

Romantic Relationships and Well-being

**Differences in Commitment and Well-Being between
Online vs. Traditionally Initiated Romantic Relationships**

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Abstract

Being in a romantic relationship has been shown to increase the individuals' sense of well-being indirectly through relationship satisfaction or quality. A general trend regarding the increased use of online dating platforms and delayed commitment can be observed. Dating apps are often used as means to find partners to have uncommitted relationships with. Nevertheless, commitment has been shown to increase relationship satisfaction, quality, and stability, resulting in higher levels of well-being for individuals. Additionally, literature suggests that commitment differs between online initiated relationships (OIR) and offline, traditionally initiated relationships (TIR).

With this thesis, the association between the variables relationship initiation, whether OIR or TIR, commitment, and the well-being of the individuals in a relationship are examined in a cross-sectional study. The final dataset included 390 participants who filled in an online questionnaire. By performing t-tests and regression analyses of the variables the extent to which the well-being of individuals differ between online and traditionally initiated romantic relationships is examined while taking commitment into account.

Results indicated that the initiation of the relationship was not a significant predictor for commitment, nor well-being. Furthermore, a 'no effect non-mediation' was found, which rejected the hypothesis that commitment had a mediating role on an initiation-well-being relationship. Excluding initiation, commitment alone showed, as expected, to be a significant predictor for well-being. Oppositely to the expectations, no differences between TIR and OIR were found.

The results imply that well-being does not differ between online and offline initiated romantic relationships, independent of whether commitment is taken into account. Moreover, relationship initiation does not play an important role for the well-being of individuals, while commitment within the relationship does. These insights can be applied, for example, for dating services or within (relationship) therapy and counselling to help individuals increase their well-being. Furthermore, future research could deepen the understanding of influences on well-being and commitment by focusing on additional factors.

Keywords: romantic relationship(s), commitment, relationship initiation, well-being, mediation, online dating.

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Introduction

Today's search for romantic relationships is marked by "slow love, less commitment and meeting potential spouses online" (Landau, 2016). Marriage rates have decreased over the past decades and other forms of commitment are delayed (Bogle, 2007; Eurostat, 2020; Statista, 2021; Shulman & Connolly, 2013). Romantic relationships can be defined as relationships that are "based on emotional and physical attraction, potentially leading to long-term intimate relationships" (WHO, 2001 p.173), and they range from casual dating to marriage (Dush & Amato, 2005). A shift from traditional dating to pursue romantic relationships, towards meeting people online to hook-up with can be observed (Bogle, 2007, 2008; Garcia et al., 2012; Orchard, 2021; Timmermans & Courtois, 2018; Sales, 2015). A hook-up is a "brief uncommitted sexual encounter among individuals who are not romantic partners" (Garcia et al., 2012, p.161). Nevertheless, around half of the individuals hope their hook-up encounter could develop into a committed relationship (Owen & Fincham, 2011). Previous research has shown that being in a romantic relationship may increase an individual's sense of well-being (Kansky, 2018). The current research focuses on the differences between offline, traditionally initiated relationships (TIR) and online initiated relationships (OIR) and how initiation influences commitment, and (in turn) well-being.

Online Dating

Online dating is a modern way of meeting potential partners, supplementary to the traditional, offline way. To this day a big proportion of people still meet their partners offline (Cacioppo et al., 2013) through family, friends, social gatherings, or institutions. Notwithstanding, more and more couples introduce themselves to each other without the involvement of others, e.g. through online platforms. In fact, 74% of the couples who met online were total strangers before (Rosenfeld & Thomas, 2012). The increase in online dating allows potential partners to meet who may not have met or formed a relationship through traditional ways (Kansky, 2018).

Furthermore, online dating is often used as a means to find hook-up partners. This is also visible in the interface of dating platforms. For example, Tinder's set up emphasizes physical appearance by using photos rather than descriptions to base the decision to match on. Timmermans and Courtois (2018) found that a significant proportion, namely 53%, of the offline 'Tinder' meetings end up being a sexual encounter. Those people are not always interested in actually pursuing a committed relationship. It is argued that apps such as Tinder

could be considered ‘hook-up’ apps, as there seems to be a sexual motive, and a large proportion of users may not want to find a partner to be in a committed relationship with (Timmermans & Courtois, 2018; Sales, 2015). Thus, online dating generally reflects the uncommitted relationship trend.

While dating platforms are often used to find hook-up encounters, research also shows that it is not uncommon for committed, serious relationships to form through online platforms. Around two thirds of the couples who met online are in a romantic relationship (Paul, 2014). Concerning Tinder, serious relationships are formed after around 25% of offline dates (Timmermans & Courtois, 2018). Furthermore, one out of three marriages between 2005 and 2012 initiated online (Cacioppo et al., 2013). Moreover, couples who met online have stronger intentions to live together compared to couples who met offline (Potarca, 2020). This indicates that online dating does not solely resolve around uncommitted relationships.

It seems that regardless of the trend for hook-ups and some dating apps being focused on sexual encounters, the desire to be in a committed romantic relationship still remains. With the rise in hook-ups and increased online dating a change in relationship formation can be observed. It seems more common for committed relationships to be formed starting with hooking up, meaning, sexual relationships may actually develop into romantic relationships (Bogle, 2008; Timmermans & Courtois, 2018; Wade, 2017). Owen and Fincham (2011) found that many individuals would actually want their hook-up partner to be more. In their study 42% of men and 51% of the women initiated a discussion with their hook-up partner about the possibility of a romantic relationship (Owen & Fincham, 2011). Furthermore, the majority of college-aged individuals prefer a more traditional romantic relationship instead of a ‘trendy’ uncommitted hook-up partner (Garcia et al., 2010 as cited in Garcia et al., 2012). Relationship formation has changed which could further explain the phenomenon of delayed commitment, despite commitment being desired.

Relationship Initiation And Well-Being

With online dating a new form of relationship initiation arises, which may be influencing an individual's well-being. Well-being is the general judgment of feeling ‘good’ and includes the experience of positive emotions and satisfaction with life (CDC, 2018; Diener, 2009). The initiation of a romantic relationship is an important step and often still vividly remembered years later (Custer et al., 2008). However, literature and research on romantic relationship initiation is sparse and understudied (Sprecher et al., 2015). As a consequence,

direct empirical evidence for a link between relationship initiation and well-being has not been found. Nevertheless, research has shown that romantic relationships themselves have a, either direct or indirect, positive influence on the well-being of individuals. Kansky (2018) explained that well-being is bi-directionally related to the perceived stability and quality of the relationship. The relationship quality contributes to the happiness, and thus the well-being of individuals (Demir, 2008; Ryan & Deci, 2001). Further influences on wellbeing, such as greater positive effect, self-esteem, and general health, are associated with romantic relationships (Gómez-López et al., 2019). Additionally, a romantic partner is the closest, most intimate relationship adults may have (Kansky, 2018), and thus, important for someone's emotional support system. This emotional support and security combined with companionship has been found to be the strongest predictors of happiness for emerging adult couples (Demir, 2008; Kansky, 2018). It includes being there for the partner to confide with, sharing and responding to positive news, which are both linked to well-being. What differentiates romantic partners from friends and family in this aspect is the greater trust, emotional connection, intimacy, and importance (Kansky, 2018), which connects to the concept of commitment. Thus, being in a romantic relationship seems to have a positive effect on the individual's well-being.

The aspects of romantic relationships that influence well-being may be related to the initiation of the relationship. For example, the ability to connect emotionally may differ between relationships initiated online and those initiated offline. Individuals who date online may have more difficulty with emotional intimacy (Orchard, 2021), which would in turn have an influence on well-being. While these links are suggestive and unsupported by research, differences between offline, traditionally initiated relationships (TIR) and online initiated relationships (OIR) have been found. This suggests that initiation may be related to well-being.

Relationship Initiation And Commitment

While findings on differences between TIR and OIR regarding well-being are sparse, differences concerning relationship development and commitment have been found. For example, OIR take more time to mature and develop (Paul, 2014; Schwartz & Velotta, 2018). This is related to the fact that people online are often complete strangers who need to get to know each other from the start (Schwartz & Velotta, 2018). Moreover, research found that individuals, men more than women, flirt or online-date with others while being in a relationship. These higher levels of 'cyberdating' negatively influence the relationship, and specifically, the satisfaction (Sánchez Jiménez et al., 2017) as it shows a lack of commitment.

These behaviours are especially influential in the development of commitment and may explain the slower maturation.

Furthermore, OIR do not only develop slower but also reflect the commitment delay trend. It is argued that individuals have more difficulty committing to a dating partner knowing that there is a large pool of potential dating partners online (Paul, 2014). Thus, the need to be paired with one partner is decreased (Schwartz & Velotta, 2018), which in turn delays commitment to the person they would actually want to start a relationship with. Additionally, individuals in OIR are generally less likely to get married and online dating may actually result in suppressed desire to get married (Paul, 2014). This indicates that initiation type may influence commitment within a relationship.

Commitment

Commitment is a key feature for successful relationships and affects influential aspects for the individuals' well-being. In Rusbult's '*investment model*', commitment is defined as "the tendency to maintain a relationship and to feel psychologically 'attached' to it" (Rusbult, 1983, p. 102). Commitment serves the purpose of communicating one's understanding of your partner as well as the relationship status (Rusbult et al., 1994). Furthermore, it indicates the intrinsic motivation for the relationship, having a long-term orientation, and the psychological attachment (Drigotas et al., 1999). In long-term relationships commitment is shown as the decision and dedication to maintain the love (Sternberg, 1986). According to Rusbult's (1983) model, commitment leads to relationship stability, which has been shown to increase well-being. Furthermore, commitment also influences quality and perceived stability of the relationship, which is bi-directionally related to well-being (Kansky, 2018).

Importantly, the development from no or little commitment to being in a committed relationship is associated with increases in well-being. This 'some commitment appears to be good, and more commitment appears to be better' has been observed in a longitudinal analysis (Dush & Amato, 2005, p.623). Additionally, commitment was linked to a stronger sense of self, identity, and self-worth, and it has an influence on feelings of intimacy and closeness in the relationship (Hadden et al. 2018), which in turn is associated with increased well-being. Moreover, individuals in committed relationships showed better mental health (Braithwaite et al., 2010). Overall, the level of commitment is associated with healthy functioning and success in relationships (Drigotas et al., 1999) as well as the quality (Farrell et al., 2015). Moreover, perceiving commitment has shown to promote commitment itself (Joel et al., 2013). Thus, the

concept of commitment is an important factor in romantic relationships and its influence on the individual's sense of well-being.

Although commitment is influential for the relationship, commitment is more and more delayed. Studies showed that many deep forms of commitment, such as marriage, are delayed and sometimes replaced with short-term, non-committed relationships (Shulman & Connolly, 2013), as reflected by the 'hook-up culture'. Additionally, as potential alternative partners can be found on dating platforms (Paul, 2014), interest in commitment is decreased (Schwartz & Velotta, 2018). This commitment delay is more likely found in OIR. Furthermore, dating platform users indicated to avoid committed relationships to prevent getting hurt but also because they struggle with emotional intimacy (Orchard, 2021). This perceived inability to connect emotionally could impede the initiation and development of commitment in romantic relationships.

Expanding research on romantic relationships and commitment beyond married couples is very important. Existing literature on romantic relationships (and initiation) is mainly focused on married couples (Braithwaite et al., 2010), which already reflect high levels of commitment, while other committed romantic relationships are neglected. These are of importance, however, as they are part of the development in relationship status. By researching relationships with different commitment levels, the influence of commitment can be better understood.

Current Research

A general trend regarding increased online dating and delayed commitment can be observed. Dating apps are often used as means to find partners to have uncommitted relationships with. Nevertheless, commitment has been shown to increase individuals' health, relationship satisfaction, quality, and stability, resulting in higher levels of well-being. According to my knowledge, existing literature is focused on these indirect links and does not mention direct correlations between commitment and well-being. Moreover, studies on relationship initiation and well-being are sparse and showed ambiguous results. Therefore, the research question for the current study is *"To what extent does the well-being of individuals differ between online and offline initiated romantic relationships, taking commitment into account?"*.

To answer the question the following hypotheses (H) are formulated:

H1: Individuals in OIR have higher well-being levels compared to those in TIR.

H2: Individuals in OIR show lower levels of commitment compared to those in TIR.

H3: The initiation and duration of the relationship influence commitment.

H4: Higher levels of commitment correlate to higher levels of well-being.

H5: Commitment is a mediating factor explaining an initiation-well-being relationship.

Methods

Design

To investigate the research question a quantitative empirical approach using a cross-sectional design was applied. Prior to the data collection, the study and its design were ethically approved by the university's ethics board (Request number: 210300). By conducting a (Qualtrics) questionnaire study, the aim was to examine the relationship between TIR and OIR and well-being of individuals, and the extent to which commitment plays a role. In the design the main independent variable is initiation, the mediating independent variable is commitment, and the dependent variable is well-being. Furthermore, the duration of the relationship is an additional independent variable.

Participants

The participants were recruited in April 2021 using snowball sampling. In the context of a combined study, the survey was shared through social channels, e.g. Instagram, Facebook, WhatsApp. Furthermore, other participants were able to take part through the research/participant pool (SONA) from the University of Twente which provides students with credits for participating. One of the inclusion criteria was being at least 18 years old to be able to give informed consent. Additionally, participants who indicated to be single were excluded. This is due to the reason that hindsight bias, in regard to their previous relationships, may otherwise have interfered with the results.

In total 832 participants filled in the survey, however, after eliminating the participants who did not meet the inclusion criteria or had missing values, a total of 390 responses were included in the dataset. From these participants 166 identified as male, 183 as female, 33 as non-binary, 7 preferred to self-disclose (e.g. genderfluid, bigender, queer), and one preferred not to say. The ages ranged from 18 to 75, with the average of $M_{age} = 25.61$ ($SD = 8.15$). Furthermore, from all included participants 57.4% were German, 7.2% Dutch, and 35.4% stated another nationality. These included a variety of European nationalities (e.g. French,

Finnish, Danish, English, Italian, Swiss, Slovak, Swedish, etc.), Asian nationalities (e.g. Taiwan, Indian, Russian, Chinese, Filipino, Korean, etc.), African nationalities (e.g. South African, Zimbabwean), North American nationalities (American, Canadian), South American nationalities (e.g. Argentinian, Mexican, Venezuelan, Peruvian), and Oceanian nationalities (New Zealander, Australian).

Additional demographics included sexuality, relationship status, duration, and initiation. For sexuality, 53.9% of the participants indicated to be heterosexual, 16.5% homosexual, 20.5% bisexual, 5.2% pansexual, and 3.9% self-disclosed (e.g. queer, asexual, or 'still figuring it out'). In regard to relationship status, 38 individuals were dating, 12 in a hook-up relationship, 17 were friends-with-benefits, 195 (50%) participants were in a relationship, 56 were cohabiting with their partner(s), 56 (14.4%) were married, and 16 self-disclosed (e.g. 'it's complicated', polyamorous, open relationship, engaged). The relationship length ranged from less than a month to 38 years. The average relationship duration was $M=4$ years ($SD=6.40$). Concerning the relationship initiation, 63.3% indicated meeting their partner(s) offline, in a traditional manner. In contrast, 36.7% of participants met their partner(s) online, of which the majority met through an online dating platform (26.2 % vs. 10.5 % who met via social media).

Materials

To collect data a Qualtrics survey was made (see Appendix A). The survey included some demographic and relationship questions. The demographic questions included gender, sexuality, nationality, and age. Whereas the relationship questions asked about the initiation, status, and duration of the relationship. For example, "Considering the type of relationship status you chose above, how long have you been with that person/ with these people? (When you have multiple partners, please indicate the longest relationship)". For this duration question, the participants could choose to indicate the number of months, or the number of years in case the relationship lasted longer than 12 months. To be as inclusive as possible, the participants could choose to self-disclose if they felt like the multiple options given did not fit them. The remaining survey questions were existing scales: the Mental Health Continuum - short form, and the commitment and satisfaction scale from the Investment model.

To measure the participants well-being, the Mental Health Continuum short form (MHC-SF; Keyes, 2018) was used. It is a 14 item self-report questionnaire to assess positive mental health. It focuses on emotional, psychological, and social well-being and provides a

general well-being score. Participants indicate how often they felt a feeling during the past month on a scale from 0 (never) to 5 (every day). Feelings range from ‘happy’, ‘interested in life’, to ‘people are basically good’, etc.. The finalized mean score could range between 0 and 6, with higher scores indicating higher well-being levels. The scale has good psychometric properties and good convergent validity and high internal reliability ($\alpha = 0.89$; Keyes, 2018; Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011). For the used sample, Cronbach's alpha remained high ($\alpha = 0.89$).

Commitment scores were obtained using the Investment model Scale, which assesses commitment, satisfaction, investment, and quality of alternatives (Rusbult et al., 1998). The psychometric properties of the scales show good convergent, discriminant, and predictive validity and good internal structure and reliability. As subscales can be used individually, only the satisfaction (10 items) and commitment (7 items) scales were used for the current study (Rusbult et al., 1998). Some example statements are “I am committed to maintaining my relationship with my partner” and “I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now)”. The statements can be answered with an 8-point Likert scale ranging from ‘Do not agree at all’ to ‘Agree completely’. The commitment scale ranges between 0 and 9, with higher commitment levels being represented by higher scores. The commitment scale with the current sample had high reliability ($\alpha = 0.90$).

Beside the English version a German version was made. This was done using back-translation. First, we translated the English survey to German to the best of our abilities and then the back translation process took place with the help from a third party being fluent in both German and English. Afterwards, a German teacher looked over the final German version. The back-translation process for the Investment model scales can be found in Appendix B.

Procedure

When the participants opened the link to the online survey, the opening statement was shown. Here information about the research, the aim, the procedure, and the researchers contact information was presented. Then the informed consent was asked to make sure the participants were aware of their rights and voluntary participation. Afterwards, the demographic and relationship questions were presented and filled in. Lastly the scales, i.e. commitment, satisfaction, and well-being, followed in a randomized order. We thanked the participants for

participating and provided our contact information once again in case they had any questions. It took roughly 10 minutes to fill in the questionnaire.

Data Analysis

After data collection, the data was prepared for analysis. First, the data from participants who did not meet the inclusion criteria were deleted. These included individuals who were single, underage, or widowed. Afterwards, the four required variables, namely well-being, commitment, initiation, and relationship duration, were computed. The variable 'well-being' consisted of the mean of the scale items of the MHC-SF. To obtain the commitment scores, some scale items had to be reversed (item 3 and 4) and recoded. Then the mean of the commitment scale items was computed. Additionally, initiation was computed into a dichotomous variable ('online' for OIR, and 'offline' for TIR). For length of relationship, the two items were first computed to indicate relationship duration in the same unit, e.g. in years, and then they were merged together to obtain a continuous variable for relationship duration.

To analyse the data, SPSS was used in addition with the PROCESS macro application. It is a macro tool for moderation, mediation, and conditioning analyses (Hayes, 2018). Before analysing the data the assumptions were tested, which showed that all assumptions were met and the data was normally distributed. Afterwards, frequencies, descriptives, t-tests, and regression analyses (using PROCESS) were performed. Specifically, to test H1, the variables well-being and initiation were examined using descriptive statistics. Furthermore a t-test, with initiation as the grouping variable, was performed. For H2, the analysis included a linear regression with the variables initiation (IV) and commitment (DV). Afterwards, relationship duration as a predictor was added to the model to assess H3. To test H4 a linear regression was performed with the variables commitment (IV) and well-being (DV). To test the mediated effect in H5 the bootstrap approach was used, which is implemented in PROCESS (Hayes, 2018). The mediation analysis included initiation as the IV, commitment as the mediating variable, and well-being as the DV.

Results

Initiation And Well-Being

To examine differences in well-being based on initiation, the means were compared. The participants in the sample had well-being scores between .39 and 4.82, with $M = 3.10$ ($SD = .82$). The average for OIR and TIR differed slightly, $M_{\text{OIR}} = 3.11$ ($SD = .78$); $M_{\text{TIR}} = 3.10$ ($SD = .85$). However, this difference was not significant $t(388) = -.10, p = .92$.

Initiation And Commitment

The association between initiation and commitment, and the influence of relationship duration was examined with regression analyses. First, the initiation-commitment model was analysed, which showed that initiation was not a significant predictor for commitment, $\beta = -.08$ ($SE = .19$), $t(388) = -1.53, p = .13$. Furthermore, the model explained little of the variance of commitment, $R^2 = .006$, $SE = 1.85$, $F(1, 388) = 2.35, p = .13$.

Second, to take the length of the relationship into account a multiple linear regression analysis was performed. With relationship duration as an additional predictor for commitment, the model was a better fit and better able to explain the variance, $R^2 = .05$, $SE = 1.74$, $F(2, 369) = 8.94, p < .001$, compared to the previous model. Moreover, contrary to initiation, $\beta = -.04$ ($SE = .19$), $t(369) = -.68, p = .49$, relationship duration was significant $\beta = .21$ ($SE = .01$), $t(369) = 3.95, p < .001$.

Commitment And Well-being

With a linear regression the relationship between commitment and well-being was analysed. The standardized coefficient was $\beta = .31$ ($SE = .02$), $t(389) = 6.30, p < .001$. The commitment-well-being model explained 9% of the variance, $R^2 = .09$, $SE = .79$, and commitment was a significant predictor for well-being, $F(1, 389) = 39.68, p < .001$.

Figure 1 presents the data in a scatter plot to be able to compare the TIR and OIR within the well-being and commitment model. The regressions show TIR to be slightly steeper than OIR. Furthermore, the graph illustrates that for high commitment levels a far-reaching range in well-being levels can be found, e.g. commitment levels around 8.1 show well-being levels between approximately 1.5 and 4.8.

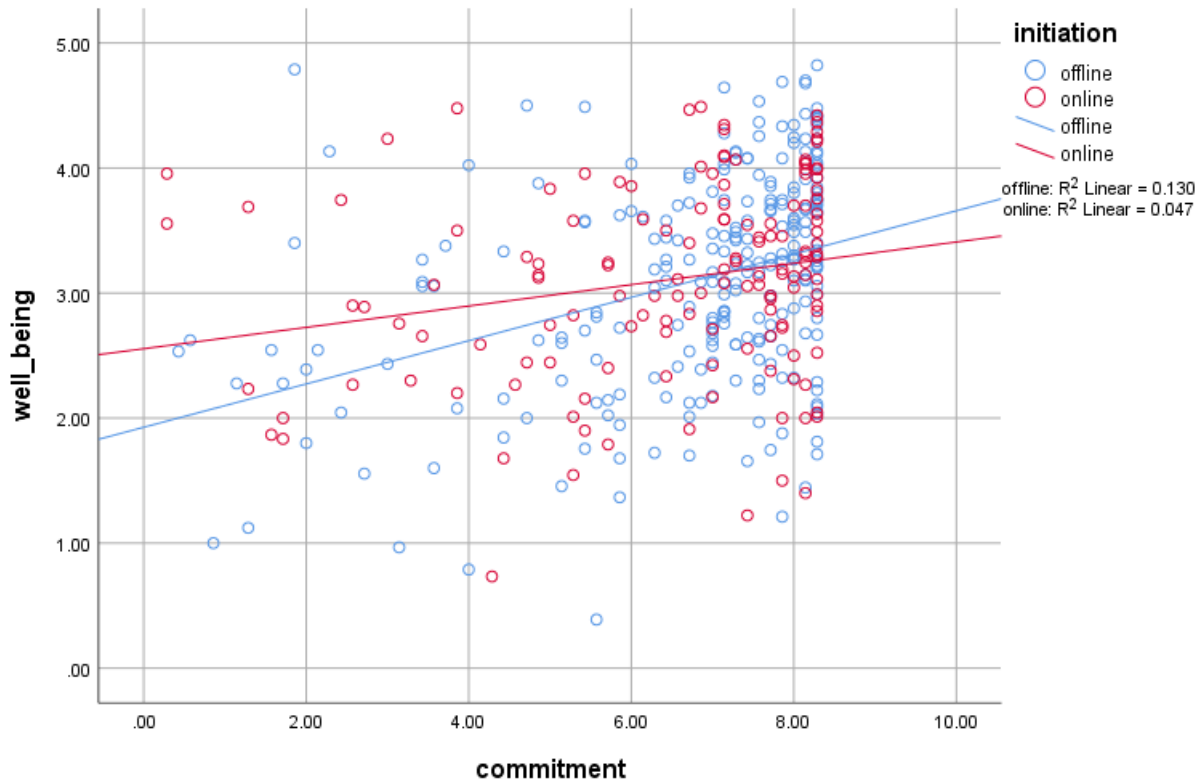


Figure 1: Scatter plot of commitment and well-being with differentiation between initiation.

Initiation, Commitment, And Well-being.

The mediation analysis examined the relationship between initiation and well-being by taking commitment into account. Initially, it was assumed that initiation had a significant influence on well-being, this was not the case, $B = .009$, $SE = .09$, $t(388) = .10$, $p = .92$, see Figure 2. Additionally, the model with initiation as IV and well-being as DV explained less than 1% of variance in well-being, $R^2 < .001$, $SE = .83$, $F(1, 388) = .01$, $p = .92$. Furthermore, after controlling for commitment, initiation was not a significant predictor of well-being, $B = .05$, $SE = .08$, 95% CI $[-.11, .21]$, $\beta = .06$, $p = .55$, in the adapted model. Approximately 9% of the variance in well-being was explained by the predictors, initiation and commitment, $R^2 = .09$, $SE = .79$, $F(2, 387) = 19.8$, $p < .001$. Thus, adding commitment as a predictor improved the model. Moreover, the results indicated that the indirect coefficient was not significant (effect = $-.04$, 95% CI $[-.1, .01]$).

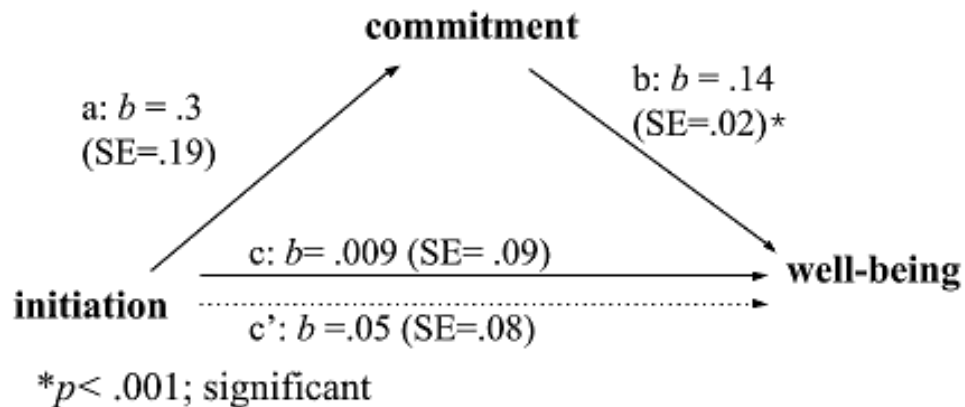


Figure 2: Diagram showing the regression coefficients (and the standard errors). Note: path c represents the total effect; path c' the direct effect.

Discussion

With relationships influencing well-being and an increasing number of relationships being initiated online, while commitment is delayed, the current research examined the extent to which the well-being of individuals differs between online and offline initiated romantic relationships while taking commitment into account. The results showed that the well-being of individuals does not seem to differ between online initiated relationships (OIR) and traditionally initiated relationships (TIR), independent of whether commitment is taken into account. Nevertheless, excluding initiation, commitment alone appears to be an important factor when considering differences in the well-being of individuals.

Results for the impact of initiation on well-being and commitment indicated that, although it was hypothesized in H1 that higher-well-being levels could be found among individuals in OIR compared to TIR, no such significant difference was found. It was further expected that OIR would show lower levels of commitment (H2). This was not the case as no differences between TIR and OIR were found, and thus, the hypothesis was rejected. Hence, whilst previous research on initiation and well-being, and initiation and commitment are sparse, current research suggests that no such relationships may exist. Similarly, Potarca (2020) stated that there is no difference concerning relationship satisfaction between TIR and OIR. Contrary to previous findings by Paul (2014), no significant differences in commitment were found

based on initiation. Besides initiation not accounting for differences in commitment, it also did not account for differences in well-being.

Furthermore, it was hypothesized in H3 that initiation and relationship duration influence commitment. The initiation-commitment model was not significant, however, this changed after adding relationship duration. Thus, the hypothesis could be accepted. Nevertheless, it should be noted that initiation was not a significant predictor in either model. As initiation was not significant, suggestions about developmental differences between TIR and OIR could not be made. This may oppose findings by Paul (2014) and Schwartz and Velotta (2018) which indicated online relationships to mature and develop slower. Our contradicting findings may be explained by the fact that our study had a different focus opposed to Paul (2014) focussing on married couples, while Schwartz and Velotta (2018) focused on OIR. Additionally, our research design was cross-sectional and did not focus on relationship development. Nevertheless, relationship duration was a significant variable in our initiation-commitment model.

Moreover, the influence of commitment on well-being was examined. As expected in H4, different commitment levels correlated to different well-being levels. Indeed a significant, linear relationship was found, indicating higher commitment levels to correlate with higher well-being levels. This implies that commitment is a contributing factor for the well-being of individuals in romantic relationships. Accordingly, the current study is in line with existing research. For example, commitment has previously been shown to be correlated to romantic relationship satisfaction (Sternberg, 1986; Farrell et al., 2015), relationship quality, as well as couple well-being (Drigotas et al., 1999). Our results indicated that commitment also has a positive influence on the individual's well-being. Thus, a direct, rather than an indirect, relationship between commitment and well-being was found. This is in line with the findings of Dush and Amato's (2005) longitudinal study suggesting that when commitment increases in a relationship the subjective well-being improves as well (Dush & Amato, 2005).

Lastly, to assess whether commitment has an impact on the initiation-well-being relationship, a mediation analysis was performed. Contrary to H5, commitment was not a mediating factor, and thus, commitment did not explain an initiation-well-being relationship. Due to the fact that neither a direct effect nor an in-direct effect was found, the results show what Zhao and his colleagues (2010) call a 'no-effect non-mediation'.

Strengths And Limitations

This study has various strengths and limitations. On the one hand, the current study had a large number of survey participants. This resulted in a varied and relatively large sample size despite having adhered to relatively strict inclusion criteria, i.e. exclude those, who had a few missing values (e.g. who did not wholly fill in every scale), or who did not meet the criteria (e.g. widowed participants). Another strength of the study was the variety in nationalities, ages, relationship status, and commitment levels, representing a diverse population. Moreover, the sample included a large number of participants with a non-hetero sexual orientation. This may be due to the survey being shared among LGBTQ+ communities. Furthermore, contrary to previous research on commitment (e.g. Paul, 2014; Cacioppo et al., 2013), the current study included data also from individuals who are not married. Including commitment levels beyond marriage gives a more accurate representation, especially since it has been observed that higher commitment forms are delayed, and a decreased desire to get married was found in OIR. Additionally, the use of existing, and well researched scales enabled valid and reliable conclusions from the well-being and commitment scores.

On the other hand, one should acknowledge, first, that the majority of relationships are TIR, and second, that OIR is a modern way of initiation that started roughly two decades ago and popularized in the past couple of years. Therefore, the chance that longer endured relationships initiated online is small. As a result, our OIR data was focused around newer formed relationships (around 0-10 years), while for TIR there was a large range in relationship duration (around 0–37 years). Furthermore, most models had relatively low R^2 scores, which indicated that the models explained very little of the variances. This suggests that other factors play a role in explaining commitment, and well-being, beyond those researched in the current study.

Lastly, it should be noted that the data collection was in April 2021 during which individuals' lives were drastically impacted by the COVID-19 pandemic. With the pandemic's social distancing and self-isolation measures the overall well-being decreased (Fernández-Abascal & Martín-Díaz, 2021; Wanberg et al., 2020). Moreover, the pandemic also impacts romantic relationships (Relationships Australia, 2020; Shillington, 2021). The impact of COVID-19 should be kept in mind as it could have influenced the commitment and well-being scores of the participants.

Implications

The current study showed that relationship initiation may not be that important, or influential, for the well-being of individuals nor for the commitment levels within a relationship. This implies that in regard to commitment and well-being one cannot make statements such as ‘finding love in real life is better than using dating apps’ (Van Weele, 2020). This may be relieving news for individuals who want to initiate a relationship online but have doubts, due to existing prejudices.

However, commitment was shown to be influential for well-being. This could be used in counselling as commitment has a positive influence on the individual’s sense of well-being. For example, the focus should not be on the past (e.g. on the relationship initiation) but rather on the present (e.g. by being aware of one's relationship status) while looking forward (e.g. by reflecting on one’s long-term orientation of the relationship).

These insights can further be used in, for example, (relationship) therapy and dating services. With a better understanding of what influences the well-being of individuals in a relationship, knowledge can be utilized to help increase well-being. In therapy, for example, identifying the main issues is necessary when wanting to target them specifically. Current research showed that commitment could be an important focus point. Moreover, dating services may apply these insights to help users find their partner(s) by communicating the insignificance of initiation for their individual well-being and highlighting the importance of commitment.

Recommendations For Future Research

Future research could focus on additional factors and reduce the limitations of the current research to gain more insights into the different factors. Due to the low R^2 scores in the current study, additional factors that influence commitment and well-being could be explored also in the context of initiation. While initiation was not a significant predictor for commitment or well-being, it may be influential on other relationship aspects, e.g. satisfaction, or relationship quality, which could be studied as Paul (2014) and Potarca (2020) have done previously. These factors may also influence commitment (Rusbult, 1983) and well-being (Kansky, 2018). With relationship initiation being understudied (Sprecher et al., 2015) such research is of importance to understand the potential differences between TIR and OIR. Besides, more insights into commitment and well-being would allow for more specific implications to be made and may enable practitioners to help individuals increase their well-being more effectively.

Additionally, research with increased focus on relationship duration may provide interesting insights. This could be done through a longitudinal study following different couples. Dush & Amato (2005) already did a longitudinal study with the focus on well-being, but other researchers may focus on relationship duration, or commitment. With our cross-sectional design it was not possible to research the development in commitment and well-being over time. That type of research would also allow for better comparison between TIR and OIR in regard to relationship duration, which could expand research of Paul (2014), and Schwartz and Velotta (2018). Additionally, such research would counter the focus on studying commitment on married individuals (Braithwaite et al., 2010) and gain insights into different commitment status. These suggested research could, thus, provide additional insights and explanations for the influence of relationships on well-being and/or development of commitment.

Conclusion

In conclusion, the current study showed that relationship initiation does not play an important role in neither commitment, nor well-being. Nevertheless, commitment alone was found to be a significant predictor for well-being of individuals in relationships. Thus, when wanting to have a relationship that positively influences the individual's well-being, the focus should be on commitment, not on the relationship initiation. Furthermore, the results counter some existing prejudices that individuals may have suggesting OIR to be 'worse' than TIR. These insights can be applied for dating services or within (relationship) therapy. To obtain a more elaborate understanding of the impact of initiation, commitment, and well-being in the context of romantic relationships, additional factors and new models could be examined in future studies.

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Appendices

Appendix A: Survey

Romantic relationships in an era of online dating

(Start of Block: Introduction)

Opening Statement

You are being invited to participate in a research study titled **Romantic relationships in an era of online dating**. This study is being done by **Anna Kirchhoff, Jedidjah Schaaïj and Kimberly Gerlach** from the Faculty of Behavioural, Management and Social Sciences at the University of Twente. The purpose of this research study is **to get new insights into online dating and romantic relationships and their effects on well-being**, and will take you approximately **10** minutes to complete. At first, you will be asked to answer demographic questions. Then, we would like you to answer a few questions about your relationship and your well-being. The data will be used for a statistical analysis in the context of our Bachelor thesis. The data will be used for purposes of this research only and will be collected anonymously. This means that neither we, nor anyone else, will be able to personally identify your data. All analysis will be performed at a group level, meaning that no inferences can be drawn about you specifically. Your participation in this study is entirely voluntary and you can withdraw at any time. You can withdraw by simply closing your browser window or tab. All data gathered up to that point will be deleted. You are free to omit any question. We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by storing your data anonymously on Qualtrics servers. Any copies of this data will be stored with password protection.

Study contact details for further information:

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Jedidjah Schaaïj (j.g.schaaïj@student.utwente.nl)

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(End of Block: Introduction -Start of Block: Informed consent)

Informed Consent

After reading the opening statement:- I confirm that I am over the age of 18 and can consent to take part in the study myself- I have read the information sheet and fully understand what the study entails and why it is being conducted- I understand that the researchers will be able to access my data, however, the data will remain anonymous- I agree to take part in this study, understanding what it involves- I understand I can withdraw my data at any time by closing the browser

Once the data has been submitted, the data will not be able to be removed due to the data being anonymous/

By clicking on the “Yes” option you indicate that you have read and understood the consent form above and choose to participate in this study on your own free will.

- Yes
- No

(End of Block: Informed consent- Start of Block: Demographics)

Please, indicate your age below.

Please, disclose your nationality below.

Please indicate the gender you were assigned at birth.

Please choose the gender you currently identify as.

Please disclose your sexuality below.

How would you describe your current relationship status?

Considering the type of relationship status you chose above, how long have you been with that person/ with these people? (When you have multiple partners, please indicate for the longest relationship)

- Less or one year (please, indicate how many months)
-

- Longer than a year (please, indicate how many years)
-

How did you meet your partner(s)?

- Offline
- Online on an online dating platform
- Online through social media platforms

(End of Block: Demographics - Start of Block: Satisfaction)

In the following questions concern your relationship satisfaction. Please use the slider to indicate to what extent you agree with the statements.

My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)

My partner fulfills my needs for companionship (doing things together, enjoying each other's company, etc.)

My partner fulfills my sexual needs (holding hands, kissing, etc.)

My partner fulfills my needs for security (feeling trusting, comfortable in a stable relationship, etc.)

My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.)

I feel satisfied with our relationship.

My relationship is much better than others' relationships.

My relationship is close to ideal.

Our relationship makes me very happy.

Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

(End of Block: Satisfaction - Start of Block: Wellbeing)

The next couple of questions relate to your well-being. Please answer the following questions about how you have been feeling during the past month. Use the slider to match what best represents how often you have experienced or felt the following:

1. happy
2. interested in life
3. satisfied with life
4. that you had something important to contribute to society
5. that you belonged to a community (like a social group, or your neighbourhood)
6. that our society is a good place, or is becoming a better place, for all people
7. that people are basically good
8. that the way our society works makes sense to you
9. that you liked most parts of your personality
10. good at managing the responsibilities of your daily life
11. that you had warm and trusting relationships with others
12. that you had experiences that challenged you to grow and become a better person
13. confident to think or express your own ideas and opinions
14. that your life has a sense of direction or meaning to it

(End of Block: Wellbeing - Start of Block: Commitment)

The next set of questions concern relationship commitment. Please use the slider to indicate to what extent you agree with the statements.

I want our relationship to last for a very long time

I am committed to maintaining my relationship with my partner.

I would not feel very upset if our relationship were to end in the near future.

It is likely that I will date someone other than my partner within the next year.

I feel very attached to our relationship-very strongly linked to my partner.

I want our relationship to last forever.

I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

(End of Block: Commitment - Start of Block: Outro)

Thank you for your participation in our study!

If there are any questions that you might have, do not hesitate to contact us:

Anna Kirchhoff (a.kirchhoff@student.utwente.nl) **Jedidjah Schaij**
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(End of Block: Outro)

Appendix B: Back-Translation of the Investment Model scale items

In order to find a translation that is sensitive to the cultural differences and linguistic properties of the scale, the back-translation method was chosen. In this method one person translates the original items into the desired language, focussing on meaning more so than wording. This translation is then given to a bilingual person who then translates the initial translation back into the original language, this is called the back translation. Following this step comes the comparison of the original version of the items and the back-translation. Then any differences in meaning or points of confusion are discussed until the final version of the translation does not lead to anymore uncertainty.

Table 1

Back translation protocol of the commitment sub-scale of the Investment Model scale

Item	Original version	Initial translation	Back-translation	Final version
Item 1	I want our relationship to last for a very long time.	Ich möchte, dass unsere Beziehung sehr lange hält.	I want that our relationship lasts long/ for a long time.	Ich möchte, dass unsere Beziehung sehr lange hält.
Item 2	I am committed to maintaining my relationship with my partner.	Ich fühle mich dem Erhalt meiner Beziehung zu meinem Partner verbunden.	I feel committed to the relationship with my partner	Ich fühle mich dem Fortbestand der Beziehung zu meinem Partner verpflichtet

Item 3	I would not feel very upset if our relationship were to end in the near future.	Ich wäre nicht sonderlich bestürzt, würde meine Beziehung in der nahen Zukunft enden.	I would not be particularly devastated, if my relationship ended in the near future/soon.	Ich wäre nicht sonderlich bestürzt, würde meine Beziehung in der nahen Zukunft enden
Item 4	It is likely that I will date someone other than my partner within the next year	Es ist wahrscheinlich, dass ich im Laufe des Jahres, jemanden anderen als meinen Partner date.	It is likely, that I will date another person than my current partner during/in this year.	Es ist wahrscheinlich, dass ich im Laufe des Jahres jemanden anderen als meinen Partner date.
Item 5	I feel very attached to our relationship-very strongly linked to my partner.	Ich fühle eine tiefe Verbundenheit zu meinem Partner/ unserer Beziehung.	I feel a deep connection to my partner/our relationship.	Ich fühle eine tiefe Verbundenheit zu meinem Partner/ unserer Beziehung
Item 6	I want our relationship to last forever.	Ich möchte, dass unsere Beziehung ewig hält.	I want that our relationship lasts forever	Ich möchte, dass unsere Beziehung ewig hält.

Item 7	I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).	Ich ziele mit meinem Partner eine langjährige Beziehung an (zum Beispiel, ich stelle mir vor mit meinem Partner in mehreren Jahren noch zusammen zu sein).	I aim for a long-standing relationship with my partner (for example, I imagine to be still together with my partner after a couple of years).	Ich strebe mit meinem Partner eine langjährige Beziehung an (zum Beispiel, ich stelle mir vor mit meinem Partner in mehreren Jahren noch zusammen zu sein)
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Table 2

Back translation protocol of the satisfaction sub-scale of the Investment Model scale

Item	Original version	Initial translation	Back-translation	Final version
Item 1	My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)	Mein Partner erfüllt mein Bedürfnis nach Intimität (persönliche Gedanken, Geheimnisse, etc. teilen)	My partner fulfills my needs for intimacy (to share personal thoughts, secrets, etc.)	Mein Partner erfüllt mein Bedürfnis nach Intimität (persönliche Gedanken, Geheimnisse, etc. teilen)

Item 2	My partner fulfills my needs for companionship (doing things together, enjoying each other's company, etc.)	Mein Partner erfüllt mein Bedürfnis nach Kameradschaft (Zusammen Sachen machen, die Gesellschaft des anderen genießen, etc.)	My partner fulfills my need for companionship (doing things together, enjoying each other's company, etc.)	Mein Partner erfüllt mein Bedürfnis nach Kameradschaft (Gemeinsam Aktivitäten durchführen, die Gesellschaft des anderen genießen, etc.)
Item 3	My partner fulfills my sexual needs (holding hands, kissing, etc.)	Mein Partner erfüllt meine sexuellen Bedürfnisse (Händchen halten, küssen, etc.)	My partner fulfills my sexual needs (holding hands, kissing, etc.)	Mein Partner erfüllt meine sexuellen Bedürfnisse (Händchen halten, küssen, etc.)
Item 4	My partner fulfills my needs for security (feeling trusting, comfortable in a stable relationship, etc.)	Mein Partner erfüllt mein Bedürfnis nach Sicherheit (sich vertrauen, sich geborgen in einer stabilen Beziehung fühlen, etc.)	My partner fulfills my security needs (to trust each other, to feel comfortable in a stable relationship, etc.)	Mein Partner erfüllt mein Bedürfnis nach Sicherheit (sich vertrauen, sich geborgen in einer stabilen Beziehung fühlen, etc.)

Item 5	My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.)	Mein Partner erfüllt mein Bedürfnis nach emotionalem Engagement (sich emotional verbunden fühlen, sich gut fühlen, wenn es auch der andere tut, etc.)	My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when the other does etc.)	Mein Partner erfüllt mein Bedürfnis nach emotionalem Engagement (sich emotional verbunden fühlen, sich gut fühlen, wenn es auch der andere tut, etc.)
Item 6	I feel satisfied with our relationship.	Ich fühle mich zufrieden mit unserer Beziehung	I feel content/happy in our relationship	Ich fühle mich zufrieden mit unserer Beziehung.
Item 7	My relationship is much better than others' relationships.	Meine Beziehung ist um einiges besser als die vieler Anderer.	My relationship is a lot better than those of many other people	Meine Beziehung ist um einiges Besser als die vieler anderer.
Item 8	My relationship is close to ideal.	Meine Beziehung ist nahezu ideal.	My relationship is almost ideal/perfect.	Meine Beziehung ist nahezu ideal.

Item 9	Our relationship makes me very happy.	Unsere Beziehung macht mich sehr glücklich.	Our relationship makes me very happy.	Unsere Beziehung macht mich sehr glücklich.
Item 10	Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.	Unsere Beziehung ist gut darin meine Bedürfnisse nach Intimität, Kameradschaft, etc. zu erfüllen.	Our relationship is good for fulfilling my needs for intimacy, companionship, etc.	Unsere Beziehung ist gut darin meine Bedürfnisse nach Intimität, Kameradschaft, etc. zu erfüllen.
