

The role of maximization for choice overload in the high-stake context of online dating

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Abstract

The choice overload effect implies that having many options to choose from leads to negative post decision results, such as low feelings of satisfaction regarding the outcome of the decision. The current study further examines choice overload by looking at how individuals differ in maximizing decisions. This effect was studied by measuring post-choice satisfaction for high-stake decisions made in online dating. The satisfaction was measured after participants chose a dating profile from either six or twenty-four dating profiles and was measured again after a week. The results indicated that there was no main difference for assortment size or tendency to maximize nor an interaction-effect. The researchers theorize that high-stake decisions require bigger assortment sizes and a larger number of different attributes for each option to evoke choice overload compared to low-stake decisions. The current study further highlights the different circumstances that cause the choice overload effect to emerge and which combination of factors decrease the chance of the effect.

Introduction

More than a third of the marriages in the United States since 2005 started with an online meeting. Spouses who met each other online were more satisfied with their marriage in general and divorced less compared to their offline equivalents (Cacioppo et al., 2013). These findings demonstrate that online dating can be a successful basis for long-term relationships. For many singles however, online dating sites have transformed the search for a partner in to a shopping culture were one keeps browsing for a" perfect match" that is seldom found. Although popularity of dating sites is on the rise in younger generations (Smith & Duggan, 2013), it is presently primarily used by people aged 30–50 (Valkenburg & Peter, 2007). Middle-aged people might be more willing to look for partners using online dating websites, because they are more interested in serious relationships. Moreover, they might perceive a

smaller selection of potential partners in their daily life compared to younger generations (Valkenburg & Peter, 2007). However, recent studies indicate that having more options to choose from makes people increasingly critical in their search for a partner. This leads to a decrease in post-decision satisfaction (D'Angelo & Toma, 2017) and can decrease the chance of making a choice all together (Best & Delmege, 2012). The above-mentioned findings indicate that having many options does not always lead to better decisions when looking for a partner. The goal of the current study is to investigate how individual differences in the decision-making process can influence decisions made in an online dating context. Current literature differentiates between maximizers, people that look for the best possible result and satisficers, people that look for an acceptable result (Schwartz et al., 2002). Therefore, this study will look specifically at maximizing decisions, and the influence on post-decision satisfaction. The expectation is that maximizers suffer more from the negative effects of choice overload than satisficers based on earlier studies (Yang & Chiou, 2010).

Choice overload

Making decisions is an important and unavoidable part of daily life. Having many alternatives to choose from should be preferable because it brings freedom of choice. It also provides the decisions maker with more information, which should increase the chance of a satisfying outcome. These logical reasonings were challenged by the study of Iyengar and Lepper (2000). Their study proved that having large amounts of options to choose from does not always lead to the best or most satisfying outcome for the decision maker. Furthermore, it suggested that a large assortment size to choose from could actually lead to lower post-decision satisfaction compared to choosing from a small amount of options. Iyengar and Lepper called the negative effect of a large assortment size on the decision-making process choice overload. In the first experiment, participants chose from either six or twenty-four different jams and in the second experiment from either six or thirty different chocolates

(Iyengar & Lepper, 2000). Both experiments found that participants choosing from the small variety bought more of the respective product. Participants in the small choice condition also felt more satisfied with their choice afterwards, compared to the participants choosing from a wider variety of either chocolates or jams. Additionally, the study found that participants in both experiments preferred choosing from large choice sets to smaller ones when making decisions. Another study found that choice overload next to influencing satisfaction, can also lead to feelings of regret concerning possible missed alternatives (Iyengar & Lepper, 1999). This study found that students handed in higher graded essays when they were limited to choose from six topics compared to when they could freely choose from thirty different essay topics. This further reveals the relevance of choice overload for decision making, even more since it does not only seem to impact affective states, like satisfaction and regret, but also the qualitative outcome of a decision.

Most studies researching choice overload focus on low-stake choices, decisions that do not have a major impact on life, in consumer context. Over the years however, studies extended the choice overload frame to decisions made in the domain of online dating (Lenton & Stewart, 2008; Lenton & Francesconi, 2011; Yang & Chiou, 2010; D'Angelo & Toma, 2017). This is an interesting development, since choosing a romantic partner is a high-stake decision focussing on people instead of consumer goods. This is a different level of decisionmaking when compared to a low-stake decision like choosing which kind of jam to eat for breakfast. Online dating seems well-suited domain to test for choice overload since the decisions in this domain are complex and therefore contain a lot of information that needs to be processed to make a choice (Eastwick, Finkel, & Eagly, 2011). Furthermore, recent studies found that, post-decision satisfaction decreases over time for choices made in online dating, even without looking at choice overload. This decrease originates from negative characteristics of potential dates that are initially ignored, though over time lead to a decrease in satisfaction (Eastwick et al., 2011). The study of D'Angelo and Toma (2017) also found that satisfaction dropped over time when choosing a potential partner through online dating. Moreover, the choice overload that was demonstrated in the study indicated that participants choosing from a set of twenty-four dating profiles were significantly less satisfied with their choice compared to participants choosing from a set of six dating profiles (D'Angelo & Toma, 2017). While there is not one clear explanation that describes how and why choice overload occurs (Scheibehenne, Greifeneder & Todd, 2010), there are multiple theories that shed light on the different aspects. Firstly, the information overload that occurs when increasing an assortment size as well as the number of attributes that need to be processed for each individual option (Mogilner, Rudnick & Iyengar, 2008). The information overload is mainly caused by the number of attributes each option contains and less by the number of alternatives itself. (Greifeneder, Scheibehenne & Kleber, 2010). Options can for example increase in complexity as they differ more from each other on attributes like flavour, look, feel and smell. As the complexity of a decision increases, more cognitive effort is necessary to make a choice, which leads to decreased post-decision satisfaction (Scheibehenne et al., 2010).

Secondly, choice overload also has a strong relationship with anticipated regret. Multiple studies found that participants experienced more regret and had more counterfactual thoughts when the assortment size increased (Iyengar & Lepper 2000; Sagi & Friedland, 2007). Counterfactual thinking is the consideration of alternatives and thoughts about how things might have turned out differently if an alternative option had been chosen instead (Leach & Patall, 2013). The increase in regret and decrease in satisfaction is most visible when the rejected alternatives are different in individual attributes and are perceived as quality alternatives from the chosen option (Leach & Patall, 2013). Lastly, choice overload is more likely to appear when decisions have to be justified to others (D'Angelo & Toma, 2017). Large choice sets make it harder to justify a decision, which decreases satisfaction with the choice and the commitment to it (Scheibehenne, Greifeneder & Todd, 2009; Sela, Berger, & Liu, 2009). Justifying the decision to date a person to family and friends plays a very important role in dating as well (Buunk, Oldersma & de Dreu, 2001). Therefore, choice justification is likely to play an important role for choice overload in the context of online dating decisions as well. To summarise, choice overload is an information overload that is caused by having to many options to choose from and is strengthened by factors like anticipated regret beforehand and having to justify the decision to others afterwards.

Maximizing and satisficing

Recent studies found that being a maximizer in a western culture is negatively correlated with well-being, mainly because of the abundance of choice and the importance that is put on individual choice in these cultures (Roets, Schwartz & Guan, 2012). As mentioned before, maximizers and satisficers have different goals when making decisions. Satisficers are content when a certain threshold is reached, while maximizers are focused on gaining the best possible outcome. Therefore, the researchers of the current study theorize that satisficers do not suffer as much from large choice sets as maximizers do. This is further supported by recent findings that indicate that satisficers are better at ignoring new alternatives after making a decision (Leach & Patall, 2013). Satisficers are therefore better able to avoid counterfactual thinking, which leads them to experience less post-decision regret (Leach & Patall, 2013). Maximizers are more troubled by large choice sets, since there is no certainty that the best possible result is achieved unless all alternatives are analysed (Schwartz et al., 2002). When analysing all alternatives is impossible or impractical for a maximizer, (which is the case for many daily decisions) it will lead to feelings of doubts, counterfactual thinking and finally, decreased post-choice satisfaction.

There are multiple indirect indications that connect the tendency to maximize to the choice overload effect. As mentioned earlier, choice overload occurs when there is an abundance of information because of the many options and their individual attributes. The satisfying heuristic helps people cope with this overload of information when making a choice regardless of the size of the choice set (Scheibehenne et al., 2010). This indicates that satisficers should be less affected by choice overload. Maximizers on the other hand, are reluctant to use heuristics, thereby missing the chance to increase decision accuracy and decrease the cognitive effort when making a choice (Lai, 2010). As a result, maximizers experience an increased cognitive load and take more time when making decisions (Lai, 2010). Another indirect indication comes from the finding that maximizers experience more regret and tend to have more counterfactual thoughts compared to satisficers, which is a key part of the choice overload effect (Leach & Patall, 2013). Maximizing college students had more counterfactual thoughts and reported less self-esteem when working on school assignments compared to satisfying college students. This led to an overall lower GPA (Grade Point Average) for maximizing students, less post-decision satisfaction and more postdecision regret (Leach & Patall, 2013). Maximizers are also more susceptible to social comparison, especially upward social comparison (Weaver, Daniloski, Schwarz & Cottone, 2015). Therefore, maximizers are more inclined than satisficers to go for lower quality options if the option brings social status or is highly valued by peers. This is another indirect indication that maximizers are more vulnerable to choice overload through choice justification as well. Since maximizers are striving for an optimal result when making a decision, this likely leads to decreased satisfaction and increased feelings of post-decision regret, since they were unable to choose the best possible option. Concluding, maximizers suffer more from the

negative results of large choice set situations and have less cognitive strategies to deal with these situations compared to satisficers.

A more direct indication that maximization moderates the choice overload effect comes from the finding that maximizers compared to satisficers clearly prefer larger choice sets to smaller ones (Yang & Chiou, 2010). Moreover, they are more susceptible to the choice overload effect because they unconsciously search for more options to choose from (Scheibehenne et al., 2010; Dar-Nimrod, Rawn, Lehman & Schwartz, 2009). Multiple studies also found that maximizers made conscious decisions to sacrifice time for additional options to choose from (Dar-Nimrod et al., 2009; Yang & Chiou, 2010). Ironically, the search for more options led to a decrease in satisfaction and increase in regret for maximizers, while satisficers did not experience the same negative feelings (Dar-Nimrod et al., 2009). The decisions made by maximizers to sacrifice time for additional options, was also found for decisions made in online dating. The study by Yang and Chiou (2010) found that maximizers spend more time searching and looking at dating profiles compared to satisficers regardless of assortment size, thereby undoing the effort saving benefit of the online search tool Furthermore, the study also found an interaction between assortment size and the tendency to maximize. Seeing that maximizers in the choice overload condition chose profiles that were furthest away from their initial preference compared to satisficers in general and maximizers in the smaller choice condition (Yang & Chiou, 2010).

To summarise, there are multiple indicators that the tendency to maximise moderates the effect of choice overload. Maximizers do not use heuristics to ease the information overload and are more susceptible to justifying their choices and counterfactual thoughts. Furthermore, maximization has been found to moderate choice overload in earlier studies, which is a direct indication of the connection (Yang & Chiou, 2010). Lastly, maximizers actively prefer large choice sets and are willing to sacrifice time to look for additional options. The meta-analytic study of Scheibehenne et al., (2010) also identified the tendency to maximize as a potential moderator. However, the researchers in the study also pointed out that studies have been performed that found no interaction effect between the two (Lenton & Stewart, 2008; Scheibehenne et al., 2009). The study of Scheibehenne et al., (2009) for example, found no differences in post-decision satisfaction or increased post-decision regret between the small and large choice set for maximizers. This study contradicts the earlier mentioned indirect and direct indications that the tendency to maximize moderates choice overload (Scheibehenne et al., 2010; Leach & Patall, 2013; Yang & Chiou, 2010). A possible explanation for the contradicting results is that the decision context in the above-mentioned study was not important enough to elicit the choice overload effect. When the importance of a certain decision is low, people might be less inclined to maximize decisions (Yang & Chiou, 2010) hence the lack of results Therefore, this study will look at the interaction effect of choice overload and the tendency to maximize decisions in the high-stake context of online dating.

In the current study, the tendency to maximize decisions was measured for each participant, next participants saw either six or twenty-four dating profiles and finally the postdecision satisfaction with the chosen dating profile was measured. The first hypothesis is that participants in the choice overload condition are less satisfied compared to participants in the small choice condition. The second hypothesis is that maximizers will be less satisfied with their choice compared to satisficers. The third hypothesis is that there is an interaction effect between the tendency to maximize and the choice overload effect. This interaction will cause maximizers in the choice overload group to experience lower post-choice satisfaction compared to satisficers in general and maximizers in the small choice condition.

Method section

Participants & Recruitment

The sample consisted of heterosexual single women within the age range of 30 to 40 years old (M = 34.14, SD = 2.96). The reason for this specific age range comes from the study of D'Angelo and Toma (2017) which used students as participants and advised against using young participants since they might be less about searching for a partner. The researchers also confirmed that all participants were interested in meeting someone of the other sex through online dating with various questions. The participants were recruited through Prolific, which is a company that connects researchers to potential participants for a fee. Participants received \$1, 25/\$ 0, 83 after the first Prolific session (15 minutes/25 minutes) and \$2 /\$1, 34 for their participation in the follow up session (5 minutes) one week later. The participants in the choice overload condition received more compensation for the study since this group had to view more dating profiles compared to the small choice condition.

The cover story for participants was as follows: "to test a new dating website, you will first be asked to answer some questions about demographics (e.g. age, gender, etc.) and about your attitudes towards and experience with online dating. After that, you will start testing the dating website. You will screen 24 (6) profiles containing pictures and a description of members of the dating website. After you have screened the profiles, you will be asked to select your preferred dating partner. We will then ask you to evaluate the website and the potential dating partner you have selected. A week later, we will ask you some short questions to evaluate the website once more. The information that is gathered will only be used to improve the experience of the website before we open it up to the real world".

Procedure and Design

The current study had a two-group between (choice set size; six or twenty-four stimuli) and within (measurement 1 and measurement 2) experimental design with the

tendency to maximize as a moderator and post-decision satisfaction as dependent variable. The study used a double-blind design, to make sure that neither the participants nor the researcher knew in which condition the participants were placed. The participants were randomly assigned to the choice overload condition or the small choice condition using randomization software. Participants first signed an informed consent, which stated that they agreed to take part in the study and that they accepted and understood that their data would be used anonymously. Next, they filled in a short questionnaire with basic demographic information followed by either six (the small choice condition) or twenty-four (the choice overload condition) dating profiles. Subsequently, participants had to choose one profile based on the available pictures and information. After the participants made their choice, they filled in two more questionnaires. The first questionnaire contained questions about the satisfaction participants felt with their choice, questions about having seen any of the stimuli before (if answered with yes, participants would be excluded from the study) and the covariate questions. The second questionnaire measured the tendency to maximize with questions that were domain specific for online dating. A week after the first measurement, participants got the see the chosen dating profile again and were subsequently asked how satisfied they were with their decision. After this last set of questions participants were debriefed and told about the true goal of the study.

Stimuli

The online dating system used in this study was created specifically for the current experiment. To make the study as realistic as possible, the researchers strived to resemble ''popular dating tool'' Happn as much as possible. The dating profiles consisted of three photos of Dutch men between the age of 30 and 40 and basic information such as height, age, academic background, hobbies and a short (made up) sentence about themselves. The pictures used to make the dating profiles were acquired with the help of the volunteers. The volunteers also signed an informed consent to make sure that they understood and agreed that their photos would be used for the current study. Physical attractiveness is an important factor when creating a desirable dating profile (Eastwick & Finkel (2008). Hence, the researchers tried to make an equal distribution of attractive dating profiles for both groups. This was achieved by establishing the average attractiveness of the male participants prior to the main study using a pre-test. Forty single women took part in the pre- test and were asked to rate twenty-five profiles on attractiveness through the questions (i.e. "How attractive is this online dater?", "How willing would you be to date this online dater?") These questions were answered on a 10-point scale. The overall attractiveness of the twenty-five dating profiles used in the main study for the choice overload condition was 5.41 (SD = 2.32). The average attractiveness in the small choice condition was 5.2 (SD = 2.24). The six dating profiles used for the small choice condition were chosen because they made up an average attractiveness that came closest to the average attractiveness of the choice overload condition. One profile with a relatively high average score of 7.6 was removed prior to the main study for fear of being ''too attractive''.

Measures

The dependent variable, post-choice-satisfaction, was measured by a 6-item satisfaction inventory that was also used in the study of D'Angelo and Toma (2017). This scale contained questions like "How much do you like the individual whose profile you selected?", "How satisfied are you with the dater you chose?", and "How much are you looking forward to contacting this individual?". Each question was answered on a 7-point Likert scale ranging from 1 (not at all) to 7 (extremely so). All hypotheses make predictions about differences in satisfaction ratings at measurement 2. The satisfaction scale was highly reliable (6 items; $\alpha = .92$).

The tendency to maximize decisions was measured with the maximization scale by Nenkov et al., (2008). This scale contained thirteen questions such as "I always strive for the maximum result, it's only right for me to be on the lookout for better opportunities". These questions were again answered on a 7-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree). The maximization scale was acceptably reliable (13 items; $\alpha = .72$). Furthermore, the researchers modified two questions either because they lacked relevance to online dating decisions or because they were outdated. The statement; "Renting videos is really difficult, I'm always struggling to find the right one" was changed to "Looking for a partner is really difficult. I'm always struggling to pick the best one". Furthermore, the statement," I find that writing is very difficult, even if it's just writing a letter to a friend, because it's so hard to word things just right. I often do several drafts of even simple things" was changed to "I find that dating is very difficult, even if it's just having a coffee, because it's so hard to word things just right".

Finally, a list of covariate questions was added, which were based on the questions used in the study of D'Angelo and Toma (2017). The following covariates were used for the current study:

a. gender, because studies indicate that women can be pickier when it comes to choosing potential mates (Grammer, Kruck, Juette, & Fink, 2000);

b. tendency for romantic idealization (e.g., "Do you believe in soul mates?"), Recent studies have shown that romantic idealization leads to more positive illusions and more satisfaction, with potential romantic partners (Murray, Holmes, & Griffin, 1996);

c. previous relationship experience ("How many committed romantic relationships have you had to date?"), because past relationships can influence perceptions of new partners (Furman, Brown, & Feiring, 1999);

d. online dating experience ("Have you ever dated someone you met through online dating?"), as experienced users may be more comfortable with online dating tools, this influences their expectations and subsequently their experiences (Sautter, Tippett, Morgan, 2010);

e. attitudes toward online dating ("Would you be willing to use online dating in the future?"), in order to control for any existing stigma felt towards online dating (Cali, Coleman, & Campbell, 2013); and

f. online dating efficacy ("I can use online dating to get what I want"), or the extent to which participants to be capable of using the online dating environment, because online daters who are not comfortable using dating sites might not be as sensitive to the manipulation.

Results

In the current study, the tendency to maximize decisions was measured for each participant, next participants saw either 6 or 24 dating profiles and finally the post-decision-satisfaction with the chosen dating profile was measured. A manipulation check was performed by using a regression analysis with amount clicked as dependent variable and condition as independent variable. The regression showed that participants clicked on significantly more profiles in the choice overload condition (M = 5.86, SD = 5.55) compared to the small choice set condition (M = 4.16, SD = 1.88), F(1, 91) = 4.572, p < 0.05.

An outlier with a score of three standard deviations below the mean satisfaction was identified and removed from the small choice condition. The error scores for satisfaction were normally distributed for both measurements. All hypotheses in the current study make predictions about the second measurement of satisfaction, which was a week after the initial measurement. The data of the second measurement were used because multiple studies indicated that satisfaction with choices made in dating decrease over time (Eastwick et al., 2011; D'Angelo & Toma, 2017). Prior to testing the hypotheses, a regression analysis was performed with satisfaction measurement 1 as the dependent variable, group as the independent variable and the tendency to maximize as moderator, the covariates were also

added. This analysis was performed to measure the initial satisfaction with the dating profiles. The model itself was not significant, $R^2 = .085$, F(10, 82) = 1.09, p = .375. There was also no significant main effect for group, b = -.095, t(82) = -.450, p = .654, since the mean satisfaction of the choice overload condition (M = 2.89, SD = 0.93) and the small choice condition was almost identical (M = 2.88, SD = .70). The test also found no significant main effect for tendency to maximize b = -.069, t(82) = -.529, p = .598 nor an interaction effect between condition and tendency to maximize, b = -.088, t(82) = -.395, p = .694, none of the covariates reached significance.

The first hypothesis was the expectation that participants in the choice overload condition would be less satisfied compared to participants in the small choice set condition at measurement 2. The regression model was not significant, $R^2 = .003$, F(1, 91) =.243, p = .624. Condition was also not a significant predictor for satisfaction b = -.132, t (91) =-.492, p = .624 and the satisfaction for the choice overload condition (M = 2.98, SD = 1.33) and the small choice condition (M = 2.85, SD = 1.20) were very similar for measurement 1 as well. The second hypothesis was that the expectation maximizers to be less satisfied with their choice then satisficers. The regression model was not significant, $R^2 = .000$, F(1, 91) = .016, p = .900, and did not find evidence to support that maximizers are significant less satisfied when compared to satisficers, b = .021, t (91) = .126, p = .900. The difference in satisfaction between maximizers and satisficers was also not significant when looking at the difference between the two measurements instead of the second measurement. The third hypothesis predicted that maximization moderates the choice overload effect. The expectation was that the interaction would cause maximizers in the choice overload condition to experience lower choice satisfaction compared to satisficers in both conditions and maximizers in the small choice condition. This hypothesis was tested with a moderation analysis with added covariates. The regression analysis indicated that the model was not significant, $R^2 = .080$, F

(10, 82) = .503, p = .883. There was also no significant main effect for group, b = -.230, t (82) = -.696, p = .489. The test also did not find a significant main effect for tendency to maximize b = -.002, t (82) = -.012, p = .991 nor a significant interaction effect between group and tendency to maximize, b = -.100, t (82) = -.220, p = .827. Again, none of the earlier mentioned covariates reached significance. The same analyses looking at the difference in satisfaction between the two measurements instead of the second measurement did not give significant results.

Exploratory Data

To gain additional knowledge about assortment size and the relation with maximization, an extra analysis was performed. A moderation analysis with the amount of profiles clicked as dependent variable, condition as independent variable and tendency to maximize as moderator was performed. The analysis found that condition, b = 2.33, SD = .88, $\beta = .268$, p < .005, was significant, the tendency to maximize however was not significant b = -.378, SD = .52, $\beta = -.091$, p > .05. The interaction between tendency to maximize and condition was however marginally significant b = -1.81, SD = .92, $\beta = .239$, p = 0.053 indicating that there was an effect between the amount of profiles available and the tendency to maximize.

Therefore, a simple slopes test was conducted to test for a relation between assortment size and amount of profiles for low levels (-1 *SD* below the mean), moderate levels (equal to the mean), and high levels (+1 *SD* above the mean) of maximization. The slopes indicated that there was a positive relationship between amount of profiles presented and amount clicked. Furthermore, the effect varied for the different levels of maximization and was only visible for moderate, b = 2.34, SE = .88, p < .05, 95% *CI* (0.60, 4.08), and for high, b = 4.14, SE = 1.31, p < .005, 95% *CI* (1.54, 6.75), levels of maximization. Low levels of maximization, b = .53, SE = 1.23, p > .05, 95% *CI* (-1.92, 2.97) was not correlated with amount of profiles clicked. Concluding participants in the choice overload condition with a high tendency to maximize clicked on significantly more profiles compared to participants

scoring moderate or low on tendency to maximize. This effect was not visible in earlier test when choice satisfaction was used as the dependent variable.

Discussion

The purpose of the current study was to gain more insight in the underlying process of choice overload by looking at the tendency to maximize decisions as a potential moderator. The current study found no significant differences in post-decision satisfaction between the choice overload condition and the small choice condition and between maximizers and satisficers. Therefore, the first and second hypothesis were not supported by the results of the current study. The third hypothesis expected an interaction effect between the tendency to maximize and the choice overload effect. However, no interaction effect was found between assortment size and tendency to maximize on post-decision satisfaction.

A possible reason why no main effect for assortment size was found, results from the low average scores for attractiveness and willingness to date, which were 5.6 out of 10 on average for the dating profiles. The low average attractiveness suggests that most of the dating profiles in the current study were not very desirable to single women, aged 30-40. The low average attractiveness can partly be explained by the gender of the participants. Previous studies found that women are more critical in the process of choosing a potential mate compared to men (Grammer et al., 2000). Furthermore, alternatives can more easily be ignored when they are perceived to be of low quality, thereby making choice overload less likely to emerge (Lenton & Francesconi, 2010). This seems to play a part in the current study, since even the three highest rated dating profiles scored relatively low with a 6.6, 6.3 and 6.1 out of 10.

Another reason why no main effect for assortment size was found, results from the low experienced satisfaction with the chosen dating profile. Neither the study of D'Angelo

and Toma (2017) nor the current study found a difference in satisfaction for the first measurement. However, the study of D'Angelo and Toma (2017) found differences in satisfaction for assortment size when processing time was taken into account. Participants in the current study however, already reported the very low average satisfaction score of 2.88 out of 7 for the first measurement. Therefore, it follows logically that satisfaction did not decrease much after a week due to processing time. The satisfaction with the chosen dating profile slightly increased for the second measurement to 2.90.

Another reason why choice overload is hard to find for decisions made in an online dating setting is because of expert knowledge. Choice overload is less likely to occur when people are expert on the topic of the decision since this makes it easier to evaluate all the alternatives (Chernev, Böckenholt & Goodman, 2015; Mogilner et al., 2008). The search for love and a romantic partner is a pursuit that often starts from an early age. Since the participants of the current study are aged 30 to 40 and had four serious committed relationships on average prior to this study, they can be considered experts, which counteracts the choice overload effect.

Lastly it is possible that maximizers need larger assortment sizes to experience choice overload. The study of Yang and Chiou (2010) used larger assortment sizes of 40 and 80 and found a significant main effect for assortment size. In this study the larger assortment sizes led to a bigger gap between the initial preference and the chosen dating profile, this effect was more pronounced for maximizers. As mentioned earlier, this study also found that participants displayed more searching behaviour in the large assortment size and again especially for maximizers. The increase in searching behaviour for maximizers compared to satisficers is also found in the current study. Participants with a medium and high tendency to maximize in the choice overload condition clicked on significant more profiles compared to participants with a low tendency to maximize. Hence there is a trend that shows maximizers actively reviewing more dating profiles compared to satisficers when the option was available and are therefore more likely to experience choice overload than satisficers when assortment size is increased. Therefore, even though the current study could not find an interaction between choice overload and the tendency to maximize, its potentials to act as a moderator for choice overload remains.

Limitations

A limitation of this study is the skewed distribution of participants between the choice overload and small choice condition. The small choice condition consisted of 57 participants while the choice overload consisted of 36 participants. This becomes particularly relevant due to the small sample size used in the current study. The main reason that the sample size (93 participants) was smaller than originally planned (150 participants), was that many participants did not participate in the second measurement of the study. Firstly, the dropout rate could be due to the two measurements being a week apart which increased the chance for participants to forget about the second part of the study. Secondly, it could be because participants already received partial payment for the first part of the study which possibly reduced the incentive to continue with the rest of the study.

Another limitation is the difference between the online dating profiles used in the study and real-life dating profiles. The online dating profiles were designed to be as realistic as possible, by using real life photos of the male participants that were aged 30 to 40 and by using short story for each individual profile. Despite these efforts most profiles were "as mentioned before" rated relatively low on average, which could have led participants to be less serious when choosing a profile than they would have been browsing a real dating site. Moreover, it is quite plausible that real online dating apps like Tinder and Happn face the same issue yet manage it by providing an almost limitless amount of available profiles, thereby offering a quality through quantity scenario.

Hence, it is advisable for future studies to have a larger selection of dating profiles to choose from. A wider pool of dating profiles to choose from will raise the average satisfaction thereby increasing the chance that choice overload occurs.

A possible point for improvement is the presentation of the dating profiles through thumbnails. The way the current study was designed required participants to click on at least one dating profile to make sure participants were not able to skip the question. However, it was not mandatory to click on all the dating profiles and neither was there a certain time participants had to spend on each profile, making it possible to skip through the profiles without thoroughly processing the information. Hence, participants could protect themselves against a possible information overload. Therefore, it might be wise for future studies to ensure that participants view a minimum amount of profiles. Alternatively, future studies could offer participants the choice to gain more dating profiles if they prefer to. This scenario fits with the earlier mentioned finding that indicate that maximizers are more willing to search for extra options (Yang & Chiou, 2010).

Practical and theoretical implications

The current study adds to the growing body of literature on the choice overload framework in the context of online dating, by looking at the effect of maximization on postdecision satisfaction. Additionally, it challenges earlier findings that found an interaction between assortment size and individual differences in maximization. The current study also lends support to previous studies that found that the choice overload frame is not as easily applicable for every choice domain, and therefore less robust than initially thought. Furthermore, the results also indicate that more domain specific studies are necessary to identify the moderating and/or suppressing factors that can influence the emergence of choice overload. Finding these factors will help online dating platforms to improve their match making process, which should lead to better matches and subsequently more satisfaction for the users. Additionally, deeper knowledge about the pre-conditions of choice overload would benefit other online platforms that exist to help with other high-stake decisions as well. Magent.me for example, uses the same''swipe system'' as Tinder to instead of romantic connections, match students to potential companies.

Conclusion

Even though many cases of choice overload have been recorded in the past for different decision domains, it remains difficult to find consistent results on how and when it occurs. The current study did not find the expected influence of assortment size and tendency to maximize on post-decision-satisfaction. Possibly, because the choice overload manipulation was not strong enough or certain pre-conditions were lacking for choice overload to emerge. This study suggests that an interaction effect between choice overload and maximization for the current choice domain relies heavily on factors like, a large assortment size and quality alternatives to choose from. It is up to future studies to determine when more choice is detrimental for our state of mind and which factors limit its effect.

References

- Best, K., & Delmege, S. (2012). The filtered encounter: online dating and the problem of filtering through excessive information. *Social Semiotics*, 22(3), 237-258.
- Buunk, B. P., Oldersma, F. L., & de Dreu, C. K. (2001). Enhancing satisfaction through downward comparison: The role of relational discontent and individual differences in social comparison orientation. *Journal of Experimental Social Psychology*, *37*(6), 452-467.
- 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.

- Cali, B. E., Coleman, J. M., & Campbell, C. (2013). Stranger danger? Women's selfprotection intent and the continuing stigma of online dating. *Cyberpsychology, Behavior, and Social Networking*, 16(12), 853-857.
- Chernev, A., Böckenholt, U., & Goodman, J. (2015). Choice overload: A conceptual review and meta-analysis. *Journal of Consumer Psychology*, 25(2), 333-358.
- D'Angelo, J. D., & Toma, C. L. (2017). There are plenty of fish in the sea: The effects of choice overload and reversibility on online daters' satisfaction with selected partners. *Media Psychology*, 20(1), 1-27.
- Dar-Nimrod, I., Rawn, C. D., Lehman, D. R., & Schwartz, B. (2009). The maximization paradox: The costs of seeking alternatives. *Personality and Individual Differences*, 46(5-6), 631-635.
- Eastwick, P. W., & Finkel, E. J. (2008). Sex differences in mate preferences revisited: Do people know what they initially desire in a romantic partner? *Journal of personality and social psychology*, *94*(2), 245.
- Eastwick, P. W., Finkel, E. J., & Eagly, A. H. (2011). When and why do ideal partner preferences affect the process of initiating and maintaining romantic relationships? Journal of Personality and Social Psychology, 101, 1012–1032.
- Furman, W., Brown, B. B., & Feiring, C. (Eds.). (1999). The development of romantic relationships in adolescence. Cambridge, UK: Cambridge University Press.
- Grammer, K., Kruck, K., Juette, A., & Fink, B. (2000). Non-verbal behavior as courtship signals: The role of control and choice in selecting partners. Evolution and Human Behavior, 21, 371–390
- Greifeneder, R., Scheibehenne, B., & Kleber, N. (2010). Less may be more when choosing is difficult: Choice complexity and too much choice. *Acta psychologica*, *133*(1), 45-50.

- Mogilner, C., Rudnick, T., & Iyengar, S. S. (2008). The mere categorization effect: How the presence of categories increases choosers' perceptions of assortment variety and outcome satisfaction. *Journal of Consumer Research*, *35*(2), 202-215.
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of personality and social psychology*, 71(6), 1155.
- Nenkov, G., Morrin, M., Schwartz, B., Ward, A., & Hulland, J. (2008). A short form of the Maximization Scale: Factor structure, reliability and validity studies.
- Lai, L. (2010). Maximizing without difficulty: A modified maximizing scale and its correlates. *Judgment and Decision making*, *5*(3), 164.
- Leach, J. K., & Patall, E. A. (2013). Maximizing and counterfactual thinking in academic major decision-making. *Journal of Career Assessment*, 21(3), 414-429.
- Lenton, A. P., & Stewart, A. (2008). Changing her ways: The number of options and matestandard strength impact mate choice strategy and satisfaction. *Judgment and Decision Making*, *3*(7), 501.
- Lenton, A. P., & Francesconi, M. (2010). How humans cognitively manage an abundance of mate options. *Psychological Science*, *21*(4), 528-533.
- Lenton, A. P., & Francesconi, M. (2011). Too much of a good thing? Variety is confusing in mate choice. *Biology letters*, 7(4), 528-531.
- Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: a cultural perspective on intrinsic motivation. *Journal of personality and social psychology*, *76*(3), 349.
- Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of personality and social psychology*, 79(6), 995.

- Roets, A., Schwartz, B., & Guan, Y. (2012). The tyranny of choice: a cross-cultural investigation of maximizing-satisfising effects on well-being. *Judgment and Decision Making*, 7(6), 689.
- Sautter, J. M., Tippett, R. M., & Morgan, S. P. (2010). The social demography of Internet dating in the United States. *Social Science Quarterly*, *91*(2), 554-575.
- Scheibehenne, B., Greifeneder, R., & Todd, P. M. (2009). What moderates the too-muchchoice effect? *Psychology & Marketing*, *26*(3), 229-253.
- Scheibehenne, B., Greifeneder, R., & Todd, P. M. (2010). Can there ever be too many options? A meta-analytic review of choice overload. *Journal of Consumer Research*, 37(3), 409-425.
- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of personality and social psychology*, 83(5), 1178.
- Sagi, A., & Friedland, N. (2007). The cost of richness: The effect of the size and diversity of decision sets on post-decision regret. *Journal of personality and social psychology*, 93(4), 515.
- Sela, A., Berger, J., & Liu, W. (2008). Variety, vice, and virtue: How assortment size influences option choice. *Journal of Consumer Research*, 35(6), 941-951.
- Smith, A., & Duggan, M. (2013). Online dating and relationships. Pew Research Center, Washington, D.C. Retrieved from http://www.pewinternet.org/2013/10/ 21/onlinedating-relationships
- Smith, A., & Anderson, M. (2016). 5 facts about online dating. Retrieved from http://www.pewresearch.org/fact-tank/2016/02/29/5-facts-about-online-dating.

Valkenburg, P. M., & Peter, J. (2007). Who visits online dating sites? Exploring some characteristics of online daters. *CyberPsychology & Behavior*, *10*(6), 849-852.

Weaver, K., Daniloski, K., Schwarz, N., & Cottone, K. (2015). The role of social comparison for maximizers and satisficers: Wanting the best or wanting to be the best? *Journal of Consumer Psychology*, 25(3), 372-388.

Yang, M. L., & Chiou, W. B. (2010). Looking online for the best romantic partner reduces decision quality: The moderating role of choice-making strategies. *Cyberpsychology*,

Behavior, and Social Networking, 13(2), 207-210.