Participants responded to a 7-point Likert scale from "*very satisfied*" to "*very unsatisfied*". The internal consistency (α) was acceptable .80. The total score consisted of the mean of all 16 items and a higher score indicated higher levels the more dissatisfied is the participant with the own body. In this study Cronbach's alpha was .89.

Body Shame

In order to find out whether participants experienced body shame a subscale *body image concerns* of the *body uneasiness test (BUT)* was used, with an internal consistency (α) .90. (Cuzzolaro, Vetrone, Marano, & Garfinkel, 2006). The subscale with 9-items assessed if participants experience shame regarding their body shape and appearance (e.g. "*I am dissatisfied with my appearance.*"). Participants responded to *never, seldom, sometimes, often, very often, always*. The total score consisted of the mean of all 9 items, a high score indicated greater body image concerns, therefore higher levels of body shame. In this study was Cronbach's alpha .92.

Procedure

The survey was posted on SONA systems for undergraduate students from the University of Twente and was accessible through the online platform Qualtrics. Students from the University of Twente received 0,25 SONA credits for participation. Before a link was distributed to the participants. Every participant confirmed to participate voluntarily by providing consent (APPENDIX A) and completed the survey anonymously. After giving consent they had to report their demographics, like age, gender, sexuality and nationality. Then they had to indicate whether they made use of online dating currently, in the past or never. The participants who never used online dating only had to fill in the questions that did not consist of online dating information. After reporting their online dating behaviour: frequency, preferred online dating

platform and their social motives, they were asked to fill in the different questionnaires. The first was the Body-Satisfaction Scale, the Rosenberg Self-Esteem Scale, the Mental Health Continuum - Short Form, the Rejection Sensitivity RS-Adult questionnaire, the Self Compassion Scale - Short Form, Body Uneasiness Test Scale, Self- Objectification Scale, and at last the Sociocultural Attitudes Towards Appearance Scale-4.

Analysis

A cross-sectional survey design was employed. In order to analyse the collected data SPSS Statistics 26 was used. Before the analysis, descriptive statistics were computed for all five variables, including means, standard deviations, and Cronbach's alpha. Furthermore, a Pearson product-moment correlation was conducted between the five variables.
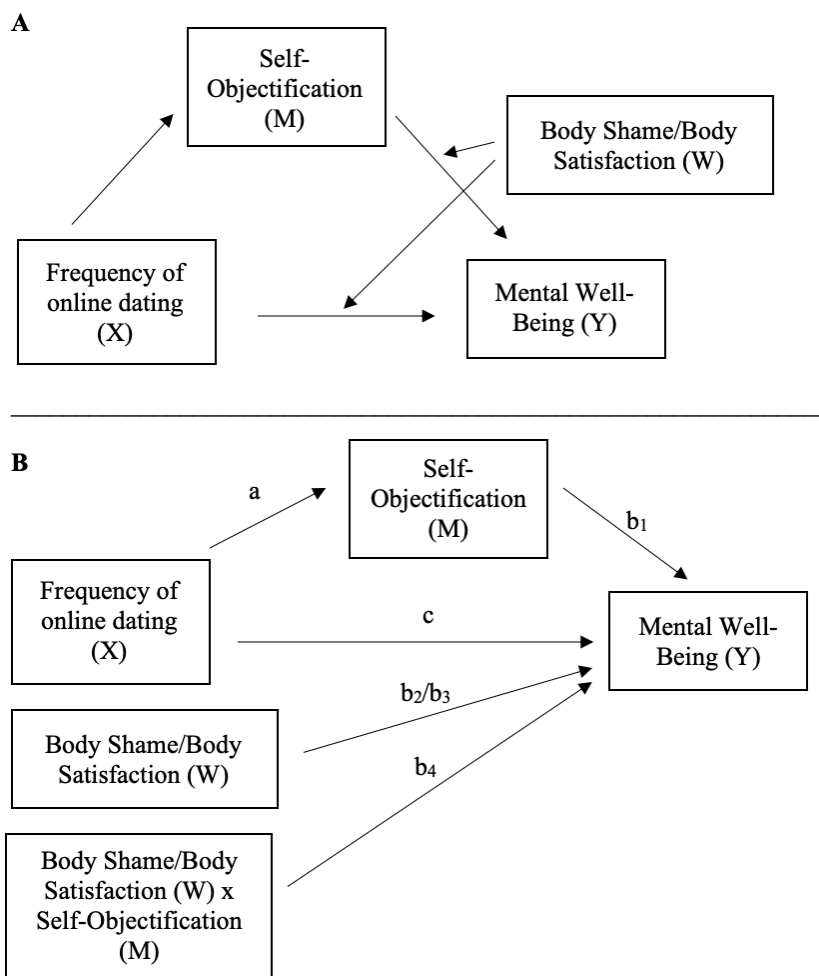
Figure 1 second stage moderated mediation model in conceptual form (panel A) and statistical form (panel B)

To investigate what impact self-objectification has on the general mental well-being of online dating users and to test the hypotheses two moderated mediation analyses were performed using PROCESS macro (Hayes 2017) in SPSS. The dependent variable for both analyses was mental well-being. The independent variable was the frequency of online dating. The mediator of the analyses was self-objectification and the moderatos were body shame and body satisfaction, which were exchanged per analysis. To test the hypotheses and research question, only participants who have used online dating in the past or used it currently were included and missing cases where excluded.

Results

Descriptive Statistics

Table 1

Descriptive Statistics

Variable	N	M	SD
Frequency of online dating	125	3.87	1.88
Mental Well-Being	125	1.18	.54
Body Dissatisfaction	125	2.86	.86
Self-Objectification	125	4.21	.83
Body Shame	125	2.65	1.01
Valid N (listwise)	125		

a. note: *M* = mean, *SD* = Standard Deviation

In *Table 1* is an overview of the average scores of all included participants. In general, participants spend *once a week* to *2-3 times per week* with an online dating platform. Their score for mental well-being had a level of 1.18, which displays that the participants well-being was quite moderate, with a tendency towards flourishing. Regarding body dissatisfaction, the mean scores show that on average participants where moderately satisfied with their body (M= 2.86), but with a trend towards slightly satisfied. In the case of self-objectification, the mean describes that participants were mostly neutral towards the statements of the questionnaire (M = 4.21). At last, participants reported on average that they *seldom* experience body shame, with

a tendency to *sometimes* for body shame levels (M = 2.65). This shows, that there might be an inclination towards higher levels of body shame.

In addition, a Pearson product-moment correlation was conducted to examine the relationship between frequency of online dating, mental well-being, body satisfaction, self-objectification and body shame. There was no significant correlation between frequency of online dating and the other four variables found. However, self-objectification and body shame were found to be positively correlated, $r(123) = .46$, $p < .001$. Self-objectification and body dissatisfaction were also found to be positively correlated, $r(123) = .32$, $p < .001$. Mental well-being and body dissatisfaction were found to be negatively correlated $r(123) = -.28$, $p < .001$. An overview of all significant correlations can be found in *Table 2*.

Table 2

Correlations (N = 125)

Variable	Body Shame	Mental Well-Being	Body Dissatisfaction
Self-Objectification	.46**	-.2*	.32**
Body Shame		-.21*	.5**
Mental Well-Being			-.28**

Note. **. Correlation is statistically significant at the .01 level.

*. Correlation is significant at the .05 level

Inferential Statistics

In order to test the two hypotheses a moderated mediation analysis was conducted with PROCESS macro (Hayes, 2020) in SPSS.
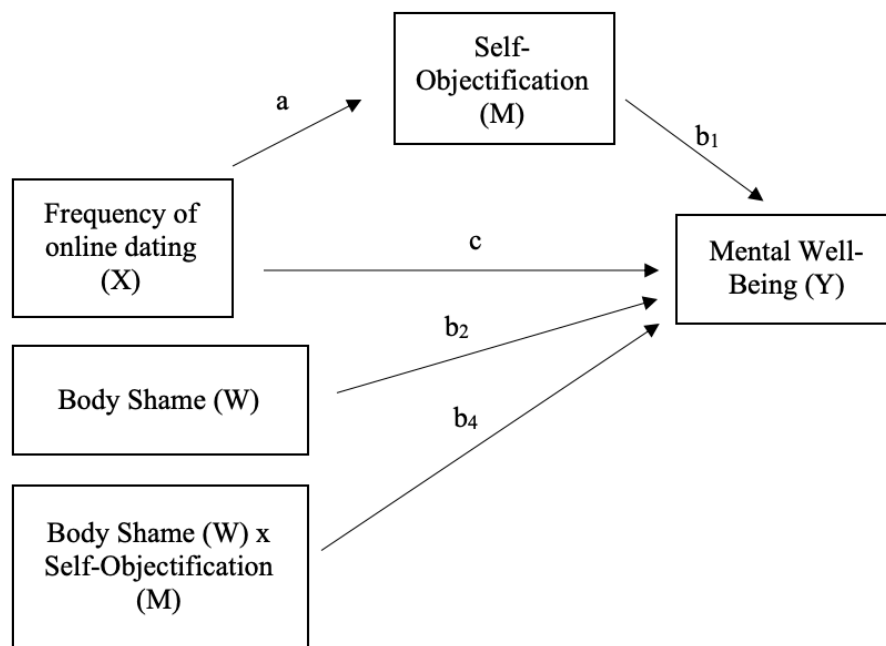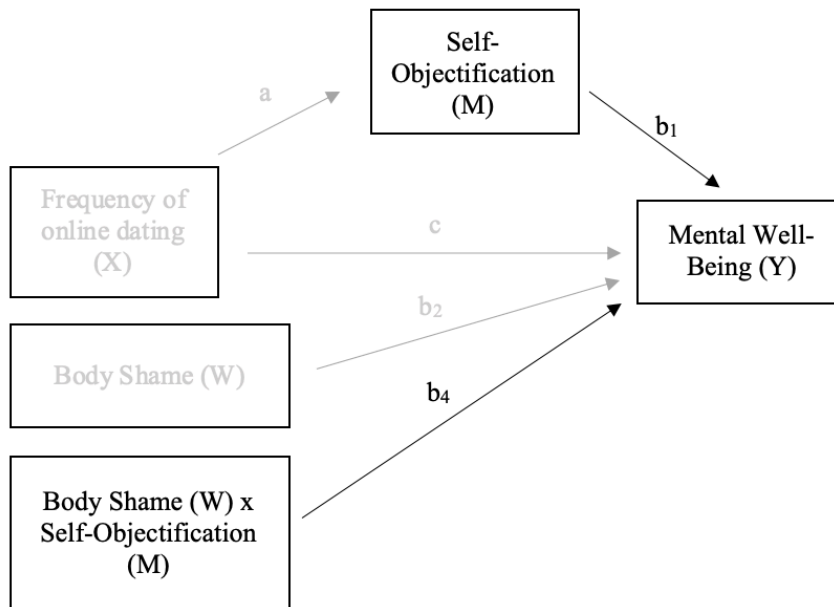

Figure 2 model to test first hypothesis

To test the first hypothesis whether high frequency of online dating levels which is assumed to lead to higher self-objectification (a) is associated with lower mental well-being (b_1), but only in people who experience high levels of body shame, body shame was included as the moderator for the b-path (b_2) and self-objectification as the mediator. The first analysis showed that there is a non-significant index of moderated mediation 95% Cl [-.01,-.08]. This means that there is no moderated mediation and body shame had no significant effect on the (c)-path. Furthermore, there were no significant conditional indirect or direct effects. This means that high frequency of online dating had no direct effect on mental well-being (c) and there was no significant conditional indirect effect of frequency of online dating (a) on self-objectification (b_1) and then on mental well-being. However, when looking at the b-path, there was a significant interaction between the mediator (self-objectification) and the moderator (body shame) b_4 = -.11, 95 % CI = [-.21,-.01], p = .026 This means that the effect of self-

objectification on mental well-being depends on body shame (*see Figure 3*). In order to check whether there really was a moderation, a single moderation for self-objectification as the independent variable and body shame as the moderator was conducted b = -.113, 95% CI [-,21,-,01], p = .027.

Figure 3 Unconditional interaction of Self-Objectification and Body Shame on Mental Well-Being

In *Figure 4* one can see that with higher levels of body shame (e.g. 3.66) and high self-objectification the level of mental well-being is going from moderate which stands for 1 in the direction of languishing, which means that the level of mental well-being is lower.
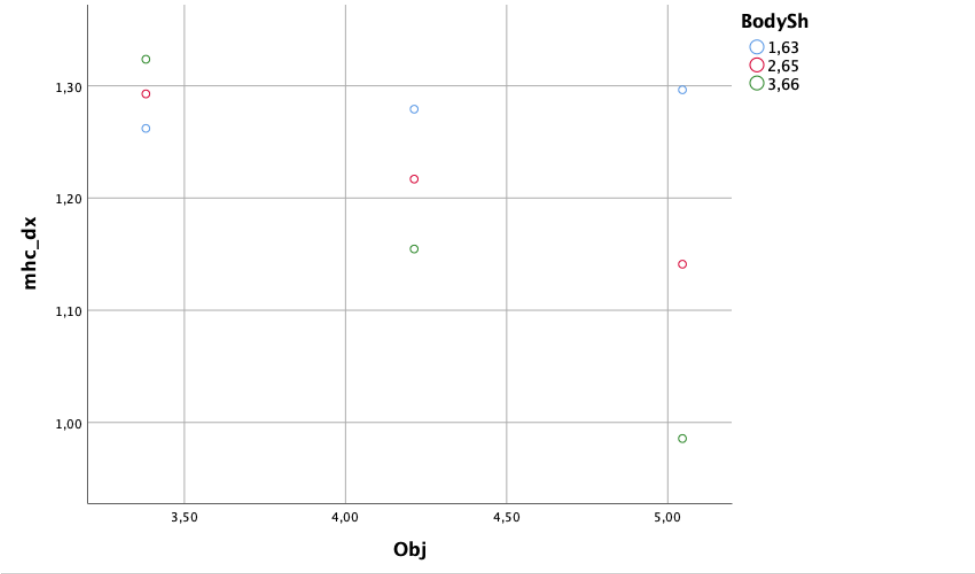

Figure 4 Moderation Body Shame

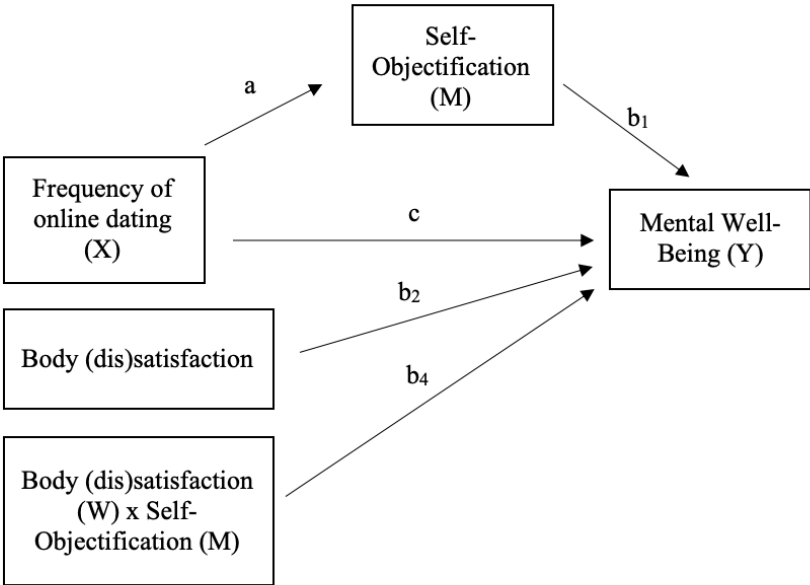*Note.* Mhc_dx = Mental Well-Being, Obj = Self-Objectification, BodySh = Body Shame

Figure 5 model to test second hypothesis

To test the second hypothesis whether high frequency of online dating levels which is assumed to lead to higher self-objectification (a) is associated with lower mental well-being (b_1), but only in people who experience high levels of body dissatisfaction, body dissatisfaction was included as the moderator for the b-path (b_2) and self-objectification as the mediator. The first analysis showed that there is a non-significant index of moderated mediation 95% Cl = -.01 to .01. This means that there is no moderated mediation and body satisfaction had no significant effect on the (c)-path. Furthermore, there were no significant conditional indirect or direct effects. This means that high frequency of online dating had no direct effect on mental well-being (c) and there was no significant conditional indirect effect of frequency of online dating (a) on self-objectification (b_1) and then on mental well-being. When looking at the b-path, there was no significant interaction between the mediator (self-objectification) and the moderator (body satisfaction) b_4 found.

Discussion

The current study aimed to investigate what impact self-objectifying behaviour has on the mental well-being of participants who used online dating in the past or use it currently. First, a two moderated mediation analyses were conducted, and body shame and body satisfaction were included to see whether these amplify the role of self-objectifying behaviour. It can be stated that no direct mediating effect was found due to the absence of a correlation between the frequency of online dating and mental well-being. However, the role of self-objectification as a risk factor for lower mental well-being was confirmed, as well as the amplifying interaction with body shame. Moreover, became self-objectification an independent predictor of mental well-being, which was approved by an individual analysis to confirm that the interaction between self-objectification and mental well-being was influenced by body shame. First, it was expected that an increased frequency of online dating amplifies self-objectification which would lead to lower mental well-being and that body shame would have strengthened the effect. In contrast to that the findings showed that a higher frequency of online dating did not increase self-objectifying behaviour which would lead to lower mental well-being, but that body shame is an important factor predicting lower mental well-being when a person is engaging in self-objectifying behaviour.

Explanation

In contrast to the first hypothesis, high frequency of online dating did not lead to higher self-objectification neither to lower mental well-being. It was assumed that spending more time on online dating platforms would lead to more self-objectifying behaviour. This was expected because in prior research it was found that users seem to adjust their appearance online in social media settings like Instagram and make use of objectified behaviour (Bell, Cassarly, & Dunbar, 2018). Online dating platforms work with a similar approach, where they offer users the opportunity to upload pictures of themselves and when they are perceived as attractive by others, they get a match (Newall, 2015; Smith, 2015). Therefore, it was assumed that the more people use online dating platforms and engage in uploading physical attractive pictures, the more they focus on their appearances and experience an increase of self-objectification. In addition to that there was the assumption that in online dating platforms, where users are aiming to find a potential partner make even more use of self-objectifying behaviour (Toma, 2015). Furthermore, did frequent online dating not amplify the mental well-being of the participants. Regarding the contradiction to the assumptions it might be that online dating platforms do not facilitate self-objectification as much as other social network sites as expected. On other SNSs, such as Instagram, the user receives more direct feedback on his posts, which is often visible in the form of "likes" and comments (Sherman et al., 2016). Previous studies found that especially young women get more positive feedback on suggestive pictures (Calogero et al., 2011). It was therefore assumed that users in the online dating context also receive more positive feedback on seductive pictures, for example through an increase in matches or messages from potential partners and therefore experience higher self-objectification. However, the feedback on online dating platforms like Tinder is not as publicly visible as on other SNSs, since only the user himself can recognize after a while that not all preferred partners resulted in a match. In addition, did online dating not reinforce lower mental well-being. On the one hand people might want to find a long-term partner but on the other hand mostly undergraduate students participated in this study whom might plan some casual sex and use online dating platforms as an entertainment during their free time (Sumter et al. 2017). In addition, when looking at the descriptive statistics of mental well-being and frequency of online dating one could see that the frequency of online dating was *once* to *three times a week* in general and the standard deviation was higher, which means that there were also participants who barely used the online dating platforms and some

participants who used them every day. When combining this with the moderate levels of the mental well-being of the participants it shows that most participants were quite content with their lives and that frequency of online dating could not have that much of an impact because most of them did not use it that frequently. There might be other factors than frequency of online dating that have a negative effect on mental well-being, which is why self-objectification, body shame and body dissatisfaction were included.

In relation to the first hypothesis it was found that participants who experienced high body shame and had higher levels of self-objectification scored lower in mental well-being. It must be added, that at the beginning it was assumed that the frequency of online dating was crucial for lower mental well-being because frequent use of other SNSs like Instagram was found to lead to self-objectifying experiences (Cohen, 2017). However, the analysis showed that in this study not the frequency of online dating was associated with lower mental well-being, but self-objectification and body shame. This can now be explained by the beforementioned literature, which showed that self-objectification can have a damaging impact on the mental health of a person (Frederickson & Roberts, 1997). Body shame was included because participants in previous research did not only show dissatisfaction with their appearance but also signs of body shame (Strubel & Petrie, 2017). The experiences of body shame and the pressure from the cultural norms regarding the ideal self can lead to negative consequences like distress and other mental health disorders like anxiety and eating disorders. In addition, the result that online dating had no great effect on mental well-being could be explained by the assumption that self-objectification and body shame existed before using online dating platforms. Expecting that most of the participants used any kind of social media, like Facebook or Instagram, one might argue that these SNSs can promote self-objectifying experiences (Gioia et al., 2020). Therefore, the internalization of this feeling could have been there already before using these forms of online media. When participants already had the impression of not being able to meet certain cultural ideals before, then using an online dating platform, might stress these feelings even more.

In contrast to the second hypothesis, body dissatisfaction did not amplify the role of self-objectification. Body dissatisfaction was chosen as a moderator because it seems closely related to body shame and was part of previous research (Strubel & Petrie, 2017). Body shame described as the upcoming feeling when failing to meet the cultural body ideals (Noll & Frederickson, 1998) and body dissatisfaction as the degree of having a negative view of the own physical body (Franchina & Lo Coco, 2018). Why body dissatisfaction did not have the significant effect as expected before, could have been due to the fact that the participants had

a quite moderate scores for body dissatisfaction. This means that in general most participants were more satisfied with their body than dissatisfied. Considering these results, the possibility that body dissatisfaction would have a negative effect was low. Furthermore, one could see in the correlation table (*see Table 2)* that mental well-being and body dissatisfaction were negatively correlated. But as the correlation was weak, the possibility that body satisfaction would lead to low mental well-being was rather unlikely in this case. Additionally, was the Cronbach's alpha of the self-objectification items rather low.

Limitations

The main limitation was that cross-sectional data was used for this study. Due to the nature of cross-sectional studies they are limited as they are carried out at a certain point in time and indicate the order of events (Levin, 2006). Therefore, it is impossible to make causal inferences which should be considered when using the findings of this study. Additionally, limitations were that there was the Covid-19 situation, where many people were in distress and there could not be as many participants collected as it might have been possible without the virus. Even though this study used a survey, there were still participants who had difficulties to connect with the internet or had difficulties to open the link, especially when they were not students of the University of Twente and did not have access to the SONA system. Furthermore, not all assumptions for the moderated mediation regression analysis were checked. In addition to that, participants that currently used Tinder might also have reduced using the online dating platforms seriously when it became clear that they would not be able to meet potential partners directly, due to the virus. At last, the study was part of a bigger study with different directions of questionnaires, which might also have had an impact on the participants concentration.

Future Research

Since, this study was part of a larger study, future research could only use specific questionnaires that focus on the impact of frequency of online dating on mental well-being. In order to find out if online dating frequency might have more of an impact research could do a longitudinal research for example about six months, where there will be a pre-test and a post-test conducted. The pre-test and post-test would serve as a comparison to see whether participants had already high self-objectifying and body shame levels before using an online

dating platform. Participants would then have to use the online dating platform of choice or platform determined beforehand, every day for a certain amount of times, here it will have to be defined how much time is considered to have an effect in the end. Moreover, these studies participants were mostly students from the University and future research could try to collect a more diverse range of participants in order to be able to generalize results more.

In addition, there might be some other potential moderators that could be interesting to investigate for future research. It might be that frequency of online dating alone is not relevant enough to increase self-objectifying behaviour in users. These moderators could be for example personality or offline social relationships and the received feedback from other users (Moody, 2001; van den Eijnden et al., 2008). What personality is more likely to engage in self-objectifying behaviour when using online dating platforms? And could offline social relationships and received feedback moderate the effect of frequency of online dating on self-objectifying behaviour?

Conclusion

To answer the research question there was no impact of self-objectifying behaviour on the mental well-being of participants who used online dating in the past or use it currently found. Despite the limitations this study is still valuable for future research as the findings show that frequency of online dating alone might not be relevant enough to lead to more self-objectification in users and therefore to lower mental well-being, however, there might be other moderators that would be of interest to investigate and could be included into the model. Furthermore, it was found that body shame has an effect on the relation of self-objectification and mental well-being, which means that they can be kept in the model and can be used in other studies to be investigated further.

References

Aubrey, J. S., & Frisby, C. M. (2011). Sexual Objectification in Music Videos: A Content
Analysis Comparing Gender and Genre. *Mass Communication and Society*, *14*(4),
475-501. https://doi.org/10.1080/15205436.2010.513468

Bell, B. T., Cassarly, J. A., & Dunbar, L. (2018). Selfie-Objectification: Self-Objectification
and Positive Feedback ("Likes") are Associated with Frequency of Posting Sexually
Objectifying Self-Images on Social Media. *Body Image*, *26*, 83
89. https://doi.org/10.1016/j.bodyim.2018.06.005

Botnen, E. O., Bendixen, M., Grøntvedt, T. V., & Kennair, L. E. (2018). Individual
differences in sociosexuality predict picture-based mobile dating app use. *Personality
and Individual Differences*, *131*, 67-73. https://doi.org/10.1016/j.paid.2018.04.021

Calogero, R. M., Tantleff-Dunn, S., & Thompson, J. K. (2011). *Self-objectification in
Women:Causes, Consequences, and Counteractions*. American Psychological
Association.

Cacioppo, J. T., Cacioppo, S., Gonzaga, G. C., Ogburn, E. L., & VanderWeele, T. J. (2013).
Marital satisfaction and break-ups differ across on-line and off-line meeting
venues. *Proceedings of the National Academy of Sciences*, *110*(25), 10135
10140. https://doi.org/10.1073/pnas.1222447110

Chua, T. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage
girls' engagement in self-presentation and peer comparison on social
media. *Computers in Human Behavior*, *55*, 190
197. https://doi.org/10.1016/j.chb.2015.09.011

Cohen, R., Newton-John, T., & Slater, A. (2017). The relationship between Facebook and
Instagram appearance-focused activities and body image concerns in young
women. *Body Image*, *23*, 183-187. https://doi.org/10.1016/j.bodyim.2017.10.002

Cuzzolaro, M., Vetrone, G., Marano, G., & Garfinkel, P. E. (2006). *The Body Uneasiness Test
(BUT): Development and validation of a new body image assessment scale. Eating
and Weight Disorders - Studies on Anorexia, Bulimia and Obesity, 11(1), 1
13.* doi:10.1007/bf03327738

Duncan, Z., & March, E. (2019). Using Tinder® to start a fire: Predicting antisocial use of
Tinder® with gender and the dark tetrad. *Personality and Individual Differences*, *145*,
9-14. https://doi.org/10.1016/j.paid.2019.03.014

Ellison, N., Heino, R., & Gibbs, J. (2006). Managing Impressions Online: Self-Presentation
Processes in the Online Dating Environment. *Journal of Computer-Mediated
Communication*, *11*(2), 415-441. doi:10.1111/j.1083-6101.2006.00020.x

Fox, J., & Rooney, M. C. (2015). The Dark Triad and trait self-objectification as predictors
of men's use and self-presentation behaviors on social networking sites. *Personality
and Individual Differences*, *76*, 161-165. doi:10.1016/j.paid.2014.12.017

Franchina, V., & Coco, G. L. (2018). The influence of social media use on body image
concerns. *International Journal of Psychoanalysis and Education, 10*(1), 5–
14 http://www.psychoedu.org/index.php/IJPE/article/view/218.

Fredrickson, B. L., & Roberts, T. (1997). Objectification Theory: Toward Understanding
Women's Lived Experiences and Mental Health Risks. *Psychology of Women
Quarterly*, *21*(2), 173-206. https://doi.org/10.1111/j.1471-6402.1997.tb00108.x

Gioia, F., Griffiths, M. D., & Boursier, V. (2020). Adolescents' body shame and social
networking sites: The mediating effect of body image control in photos. *Sex
Roles*. https://doi.org/10.1007/s11199-020-01142-0

Guadagno, R.E., Okdie, B. M., & Kruse, S. A. (2012). *Dating deception: Gender, online dating,
and exaggerated self-presentation. Computers in Human Behaviour, 28(2),642-647.*
Doi: 10.1016/j.chb.2011.11.010

Hall, J. A., Park, N., Song, H., & Cody, M. J. (2010). Strategic misrepresentation in online
dating: The effects of gender, self-monitoring, and personality traits. *Journal of
Social and Personal Relationships*, *27*(1), 117-135. doi:10.1177/0265407509349633

Haslam, N. (2006). Dehumanization: An Integrative Review. Personality and Social
Psychology Review, 10(3), 252-264. https://doi.org/10.1207/s15327957pspr1003_4

Heflick, N. A., & Goldenberg, J. L. (2014). Seeing Eye to Body. Current Directions in
Psychological Science, 23(3), 225-229. https://doi.org/10.1177/0963721414531599

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process
analysis: A regression-based approach* (2nd ed.). Guilford Publications.

Hitsch, G. J., Hortaçsu, A., & Ariely, D. (2010). What makes you click?—Mate preferences
in online dating. *Quantitative Marketing and Economics*, *8*(4), 393
427. https://doi.org/10.1007/s11129-010-9088-6

Keyes, C.L.M. (2006). Mental health in adolescence: Is America's youth
flourishing? *American Journal of Orthopsychiatry, 76*, 395–402.

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S.
(2008). Evaluation of the mental health continuum-short form (MHC-SF) in

setswana-speaking south africans. *Clinical Psychology and Psychotherapy, 15(3)*,
181-192.

Levin, K. A. (2006). Study design III: Cross-sectional studies. *Evidence-Based
Dentistry*, *7*(1), 24-25. https://doi.org/10.1038/sj.ebd.6400375

Lomanowska, A. M., & Guitton, M. J. (2016). *Online intimacy and well-being in the digital
age. Internet Interventions, 4, 138–144.* doi:10.1016/j.invent.2016.06.005

Lyu, S. O. (2016). Travel selfies on social media as objectified self-presentation. *Tourism
Management*, *54*, 185-195. doi:10.1016/j.tourman.2015.11.001

Mascheroni, G., Vincent, J., & Jimenez, E. (2015). "Girls are addicted to likes so they
postsemi-naked selfies": Peer mediation, normativity and the construction
ofidentityonline. *Cyberpsychology: Journal of Psychosocial Research
onCyberspace*, *9*(1). https://doi.org/10.5817/cp2015-1-5

McKinley, N. M., & Hyde, J. S. (1996). *The Objectified Body Consciousness
Scale.Psychology of Women Quarterly, 20(2), 181–
215.* doi:10.1111/j.14716402.1996.tb00467.x

Moody, E. J. (2001). Internet use and its relationship to loneliness. *CyberPsychology
&Behavior*, *4*(3), 393-401. https://doi.org/10.1089/109493101300210303

Moradi, B., & Huang, Y. (2008). Objectification Theory and Psychology of Women: A
Decade of Advances and Future Directions. *Psychology of Women Quarterly*, *32*(4),
377-398. https://doi.org/10.1111/j.1471-6402.2008.00452.x

Newall, S. (2015). Tinder: The online dating app everyone is still talking about. Marie Claire,
(August (17)). Retrieved from http://www.marieclaire.co.uk/blogs/
543941/tinder-the-online-dating-app-that-everyone-s-talking-about.html

Noll, S. M., & Fredrickson, B. L. (1998). *A Mediational Model Linking Self-Objectification,
Body Shame, and Disordered Eating. Psychology of Women Quarterly, 22(4), 623
636.*doi:10.1111/j.1471-6402.1998.tb00181.x

Rollero, C., & De Piccoli, N. (2017). Self-Objectification and Personal Values. An
Exploratory Study. *Frontiers in Psychology*, *8*. doi:10.3389/fpsyg.2017.01055

Sherman, L. E., Payton, A. A., Hernandez, L. M., Greenfield, P. M., & Dapretto, M. (2016).
The power of the like in adolescence. *Psychological Science*, *27*(7), 1027-
1035. https://doi.org/10.1177/0956797616645673

Slade, P. D., Dewey, M. E., Newton, T., Brodie, D., & Kiemle, G. (1990). Development and
preliminary validation of the body satisfaction scale (BSS). *Psychology &
Health*, *4*(3), 213-220. https://doi.org/10.1080/08870449008400391

Smith, C. (2015). By the numbers: 17 impressive Tinder statistics. Digital Market- ing

    Stats/Strategy/Gadgets, (May (9)). Retrieved from http://expandedramblings.

    com/index.php/tinder-statistics/

Smith, A. (2016, February 11). 15% of American Adults Have Used Online Dating Sites

    Mobile Dating Apps. *Pew Research Center*.

Strubel, J., & Petrie, T. A. (2017). Love me Tinder: Body image and psychosocial

    functioning among men and women. *Body Image*, *21*, 34-38.

    doi:10.1016/j.bodyim.2017.02.006

Sumter, S.R., Vandenbosch, L., & Ligtenberg, L. (2017). *Love me Tinder: Untangling*

    emerging adults' motivations for using the dating application Tinder.Telematics and

    Informatics., 34(1), 67-78 https://doi.org/10.1016/j.tele.2016.04.009

Tolman, D. L., & McClelland, S. I. (2011). Normative Sexuality Development in

    Adolescence: A Decade in Review, 2000-2009. *Journal of Research on Adolescence,*

    21(1), 242 255. doi:10.1111/j.1532-7795.2010.00726.x

Toma, C. L. (2015). Online dating. *The International Encyclopedia of Interpersonal*

    Communication, 1-5. https://doi.org/10.1002/9781118540190.wbeic118

Valkenburg, P. M., & Peter, J. (2007). *Who Visits Online Dating Sites? Exploring Some*

    Characteristics of Online Daters. CyberPsychology & Behavior, 10(6), 849

    852. doi:10.1089/cpb.2007.9941

Van den Eijnden, R. J., Meerkerk, G., Vermulst, A. A., Spijkerman, R., & Engels, R. C.

    (2008). Online communication, compulsive internet use, and psychosocial well-being

    among adolescents: A longitudinal study. *Developmental Psychology*, *44*(3), 655

    665. https://doi.org/10.1037/0012-1649.44.3.655

What is Tinder? (n.d.). Tinder. Retrieved from

    https://www.help.tinder.com/hc/enus/articles/115004647686-What-isTinder-

Yakar, F., Jacobs, R., & Agarwal, N. (2020). The current usage of Instagram in

    neurosurgery. *Interdisciplinary Neurosurgery*, *19*,

    100553. https://doi.org/10.1016/j.inat.2019.100553

APPENDIX

APPENDIX A

Informed Consent

Dear participant,
You are being invited to participate in a research study about "Mental wellbeing in an era of online dating". This study is being done by a group of third-year Psychology students from the University of Twente from the Faculty of Behavioural, Management, and Social Sciences at the University of Twente.
The purpose of this research is to investigate the relationship between online dating and different facets of mental wellbeing, and will take approximately 20-30 minutes to complete. The data collected in this online survey will be treated strictly confidential. As such, all analysis of the collected data occurs anonymously and only for the purpose of this study. If the data is published, measures will be taken to ensure that no data of any individual is recognizable as such.
Your participation in this study is entirely voluntary and you can withdraw at any time. There are no right or wrong answers to the questions. Try to go along with the first thoughts you have.

We believe there are no known risks associated with this research study. We will minimize any risks by safely storing the data, and anonymize all of your answers. However, during the study you are asked to individually self-reflect upon different constructs of your current mental well-being level. If you have the feeling that your current level of mental well-being is at risk we kindly invite you (if you are a student of the University of Twente to contact the student psychologist (please contact the secretariat of SACC on office hours: +31 53 489 2035 or visit the desk in the
Vrijhof, 3rd floor, room 311) or your study advisor) to get help by contacting self-help hotlines (https://www.nhs.uk/conditions/stress-anxiety-depression/mental-health-helplines/).

Study contact details for further information: Miriam Sanhaji, m.sanhaji@student.utwente.nl
Charlie Chrie, c.s.chrie@student.utwente.nl Lea Faesing, l.m.faesing@student.utwente.nl

Thank you for your participation.

In compliance with the EU General Data Protection Regulation GDPR for collection of new data active, informed consent is required.

I understand and consent that:

1. I am 18 years old or older.
2. The procedure will approximately take 20-30 minutes.
3. I understood the content and agreed to contribute my data for the use of this

research.
4. I can withdraw from this research at any time by informing the researchers and all my
data will be deleted.
5. My personal information will be anonymised to protect my privacy.
6. With my permission, I agree that all my data can be evaluated and used for the research.
7. I have been given the guarantee that this research project has been reviewed and approved by the BMS Ethics Committee. For research problems or any other questions regarding the research project, the Secretary of the Ethics Commission of the faculty Behavioural, Management and Social Sciences at the University of Twente may becontaced through ethicscommittee-bms@utwente.nl

In the case of questions or ambiguities, the researchers Miriam Sanhaji (m.sanhaji@student.utwente.nl), Charlie Chrie (c.s.chrie@student.utwente.nl) , Lea Faesing
(l.m.faesing@student.utwente.nl) will be available in order to help.

Yes, I do consent

No, I do not consent