

**Romantic Relationships and Well-being in an Era of Online Dating:  
How Commitment and Satisfaction in Relationships are Associated with Well-being**

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### **Abstract**

In an era of online dating, emerging new forms of relationships raise interest for scientific inquiry of the association of relationship commitment, satisfaction, and well-being. Further, the extent to which satisfaction mediates the relationship between commitment and well-being is tested. Since the level of commitment is associated with satisfaction, investments, and the quality of alternatives, commitment is expected to be lower in times of online dating (Rusbult, 1980). New forms of relationships are expected to result in low levels of commitment due to lower levels of satisfaction, lower investments, and higher quality of alternatives. Past studies did not observe the association between lower levels of commitment and well-being in much detail. Hence, literature research suggested that satisfaction might be a better predictor of well-being as commitment is expected to be lower in times of online dating.

The cross-sectional research consisted of a total sample with 401 participants. The subsequent scales of the investment model by Rusbult et al. (1998) assessed relationship commitment and relationship satisfaction among participants. The Mental Health Continuum Short-Form by Keyes (2018) evaluated the level of positive mental health. An ANOVA mediation analysis was done testing the association of relationship satisfaction, relationship commitment, and well-being.

The results showed a significant mediating effect of relationship satisfaction. In particular, the direct effect between relationship commitment and well-being is not significant, meaning that their relationship is fully mediated by relationship satisfaction. Furthermore, relationship commitment is not a strong predictor of well-being, this relationship is not significant. Instead, relationship satisfaction significantly predicts well-being.

Concluding, relationship commitment may not be a strong predictor of well-being because several factors reduce the level of commitment nowadays. In turn, satisfaction is a better predictor for well-being. Therefore, the causal association of relationship commitment and relationship satisfaction should be evaluated in future research. Moreover, the investment model could be revisited in future research.

*Keywords:* Romantic Relationships, Well-being, Investment Model Scale, Commitment, Satisfaction, Online Dating

### **Romantic Relationships and Well-being in an Era of Online Dating:**

#### **How Commitment and Satisfaction in Relationships are Associated with Well-being**

Online dating apps are an increasingly important area in finding romantic relationships nowadays. In recent years, there has been a growing interest in using online dating apps. Especially during the worldwide pandemic, the popularity of online dating apps is rising (Shaw, 2020). The past decade has seen the rapid development of online dating apps: using mobile dating apps increased fourfold within a time frame of two years, specifically, 5% of young adults between 18-24 years old in 2013 used online dating apps compared to 22% in 2015 (Smith, 2016). Furthermore, since the launch of Tinder in 2012, the app has been downloaded 340 million times (Shaw, 2020). In particular, Tinder recorded three billion swipes on March 29th, 2020, worldwide, the most ever recorded (Shaw, 2020). Therefore, this suggests that online dating apps exert influence on current dating behaviour and relationships.

The increased convenience of online dating on finding a partner influences dating with an increase in non-romantic relationships. Specifically, the immediacy, proximity, and surplus of choice on online dating apps make the search for a partner nowadays very convenient (Albury et al., 2017; Potarca, 2020; Timmermans & Courtois, 2018). Several studies highlight that online dating apps such as Tinder and Grindr are described as ‘hook-up applications’ and influence dating nowadays (Albury et al., 2017; Licoppe et al., 2016; Timmermans & Courtois, 2018). Hence, online dating apps are believed to favour the increase in non-romantic relationships.

A growing number of new types of relationships are emerging and growing in popularity, replacing traditional forms of relationships. Starting in 2000, there is a change from seeking traditional romantic relationships to short-term mating strategies and a post-traditional “hook-up culture” (Timmermans & Courtois, 2018). The term “hooking up” refers to a sexual encounter between two people without having a traditional romantic relationship (Garcia et al., 2012). Another non-romantic relationship type is called “friends with benefits” (FWB), which refers to casual sex between friends without romantic emotions, monogamy, or the level of commitment that romantic relationships bring. Considering the fact that 60-80% of college students in the USA have experiences with hooking up, this is a crucial component of intimacy nowadays. In contrast, other studies indicate that even though the majority of college students engage in non-committed relationships, they prefer a traditional romantic relationship instead of their non-romantic relationship (Garcia et al., 2012) and wish that their hook-up relationship becomes a committed

relationship (Timmermans & Courtois, 2018). In sum, this suggests that new forms of non-romantic relationships with lower commitment arise and become prominent among young adults.

The level of commitment in relationships has an impact on the well-being of individuals. Recent studies showed that subjective well-being increases for people with a higher level of commitment in their relationships (Dush & Amato, 2005). Dush and Amato (2005) showed that subjective well-being is the highest among married couples in succession by cohabitating couples, steady dating relationships, and casual dating relationships. Considering these findings and the fact that new, less committed forms of relationships emerge in the era of online dating, further research is needed to investigate how different forms of romantic relationships are associated with general well-being.

In the section that follows, the theoretical framework of this study in categorizing relationships will be described.

### **Theoretical Framework**

Commitment in relationships is thought to be influenced by the level of satisfaction, the investment size, and the quality of alternatives. According to the investment model by Rusbult (1980), which is based on interdependence theory, commitment in relationships can be defined as the orientation for a long-term relationship and the intention to stay in a relationship, while having a feeling of psychological attachment. Rusbult (1980) lists three factors influencing commitment in relationships: the satisfaction level, investment size, and quality of alternatives.

First, the *level of satisfaction* is determined by the divergence of costs and benefits of the relationship. For instance, the physical appearance of a partner, intelligence, wealth, or behaviours of the partner. The individual analyzes their current relationship regarding its costs and benefits and compares it to previous relationships and to that of others. Subsequently, if individuals perceive that their relationship is more rewarding than this, they are satisfied with their relationship.

Second, the *investment size* depends on the extrinsic factors (interests that influence current behaviour, such as living conditions, children, peer group) or intrinsic factors (emotions, time) invested in the relationship. Consequently, the more partners invest in the relationship, the less likely they will end their relationship because they would lose these factors.

Third, the *quality of alternatives* is based on assessing available other relationship partners or renouncing a romantic partner, hereby, the attractiveness of alternatives plays an important role (Rusbult, 1980; Tran et al., 2019).

Therefore, this model implies that commitment will be higher among those that perceive high satisfaction with their relationship, invested largely, and judge their quality of alternatives as worse than their current partner.

### **The Impact of Relationship Commitment on Well-being**

Higher levels of commitment are associated with higher levels of well-being. Specifically, strongly committed relationships, such as marriages, are proven to be related to higher levels of well-being (Dush & Amato, 2005). This is related to the amount of investments that are made in relationships. In particular, extrinsic and intrinsic investments are the highest among marriages (Rusbult, 1980). Specifically, married partners have a higher living standard than less committed couples (Dush & Amato, 2005). In addition, socioeconomic status is proven to be higher among married couples, which is comparable to large extrinsic investments (Rusbult, 1980; Brown, 2000). Hence, married couples indicate higher levels of subjective well-being because of higher investment benefits, such as social support, social integration, and higher living standards. Accordingly, more increased happiness and life satisfaction (Dush & Amato, 2005). Additionally, Brown (2000) established that married couples show lower levels of depression than cohabiting couples. In fact, cohabiting couples in long-term relationships report 30% higher depression rates than married couples (Brown, 2000). Therefore, it is likely that higher commitment leads to higher general well-being.

It is unclear how online dating and the rise in non-romantic relationships are related to well-being. Whereas online dating apps lead to benefits such as “instant gratification” and “confidence boosts” if users match with another person (Sales, 2015), researchers attempted to evaluate the consequences of less committed relationships on mental health. In general, individuals try to reduce unpleasant, negative feelings and want to exceed the positive, pleasant feelings, which leads to positive mental health (Lamers et al., 2011). Previous studies reported the short-term pleasure of hooking up: individuals indicated that they enjoyed hooking up with a partner. Hence, one might assume that online dating and rising non-traditional forms of dating may lead to positive well-being. However, because of different desires, most individuals feel bad after a sexual encounter (Garcia et al., 2012). Similarly, Owen and Fincham (2011) argued that depressive

symptoms and feelings of loneliness increased for students that engaged in uncommitted sexual encounters. Overall, researchers have not treated various forms of romantic relationships and general psychological functioning in much detail.

### **The Association of Relationship Commitment and Relationship Satisfaction**

The association between relationship satisfaction and relationship commitment seems to be bidirectional. On the one hand, relationship commitment might be influencing relationship satisfaction. Former studies state that relationship satisfaction is associated with the level of positive affect experienced (Rusbult, 1980). A person is satisfied when their partner fulfills their needs, thus, the rewards of the relationship increase (Rusbult et al., 1998). Consequently, it may be concluded that relationships with higher levels of commitment perceive more elevated levels of positive affect and, in turn, higher relationship satisfaction. In support, it is evident that marriages display the highest level of satisfaction because of the large investments (Dush & Amato, 2005).

On the other hand, the level of satisfaction can strengthen commitment and is influenced by the degree to which the needs are fulfilled by their partner (Rusbult, 1980). In fact, lower levels of relationship satisfaction are associated with lower levels of commitment (Emery et al., 2021). Further, Nascimento and Little (2020) stated that individuals evaluate the quality of relationships by satisfaction and then decide whether they want to continue or dissolve their relationship. Thus, if they are not satisfied with their relationship, they are more likely to lower commitment and end their relationship, whereas high satisfaction leads to higher commitment, such as investing in time, effort, or finances to maintain the relationship (Nascimento & Little, 2020). Moreover, Fincham et al. (2018) stated that dissatisfaction in marriages is a leading factor for divorces. A meta-analysis by Tran et al. (2019) of the investment model showed that relationship satisfaction is one of the most important factors contributing to the long-term orientation of a relationship. Thus far, the evidence presented supports the idea that relationship satisfaction is a key contributing factor to commitment in relationships.

### **The Impact of Relationship Satisfaction on Well-being**

Besides relationship commitment, relationship satisfaction is possibly influencing well-being to a great extent. Many researchers have reported about the satisfaction of romantic relationships (Dush & Amato, 2005; Potarca, 2020). In fact, high levels of positive affect correlate with higher subjective well-being (Dush & Amato, 2005). Specifically, Dush and Amato (2005)

revealed that people in satisfying marriages indicate positive general mental health. In other words, individuals in unsatisfying marriages indicate lower levels of well-being. Actually, even though marriages present the highest level of commitment and, therefore, show high positive well-being, low relationship satisfaction contributes to a tremendous shift in well-being. Specifically, if marriages are unhappy or unsatisfying, they lead to lower levels of well-being. Accordingly, relationship satisfaction seems to play an essential role in predicting positive general mental health (Dush & Amato, 2005). Therefore, it can be expected that this study replicates current findings that show that not only relationship commitment influences well-being but also that higher relationship satisfaction is associated with higher levels of subjective well-being. In short, it is valuable to consider relationship satisfaction to be mediating the relationship between commitment and well-being.

### **The Current Study**

This study aims to investigate the relationships between relationship commitment, relationship satisfaction, and well-being. While many researchers have reported about the well-being of people in romantic relationships (Dush & Amato, 2005; Potarca, 2020), in contrast, very little is known about the well-being of other kinds of relationships. Looking at the cultural shifts of dating behaviour among young adults nowadays, it is interesting to study how the level of commitment in relationships is associated with the level of well-being. According to Rusbult (1980), commitment to relationships is weakened by the alternatives that are available for the individual. Thus, the rise of post-traditional relationships during the emergence of online dating apps may be influenced by the convenience of finding an attractive and fitting partner online. The immediacy, proximity, and surplus of choice could lead to lower commitment because of higher qualities of alternatives. Moreover, the literature review showed that there is an association between relationship commitment and relationship satisfaction (Emery et al., 2021; Nascimento & Little, 2020). Further, relationship satisfaction seems to be associated with well-being to a great extent and may function as a mediating variable (Dush & Amato, 2005). Consequently, a mediation model is proposed (see Figure 1). Hence, this research seeks to answer the following questions:

*RQ1:* To what extent is relationship commitment associated with the level of well-being?

*H1:* Lower levels of relationship commitment indicate lower levels of well-being.

*RQ2:* To what extent is relationship satisfaction associated with the level of well-being?

*H2*: Higher relationship satisfaction is correlated with higher levels of well-being.

*RQ3*: To what extent is relationship commitment associated with the level of relationship satisfaction?

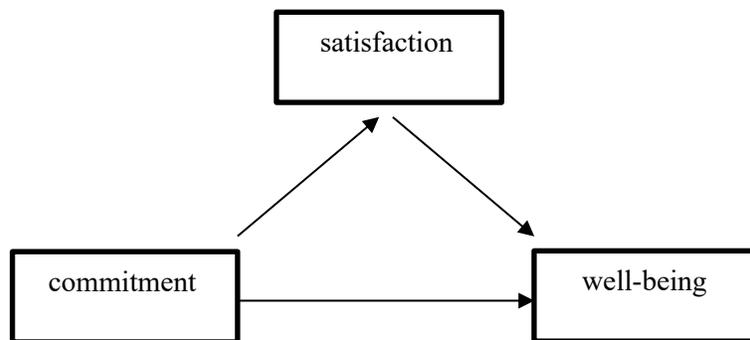
*H3*: Relationship commitment is positively associated with relationship satisfaction.

*RQ4*: To what extent does relationship satisfaction mediate the relationship between commitment and well-being?

*H4*: Relationship satisfaction is a significant mediator for the relationship between relationship commitment and well-being.

### Figure 1

*Proposed Mediation Model of Relevant Variables*



### Methods

#### Design

The design of the study aims to investigate the relationship between the independent variable relationship commitment and the dependent variable well-being. Further, it was tested whether relationship satisfaction is a better predictor of well-being or whether it functions as a mediating variable. Quantitative and cross-sectional data was collected through an online questionnaire. Prior to the publication of the questionnaire, ethical approval was obtained by the Behavioural, Management and Social Sciences (BMS) ethics committee of the University of Twente, the Netherlands. Two language options were offered to participants: either German or English.

## Participants

A random sample of participants (total  $N = 832$ ) was recruited through the researchers own social networks, specifically, through snowball sampling. Social networks included social media applications such as WhatsApp, Facebook, and Instagram. Additionally, the study was presented at the BMS test subject pool of the University of Twente, Enschede. 103 participants were recruited from this website and earned 0.25 SONA points for their participation. The participation was based on informed consent (Appendix A) that informed participants about their right to withdraw at any time and about the responsible handling of the data, for example, “I have read the information sheet and fully understand what the study entails and why it is being conducted”.

Participants were excluded from the dataset if they did not match the inclusion criteria, such as denied informed consent in the beginning or did not meet the participation requirements, such as minimum age of 18 years or because they indicated being single as a relationship status. The participation was voluntary and one-time.

The final sample consisted of 401 participants, of whom 302 participants identified as female (75,3%), 58 participants identified as male (14,5%), 33 participants identified as non-binary (8,2%), and 8 participants preferred to self-disclose or not to say (1,9%). The total sample ranged from 18-75 years of age. Participants were on average 25,63 years old ( $SD = 8,29$ ). Regarding nationalities, 230 participants identified as German (57,4%), 28 participants were Dutch (7%) and 143 participants identified with other nationalities (35,7%). Further details about demographic characteristics can be found in Table 1, such as distinctions of the categories of relationships and their initiation type.

**Table 1***Descriptive Statistics of Socio-Demographic Data*

Demographic	Frequency	%
Gender		
Male	58	14,5
Female	302	75,3
Non-binary	33	8,2
Self-disclose	8	1,9
Nationality		
German	230	57,4
Dutch	28	7
Other	143	35,7
Relationship status		
Dating	41	10,2
Hook-Up	12	3
FWB	17	4,2
Cohabiting	58	14,5
Married	57	14,2
Self-disclose	17	4,2
Initiation		
Offline	253	63,1
Online	148	36,9

*Note.*  $n = 401$ .

**Materials*****Software***

Data was collected through Qualtrics, an online platform for questionnaires. To fill in the survey, participants used their mobile devices or computers. The software package IBM SPSS Statistics 24 and the PROCESS version 3.5.3 by Hayes (2017) was installed and used.

***Demographic questions***

Eight items about demographics were administered. Specifically, age, nationality, gender at birth, gender identification, sexuality, relationship status, duration of the relationship, and origin of the relationship (Appendix B).

***Mental Health Continuum Short Form***

The survey included 14 items of the mental health continuum short form (MHC-SF) by Keyes (2018) to investigate the well-being of participants. The MHC-SF consists of three subscales that depict each facet of the construct definition of well-being. Three items of the MHC-SF measure emotional well-being (items 1 to 3), for example, “happy”. Five items measure social well-being (items 4 to 8), for instance, “that people are basically good”. Six items represent psychological well-being (items 9 to 14), for example, “that you liked most parts of your personality”.

All items were measured on a 6-point Likert scale (*never, once or twice a month, about once a week, two or three times a week, almost every day, every day*) (Keyes, 2018; Lamers et al., 2011). The items were presented with a slider option for participants to indicate to what extent participants have experienced or felt the statements during the last month, specifically “During the past month, how often did you feel...”.

This questionnaire is of high internal consistency, or reliability  $>.80$  and the test-retest reliability is stable over a 9-month period with  $.65$ . Moreover, the MHC-SF is of good discriminant and convergent validity with high factor loadings of  $.52$ -. $90$  (Lamers et al., 2011). For this study, the reliability analysis indicated a Cronbach’s alpha of  $.89$  ( $n = 391$ ). The inter-item correlation coefficient is  $.37$ .

***Investment Model Scale***

The survey included 17 items of the investment model scale by Rubult et al. (1998) to investigate relationship satisfaction and relationship commitment. For the German version of the commitment scale and satisfaction scale, back-translation was used to ensure the reliability and validity of the questionnaire. The items were translated into German focused on meaning. Then, the German version is back-translated by a bilingual person into English. Next, differences between the original version and the back-translated version were discussed until the translated version is unambiguous (see Appendix C, Table 2 and Table 3).

To study relationship satisfaction, all 10 items of the satisfaction scale were used. The scale consists of five facet items, for example, “My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)” and five global items, for example, “My relationship is much better than others’ relationships.”. The items were presented with a slider option to indicate to what extent participants agree with the statements, in particular “The following questions concern your relationship satisfaction. Please use the slider to indicate to what extent you agree with the statements.”. The questions were measured on a 9-point Likert scale, ranging from 0 (*do not agree at all*) to 8 (*agree completely*).

To study relationship commitment, all items of the commitment scale of the investment model scale by Rusbult et al. (1998) were used. The commitment scale consists of seven global items, for example, “I am committed to maintaining my relationship with my partner.”. All items were presented with a slider option to indicate to what extent participants agree with the statements, specifically “The next set of questions concern relationship commitment. Please use the slider to indicate to what extent you agree with the statements.”. Items were measured on a 9-point Likert scale, ranging from 0 (*do not agree at all*) to 8 (*agree completely*). Two items were negative and therefore recoded, namely item 3 “I would not feel very upset if our relationship were to end in the near future.” and item 4 “It is likely that I will date someone other than my partner within the next year.”.

For all scales of the investment model, convergent and discriminant validity are proven to be good (Rusbult et al., 1998). Further, reliability measures indicated that the internal consistency of all scales is good. Commitment global items alpha scores ranged from .91 to .95, indicating good reliability. Validity measures of the commitment scale showed  $R^2 = .69-.77$ , all  $p < .01$ . Satisfaction global items indicated a reliability alpha of .92 to .95, followed by .79 to .93 for the facet items. Validity measures are good for the satisfaction scale ( $R^2 = .83-.90$ ) (Rusbult et al., 1998).

For this study, the reliability analysis for all items of the satisfaction subscale indicated excellent reliability  $\alpha = .88$  ( $n = 389$ ). For global items only, Cronbach’s alpha was at .91 ( $n = 379$ ). Inter-item correlation for this subscale was .70. Moreover, reliability for relationship commitment was also excellent with Cronbach’s alpha at .90 ( $n = 401$ ). The inter-item correlation for this subscale was .59.

## **Procedure**

The survey was accessed through Qualtrics. First, the opening statement was presented to participants, including the contact details of the researchers and the purpose of the study, the procedure of the questionnaire and the confidentiality (Appendix D). On the second page of the study, participants were asked to agree to the informed consent to participate in the study (Appendix A). After obtaining written informed consent, items about demographics were administered. To ensure that enough participants complete the three scales on average, the commitment scale, satisfaction scale and the MHC-SF were randomized for each participant. On the last page of the survey, participants were provided with the contact information of the researchers.

## **Data Analysis**

### ***Descriptive Statistics***

The data was analysed by quantitative analysis. Items were labelled and unimportant items were excluded from the data set, for instance, the location. Participants that did not match the requirements were excluded. All data of participants that did not finish one of the scales were deleted.

Before running analyses, the data was checked to identify if all assumptions were met. Specifically, normality (skewness, kurtosis, and Shapiro-Wilk's  $W$  test), homogeneity (multicollinearity checked with VIF), and linearity (graphical observation).

The socio-demographic data were analysed through descriptive statistics in SPSS. Descriptive statistics were used to calculate means and standard deviations.

### ***Mental Health Continuum Short Form***

The total scores of the total scale and all subscales were calculated. The mean scores of items 1 to 14 result in the total scale, namely "*Positive Mental health*". This served as the basis for the dependent continuous variable in this research, called well-being. The descriptive analysis indicated means and standard deviations for this variable (Table 4). Cronbach's alpha is calculated to identify if items of subscales need to be deleted.

### ***Investment Model Scale***

Only the five global items of the satisfaction scale are included in the analysis. Seven global items of the commitment scale were included. Mean scores were calculated for each subscale, resulting in the independent continuous variables relationship satisfaction and relationship

commitment. Descriptive statistics were used to calculate means and standard deviations (Table 4). Again, Cronbach's alpha is calculated to identify if items of subscales need to be deleted.

### ***Analyses***

To test whether relationship satisfaction is a better predictor of well-being than relationship commitment, an ANOVA mediation analysis in SPSS is done using model 4 of the package PROCESS version 3.5.3 (Hayes, 2017). This package also includes a two-tailed Pearson correlation analysis and a multiple regression analysis. These were used to answer the research questions and to observe the association between the independent variables relationship commitment and relationship satisfaction, and their association to the dependent variable well-being. Prior to the analysis, all assumptions were checked, such as no autocorrelation, no multicollinearity, linearity, and normal distribution. The confidence intervals and inferential statistics were calculated by bootstrapping 5000 samples with heteroscedasticity consistent standard errors (Davidson & MacKinnon, 1993). During the analysis, the independent variable was relationship commitment, the dependent variable was well-being, and the mediating variable was relationship satisfaction.

## **Results**

### **Analyses**

#### ***Pearson Correlation Analysis***

A correlation analysis was performed. The scale relationship satisfaction is positively correlated with relationship commitment  $r = .7$ , which is significant at  $p = .001$ . The scale relationship satisfaction is positively correlated with well-being  $r = .34$ , which is also significant at  $p = .001$ . The scale relationship commitment is also positively correlated with well-being  $r = .3$ , which is significant at  $p = .001$  (Table 4).

**Table 4***Descriptive Statistics and Correlation Analysis for Relevant Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3
1 Satisfaction	6.1	1.72	-		
2 Commitment	6.41	1.8	.7**	-	
3 Well-being	3.05	.83	.34**	.3**	-

Note.  $n = 389$ , \*\*  $p < .01$

**Multiple Regression Analysis**

A multiple regression analysis was performed to determine to what extent well-being is predicted by relationship commitment and relationship satisfaction. Relationship commitment and satisfaction as predictors of well-being explain 12,5% of the variance ( $F(2, 386) = 27.50$ ,  $p = .001$ ). Relationship commitment predicts well-being with  $\beta = 0.05$ ,  $t(386) = 1.76$ ,  $SE = 0.31$ , this relationship is not significant with  $p = .08$ . Relationship satisfaction predicts well-being significantly with  $\beta = .13$ ,  $t(386) = 3.90$ ,  $SE = 0.03$ ,  $p = .001$  (Table 5).

**Table 5***Regression Coefficients of Well-being*

Variable	Estimate	<i>SE</i>	<i>t</i>	95% CI		<i>p</i>
				<i>LL</i>	<i>UL</i>	
Intercept	1.94	.16	12.39	1.63	2.25	.00
Commitment	.05	.31	1.76	-.01	.11	.08
Satisfaction	.13	.03	3.90	.06	.19	.00

Note.  $n = 389$ , CI = confidence interval, *LL* = lower limit, *UL* = upper limit

### *Mediation Analysis*

The mediation analysis indicated a linear relationship between all variables involved, judged by interpretation of the LOESS smoothed scatterplots. All other assumptions were met.

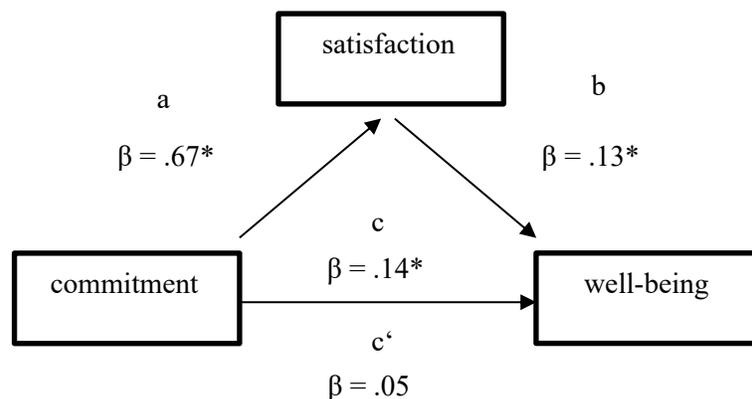
The simple mediation analysis showed a significant total effect of the independent variable relationship commitment to the dependent variable well-being with  $\beta = .14$ ,  $t(387) = 6.19$ ,  $p = .001$ .

The indirect effects were also significant, as relationship commitment predicted the mediator variable relationship satisfaction with  $\beta = .67$ ,  $p = .001$ . The mediator variable, relationship satisfaction, predicted well-being significantly with  $\beta = .13$ ,  $p = .001$ .

Further, the direct effect between relationship commitment and well-being is not significant ( $\beta = .05$ ,  $p = .08$ ), meaning that their relationship is fully mediated by relationship satisfaction ( $ab = .08$ , 95% CI [.03, .14]) (Figure 2).

**Figure 2**

#### *Mediation Model of Relevant Variables*



*Note.*  $n = 389$ ,  $* p < .001$

Pathway a refers to the indirect effect of the independent variable to the mediating variable.

Pathway b refers to the indirect effect of the mediating variable to the dependent variable.

Pathway c refers to the total effect of the independent variable to the dependent variable.

Pathway c' refers to the direct effect of the independent variable to the dependent variable.

## Discussion

The present study aimed to investigate the association between relationship commitment and relationship satisfaction to well-being. Since previous research did not indicate whether relationship satisfaction better function as a mediating variable and how new forms of relationships that are less committed are associated with well-being, this study adds value to the present literature. Specifically, the results show that relationship satisfaction is completely mediating the relationship between commitment and well-being. Further, the regression analysis indicated that relationship commitment is not a strong predictor of well-being. Instead, relationship satisfaction explains most of the effect on well-being.

### Hypothesis Testing and Implications

Taken together, these analyses provided results to answer the aforementioned research questions and hypotheses. Therefore, the following part serves as a structured overview of the implications of the results.

#### *The Impact of the Level of Commitment in Relationships on Well-being*

Concerning the first research question, “*To what extent is relationship commitment associated with the level of well-being?*”, the results showed that the subsequent hypothesis “*Lower levels of relationship commitment indicate lower levels of well-being.*” can be accepted since relationship commitment is positively related to well-being.

As expected, this study supports the view that commitment predicts well-being. The results are in agreement with Brown’s (2000) findings which showed that married couples report higher psychological well-being. This is also consistent with Dush and Amato (2005), who argued that individuals with higher status relationships, such as marriages, indicate higher subjective well-being. Dush and Amato (2005) conceptualized subjective well-being as a combination of emotional and psychological well-being. This study adds to previous findings in broadening the concept to general well-being. Therefore, the findings suggest that overall positive mental health is higher among people in higher committed relationships.

However, the findings of this study differentiate to the degree that commitment is not a strong predictor of well-being. In particular, the coefficient commitment predicting well-being together with relationship satisfaction is low. This contradicts previous findings by Dush and Amato (2005), who demonstrated that commitment is a significant predictor of subjective well-being. A possible explanation might be that Dush and Amato (2005) drew attention to distinctive

categories in relationships and measured how relationship status, unlike commitment, is associated with subjective well-being. Although they consider commitment to be interchangeable with the categories of relationship status, there is a significant difference in measuring solely relationship commitment instead of relationship status. To be concrete, a high relationship status, such as marriages, already includes the concept of relationship satisfaction and other factors within the analysis, since the investment model also states that higher status is expected to be connected to higher investments, higher satisfaction, and less quality of alternatives (Brown, 2000; Rusbult, 1980). Concluding, this may explain the relatively weak effect that commitment has on well-being in this research. Therefore, it is even more important to look at other variables that seem to predict well-being.

Another source of uncertainty is whether post-traditional forms of relationships themselves differ in commitment. In the past, a lifelong commitment was very important in relationships, whereas today, self-development is mainly important (Gross & Simmons, 2002). A significant difference between post-traditional relationships and romantic relationships are the factors that seem to contribute to their satisfaction. Brown (2000) stated that marriages benefit from far more aspects than their level of commitment, for instance, economic advantages. Gross and Simmons (2002) argued that material possessions are past premises to endure a romantic relationship, while today, values, interests, and identity are essential elements of the continuation of a relationship. Consequently, commitment is lower for post-traditional relationships (Gross & Simmons, 2002). However, the results need to be interpreted with caution.

### ***The Impact of Relationship Satisfaction on Well-being***

Regarding the second research question, “*To what extent is relationship satisfaction associated with the level of well-being?*”, the results indicated that the following hypothesis, “*Higher relationship satisfaction is correlated with higher levels of well-being.*” can be accepted because there is a significant positive relationship between both variables.

Relationship satisfaction is a strong predictor of well-being and explains most of the effect on well-being. In accordance with this, previous studies have reported that satisfaction is a crucial contributing factor to positive mental health (Dush & Amato, 2005). For instance, individuals in unsatisfying marriages indicate lower levels of well-being, even though they report the highest level of commitment with marriage as their relationship status (Dush & Amato, 2005). Concluding, these results confirm the strong association between satisfaction and well-being.

### ***The Association of Relationship Commitment and Relationship Satisfaction***

In relation to the third research question, “*To what extent is relationship commitment associated with the level of relationship satisfaction?*” the allied hypothesis “*Relationship commitment is positively associated with relationship satisfaction.*” can be accepted. In this present study, results showed that there is a strong positive relationship between relationship commitment and relationship satisfaction.

The literature research suggested that not only relationship commitment influences relationship satisfaction, but also vice versa (Emery et al., 2021; Rusbult, 1980; Rusbult et al., 1998). These findings raise intriguing questions regarding the causal relationship between relationship satisfaction and relationship commitment. The results reflect those of a meta-analysis by Tran et al. (2019) that support the strong association between relationship satisfaction and relationship commitment. Furthermore, more recent studies have evaluated the importance of satisfaction on commitment, stating that the quality of a relationship influences the investments made to continue a relationship (Emery et al., 2021; Fincham et al., 2018; Nascimento & Little, 2020). Hence, this study confirms the assumption that satisfaction is a key contributor to commitment in relationships. Particularly, present studies report a trend towards satisfaction influencing commitment (Emery et al., 2021; Fincham et al., 2018; Nascimento & Little, 2020).

A possible explanation for the low predicted value of commitment may be the influence of online dating. In reviewing the literature, one could expect that online dating could contribute to lower levels of commitment. According to Rusbult’s (1980) investment model, it is likely that commitment is lower nowadays because online dating apps provide a surplus of choice, consequently, the quality of alternatives could be judged as better than their current partner (Potarca, 2020). It is therefore likely that connections exist between online dating and the level of commitment in relationships.

### ***Relationship Satisfaction as a Mediating Variable***

The fourth research question served as a basis for the analysis of a mediation model between the independent variable relationship commitment, the dependent variable well-being, and the mediating variable relationship satisfaction. The fourth research question, specifically “*To what extent does relationship satisfaction mediate the level of commitment in relationships and well-being?*” and the following hypothesis “*Relationship satisfaction is a significant mediator for the relationship between relationship commitment and well-being.*” can be accepted. As visible in

Figure 1, relationship satisfaction fully mediates the relationship between the independent and the dependent variable.

Consistent with the literature research, these results confirm the mediating role of satisfaction. In fact, the relationship between commitment and satisfaction is the strongest relationship within the model. These results are consistent with previous research that indicates several proofs for their relationship (Dush & Amato, 2005; Emery et al., 2021; Fincham et al., 2018; Nascimento & Little, 2020).

Overall, these findings help understand that relationship satisfaction is an essential factor compared to commitment when looking at the well-being of individuals. Even though high commitment is one main contributor to the happiness of individuals (Dush & Amato, 2005), this study suggests that satisfaction in a relationship may be more important to feel happy than being strongly committed in a relationship. The literature research indicated that online dating and a shift towards less committed relationships can be observed during the last two decades (Albury et al., 2017; Licoppe et al., 2016; Timmermans & Courtois, 2018). Highly committed forms of relationships such as marriages may be expected to be formed less frequently in the future since commitment is not as crucial for an individual's mental health as their satisfaction in the relationship. Consequently, the post-traditional shift towards non-romantic relationships may continue to enhance in the future, resulting in developments of different and less committed relationship types. Gross and Simmons (2002) stated that values in relationships change, which could be an interesting factor to consider in couple's therapy because satisfaction is a key influence on the continuation of a relationship (Tran et al., 2019).

### **Strengths of this Study**

Alongside the mentioned implications, several strengths contribute to this present research. A major strength of this study is the sample of the study. First, the sample size is relatively large, which enables good generalizability to the population. Second, the sample is also heterogeneous, indicating a large age range, different nationalities, different sexualities, and different identifications of gender. Since this study's topic referred to relationships and is especially relevant in today's era, it is valuable that this sample included several types of relationships and sexualities. Specifically, categories of relationships that have not been considered before.

Finally, previous research indicates that variance in correlations of satisfaction and commitment studies were weaker in European studies, hence, the combination of different nationalities worldwide is a significant strength of this cross-cultural study (Tran et al., 2019).

### **Limitations of this Study**

It is unfortunate that the study did not include demographic questions about the participants' educational background since Brown (2000) highlighted that socio-economic status and education is an essential factor for satisfaction and commitment levels of several different relationship statuses. Another limitation of this study's sample is that arguably few males are represented.

Further, one source of weakness of this study is the research design since cross-sectional research cannot draw inferences about causal relationships. Especially recognizable in literature research, prior studies did not clearly define the relationship between commitment and satisfaction. Moreover, this present study did not consider which role online dating plays in commitment and satisfaction nowadays.

### **Recommendations for Future Research**

Future research is required to establish how new forms of relationships with lower levels of commitment are associated with relationship satisfaction and well-being while controlling for online dating apps. It is valuable to research the association because literature search indicated that online dating might influence post-traditional relationships to a great extent (Albury et al., 2017; Licoppe et al., 2016; Timmermans & Courtois, 2018).

Further research might explore how commitment and satisfaction change over time by using a longitudinal research design as this study used a cross-sectional study design. The literature research suggested that not only relationship commitment influences relationship satisfaction, but also the other way around (Emery et al., 2021; Rusbult, 1980; Rusbult et al., 1998). These findings raise intriguing questions regarding the causal relationship of relationship satisfaction and relationship commitment. Further studies may aim to investigate the causality of the relationship in more depth. Therefore, the investment model may be revisited in future research.

### **Conclusion**

This study lays the groundwork for future research into relationship studies connected to positive mental health by breaking down essential elements such as commitment and satisfaction in relationships.

The current data highlight several implications by focusing on the importance of relationship satisfaction as a mediating variable. Taken together, these results suggest that relationship satisfaction is fully mediating relationship commitment and well-being. Specifically, this study contributed to the present literature by broadening the concept of subjective well-being to general well-being. Supporting previous findings, commitment is a predictor of well-being. However, relationship commitment is not a strong predictor of well-being, possibly due to differences in measuring commitment as a concept in past research. Therefore, this present research is valuable because it measures commitment solely by using the subsequent scale of the investment model. Moreover, as confirmed in previous studies, relationship satisfaction is a significant predictor of well-being and explains most of the effect. Lastly, relationship satisfaction and relationship commitment are strongly related.

Furthermore, future research may investigate if commitment and satisfaction may differ in post-traditional relationships because online dating apps are rising in popularity and relevance for dating nowadays. Moreover, research can focus on the causal relationship between relationship commitment and relationship satisfaction since the literature search implies a bidirectional relationship. Hence, the investment model could be revisited in future research.

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## **Appendices**

### **Appendix A**

#### ***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.

### **Appendix B**

#### ***Demographic Questions***

1. Please, indicate your age below.
2. Please, disclose your nationality below.
  - Dutch
  - German
  - Other
3. Please indicate the gender you were assigned at birth.
  - Male
  - Female
  - Prefer to self-disclose
  - No gender was assigned
  - Prefer not to say
4. Please choose the gender you currently identify as.

- Male
  - Female
  - Non-binary
  - Prefer to self-disclose
  - Prefer not to say
5. Please disclose your sexuality below.
- Heterosexual
  - Homosexual
  - Bisexual
  - Pansexual
  - Prefer to self disclose
  - Prefer not to say
6. How would you describe your current relationship status?
- Single
  - Dating
  - Hook-up relationship (sexual encounters between two people without a serious relationship)
  - Friends-with-benefits (casual sex between friends without romantic emotions)
  - In a relationship
  - Cohabiting with my romantic partner(s)
  - Married
  - Prefer to self-disclose
7. 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)
  - More than a year (please indicate how many years)
8. How did you meet your partner(s)?
- Offline
  - Online, on an online dating platform
  - Online through social media platforms

## Appendix C

*Back-translation Protocols***Table 2***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	Ich ziele mit meinem Partner eine langjährige Beziehung an (zum Beispiel, ich stelle	I aim for a long-standing relationship with my partner (for example, I imagine	Ich strebe mit meinem Partner eine langjährige Beziehung an (zum Beispiel,

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being with my	mir vor mit	to be still together	ich stelle mir
partner several	meinem Partner in	with my partner	vor mit meinem
years from now).	mehreren Jahren	after a couple of	Partner in
	noch zusammen zu	years).	mehreren Jahren
	sein).		noch zusammen
			zu sein)

**Table 3***Back-translation Protocol of the Satisfaction Subscale 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	Mein Partner erfüllt mein Bedürfnis nach Kameradschaft (Zusammen	My partner fulfills my need for companionship (doing things together, enjoying	Mein Partner erfüllt mein Bedürfnis nach Kameradschaft (Gemeinsam

	each other's company, etc.)	Sachen machen, die Gesellschaft des anderen genießen, etc.)	each other's company, etc.)	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	Mein Partner erfüllt mein	My partner fulfills my needs for	Mein Partner erfüllt mein

	emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.)	Bedürfnis nach emotionalem Engagement (sich emotional verbunden fühlen, sich gut fühlen, wenn es auch der andere tut, etc.)	emotional involvement (feeling emotionally attached, feeling good when the other does etc.)	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.

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## Appendix D

### *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.