



Master's Thesis

Expectancy Violations in Face-to-Face and Online Dating Initiations: How do Young Women Respond?

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Are there deviations of the Master's thesis from the proposed plan?

No

Yes, please explain below the deviations

The independent variable was adapted to include three instead of two levels, which increased the number of vignettes from four to six. Due to this, the required sample size was adjusted from 156 to 324 participants. Furthermore, open-ended questions were added to the questionnaires for exploratory analyses.

Abstract

The initiation of romantic relationships can be a complex process as there are many norms and expectations people need to navigate through. One aspect that has received very little attention are the norms surrounding appropriate face-to-face (FtF) and online environments for dating initiations. Given that young people are more likely to engage in (online) dating activities and women might place more importance to the appropriateness of an environment for dating, the present paper focuses on the experiences of young women. In the present study, we aim to answer the question whether young women react differently to dating initiations in *dating* versus *non-dating* environments depending on whether these are *online* or *FtF*. We conducted a vignette study with a 2x3 factorial design via an online survey. Participants ($N = 348$) responded with more negative behaviours in non-dating than neutral environments followed by dating environments, but with more positive affects in non-dating than neutral environments followed by dating environments. Results showed that expectancy violations partially mediate the effect of the environment on participants' affective and behavioural responses, and young women's affects and behaviours do not depend on whether they receive dating proposals FtF or online. The mode of communication does not moderate the relationship between environment and expectancy violations, but independently predicts expectancy violations. We conclude that young women hold negative views towards online dating and romantic advances in professional contexts. Theoretical and practical implications are discussed.

Keywords: online dating, face-to-face dating, expectancy violations, contexts, appropriateness

Expectancy Violations in Face-to-Face and Online Dating Initiations: How do Young Women Respond?

Romantic relationships play an essential role for one's well-being in adolescence and emerging adulthood as being in a romantic relationship is associated with increased happiness, life satisfaction, and better mental and physical health outcomes (Gómez-López et al., 2019). However, even initiating those relationships can be a complex process as there are many social norms and expectations one needs to navigate through. For instance, societal expectations often dictate that men should take a more active role in initiating romantic relationships, while women are expected to assume a more reactive role and present themselves as "hard-to-get" (Rose & Frieze, 1989, 1993; Laner & Ventrone, 2000; Morr Serewicz & Gale, 2008; Eaton et al., 2016; Cameron & Curry, 2020; Houle et al., 2022). While these traditional dating scripts¹ prescribing how men and women should act in these situations have been relatively stable since the 1950s (Laner & Ventrone, 2000), norms and expectations about contexts or environments where one can meet romantic partners and initiate a romantic relationship have changed significantly. In the 20th century, where the internet was not accessible to the public until the end of the century (Ring, 2023), most heterosexual couples met through friends, family, primary or secondary school, bars and restaurants, coworkers, neighbours, church or college (Rosenfeld & Thomas, 2012). Since 1995, the internet became increasingly popular for finding a partner, and by 2017 the internet had become the most favoured method of meeting one's significant other in the USA (Rosenfeld et al., 2019). Because of this, researchers assume that online dating is replacing more

¹ Dating scripts are cognitive representations that contain information about norms, values, and appropriate behaviours typically associated with dating (Eaton & Rose, 2011).

traditional ways of dating for heterosexual couples (Rosenfeld & Thomas, 2012; Rosenfeld et al., 2019) and that online dating has lost most of its stigma (Finkel et al., 2012). Yet, there is evidence revealing that online dating might still be stigmatized especially by women (Cali et al., 2013), which is not surprising considering more women (50-66%) than men (36-40%) report experiencing harassment on dating sites (McClain & Gelles-Watnick, 2023).

Similar to how traditional ways of dating have norms and expectations regarding which environments are appropriate to initiate a romantic relationship, it is not implausible to assume that online dating might also have its own set of norms and expectations about initiating a date in different online environments. Given that women often have negative experiences with men (e.g., sexual harassment; FRA, 2014), more negative online dating experiences than men (Anderson & Vogels, 2020; McClain & Gelles-Watnick, 2023), and are socialized to be more vigilant about their environment than men (Silva & Wright, 2014; Almanza Avendaño et al., 2022), one might wonder whether women's reactions to dating initiations might vary depending on the environment, particularly when these initiations happen online. Since young people are more likely to be single and are more likely to engage in (online) dating activities than their older counterparts (Gelles-Watnick, 2023), the present paper focuses on the experiences of young women.

The Role of the Environment

Previous studies have shown that there are environments that young people seek out to find a romantic partner (Rosenfeld & Thomas, 2012; Jonason et al., 2015; Rosenfeld et al., 2019). Nowadays such environments include (but are not limited to) the internet, the workplace, schools (primary and secondary school, college), religious

events, one's own neighbourhood, bars, and restaurants (Rosenfeld & Thomas, 2012; Jonason et al., 2015; Rosenfeld et al., 2019). Furthermore, the preference for one environment over the other often depends on one's age, sexual orientation, personality traits, historical period one lives in, and whether one is looking for short-term or long-term mates (Rosenfeld & Thomas, 2012; Jonason et al., 2015; Rosenfeld et al., 2019).

At face value, romantic environments or contexts such as speed-dating events would be appropriate to initiate a date, as their main purpose is to meet new people for a possible romantic relationship (Cambridge Dictionary, n.d.). Previous studies have also shown that various social gathering places (e.g., educational institutions, parties, bars, etc.) have been one of the most common physical locations for young heterosexual people to have romantic encounters (Rosenfeld & Thomas, 2012; Jonason et al., 2015; Rosenfeld et al., 2019). However, because most of those places' primary purpose is not finding a romantic partner, they could be considered ambiguous and moderately appropriate environments to initiate a date compared to speed-dating events. Regarding environments where it is less appropriate to approach another person romantically often include professional contexts. Since the 1990s, there has been a steady decline in couples meeting through or as coworkers (Rosenfeld et al., 2019). There is also the discussion among scholars and the media that this could be due to sexual harassment receiving more attention at the workplace (e.g., through the MeToo movement), which resulted in restrictive policies about romantic relationships at the workplace (e.g., Finkel et al., 2012; Doyle, 2018; Gallo, 2019). Although such relationships are generally allowed under certain conditions (see Meta, n.d.; Lebowitz, 2018; Zipkin, 2018), these developments still indicate a shift in social norms towards viewing dating in professional contexts as increasingly inappropriate. Surprisingly, there seem to be no or

few explicit policies about other types of romantic workplace relationships, such as those between employees and clients. These could also be deemed inappropriate due to the presence of an unbalanced power dynamic (e.g., “the customer is king”; Kim & Aggarwal, 2016), which is often highlighted as a factor that can make romantic relationships at the workplace problematic and inappropriate (e.g., Meta, n.d.; Zipkin, 2018). In summary, there should be environments that are more appropriate (e.g., romantic contexts), moderately appropriate (e.g., ambiguous contexts), and less appropriate (e.g., professional contexts) for dating initiations. However, little is known about whether this classification withstands empirical investigation and whether online environments could also be classified within these different degrees of appropriateness for dating initiations.

The Role of the Mode of Communication

Anecdotal evidence suggests that similar to FtF contexts, there might be platforms that are more appropriate for dating initiations than others. For instance, a dating site or app like Tinder would be considered an appropriate dating environment as its purpose is to find a romantic partner (Tinder, n.d.).² Yet, there seem to be people who search for a date or romantic relationship on professional sites like LinkedIn.³ When recounting her experiences with LinkedIn, Glamour magazine writer Engle (2017) said, “Personally, I receive more messages from guys hitting on me than I do from people looking for professional advice or opportunities. Sometimes it feels like I can no longer trust my LinkedIn inbox [...]” (para. 2). Furthermore, when Medium writer Huang (2018) asked people about their opinions on using LinkedIn as a dating

² Tinder is one of the most used dating platforms in the world (Marrazzo, n.d.).

³ LinkedIn is the world’s largest professional networking site (LinkedIn, n.d.).

site, responders commented, “Please do not use this website like Tinder, I don’t invite these comments with my profile or my work” (quote 4), or “You look like a creep. Speaking as a woman in tech, it’s hard enough to safely network and to establish business relationships.” (quote 10) with many others giving similar answers. According to a survey with over 1.000 active female LinkedIn users in the US, 91% received romantic or inappropriate messages through the platform (Woolf, 2023). Therefore, it can be assumed that professional sites are perceived as less appropriate for dating initiations.

There are also other social networking sites that are more casual or ambiguous in its purpose and can also be used for dating such as Instagram (Levin, 2016; Lefroy, 2022; Espada, 2023).⁴ It seems that dating on such sites is perceived as more appropriate than on professional sites based on more positive reactions found in different media outlets. One Instagram user told the New York Post (Lefroy, 2022), “You see that you have similar interests and they get to see your profile right off the bat. It’s not fake” (para. 7). Another user told the Time (Espada, 2023), “I use Instagram to share moments of my life, from fun experiences to my hobbies, so it sets up a good base for someone to see if we’d be a good fit to go on a date together.” (para. 10). Thus, sites like Instagram can be classified as ambiguous environments for dating initiations as they are not intended for romantic encounters but still regarded as moderately appropriate for that purpose. Yet, these assumptions regarding the appropriateness of initiating a date on different types of online environments are only based on anecdotal

⁴ Instagram is one of the most used social media platforms by young people (Pew Research Center, 2021), where one can share photos and videos to friends and followers among other things (Instagram, n.d.-a). It is also often used for marketing purposes (Instagram, n.d.-b).

evidence. Whether some online environments are truly regarded as more appropriate for dating initiations than others by young women still needs empirical investigation.

Although past studies have demonstrated that the internet is increasingly becoming a prevalent method for finding a partner, to the point where it is almost replacing more traditional FtF approaches (Rosenfeld & Thomas, 2012; Rosenfeld et al., 2019), online dating still seems to be stigmatized (Finkel et al., 2012; Cali et al., 2013). For example, a study found that young women reported more self-protection intent when they read a romantic online meeting scenario than when they read a FtF meeting scenario, especially when they had no experience with online dating (Cali et al., 2013). This introduces the possibility that FtF dating initiations may lead to more favourable outcomes than online dating initiations.

The Mediating Role of Expectancy Violations

Why someone's actions, like initiating a date, are sometimes considered inappropriate by others can be explained by the presence of negative expectancy violations. The Expectancy Violations Theory (EVT) posits that whenever people interact with each other, they have enduring cognitions, also called expectations, about the behaviour of the other person (Burgoon, 2015). Expectations are formed by social norms that are determined by personal characteristics, relationship and context factors (Burgoon, 1993, 2015). Personal characteristics encompass all possible traits of an interaction partner such as demographics, personality, physical appearance, or idiosyncrasies (Burgoon, 1993, 2015). Relationship factors describe the type of relationship of the interactants, which includes familiarity, liking, attraction, and power dynamics among other things (Burgoon, 1993, 2015; Burgoon et al., 2010). Context factors can be any characteristics of the environment in which the interaction takes

place, such as the setting, culture, degree of formality and privacy (Burgoon, 1993, 2015; Burgoon et al., 2010). This suggests that the context or environment in which a dating initiation takes place can have an influence on one's expectations. That is, young women might have different expectations about how and if dating should be initiated in different environments (e.g., romantic, ambiguous, or professional), and how and if it should be done *FtF* or *online*.

When these expectations are violated, physiological and/or psychological arousal occurs (Burgoon, 2015). This shifts their attention towards the violation and leads to a number of cognitive appraisal processes to determine whether the violation is viewed positively or negatively (Burgoon, 1993, 2015). A *positive* expectancy violation occurs if someone acts more favourably than expected and a *negative* expectancy violation occurs if someone behaves in a less favourable way (Burgoon, 2015). Depending on the violation valence, people can feel multiple different positive or negative emotions towards the violator (Burgoon, 1993). Thus, positive expectancy violations would lead to more favourable outcomes than negative expectancy violations (Burgoon, 1993, 2015). In dating initiations, a young man asking a young woman out would either be successful in obtaining a date (a favourable outcome) or be rejected (an unfavourable outcome). Young women might perceive romantic advances by men in some environments as *negative* expectancy violations⁵, which could explain why many women seem to react negatively and refuse a date proposal when they are approached in some FtF or online environments.

Overview and Hypotheses

⁵ In the remainder of this paper, *negative expectancy violations* will be referred to as *expectancy violations* for simplicity.

Hence, the purpose of the present study is to answer the following questions: What are the influences of *online* versus *FtF* modes and *dating* versus *non-dating* environments on young women's responses to dating initiations? And what are the effects of expectancy violations on these responses? First, we hypothesize that dating initiations taking place in *non-dating* environments (e.g., a professional context like a business or LinkedIn) should lead to more negative responses than in *neutral* (e.g., an ambiguous context like a school or Instagram) and *dating* environments (e.g., a romantic context like a speed-dating event or Tinder). Additionally, dating initiations taking place in *neutral* environments should lead to more negative responses than in *dating* environments. Therefore, we expect negative affective and behavioural responses to be greatest in the non-dating environments, followed by the neutral environments, and least in the dating environments (hypothesis 1, H1). Secondly, we propose that expectancy violations mediate the effect of the environment on young women's responses to dating initiations (hypothesis 2, H2). Lastly, there should be more support for this mediation effect in the *online* than in the *FtF* mode. Specifically, paths a and c should be weaker FtF than online (hypothesis 3, H3). That is, the effect of the environment on the response of the participants should be weaker *FtF* than *online* (hypothesis 3a, H3a). Additionally, the effect of the environment on expectancy violations should be weaker *FtF* than *online* (hypothesis 3b, H3b).

Method

Participants

For this study, the population of interest was 18- to 29-year-old single, heterosexual and cisgender women. Due to the difficulty of estimating sample sizes for moderated mediation models, the sample size estimation was based on Fritz and

MacKinnon (2007) and rules of thumb. For percentile bootstrapping analyses, 324 participants would be needed to detect a small effect of .26 with a power of .80. To achieve this desired sample size after deleting low-quality data, the total number of participants was set to 350, which is a very rough estimate.

Through Prolific, a convenience sample of 350 participants was recruited between October 22 and 23, 2023 to participate in this study on Qualtrics, for which they were required to use a desktop computer and received £0.75. To acquire reliable survey responses, participants were only allowed to participate if they were residents of English-speaking countries, their approved submissions rate was between 95% to 100%, their number of previous submissions were between 10 to 10,000, and they indicated on Prolific that they agree to be recruited for surveys containing deceptions. The final sample size amounted to 368 due to Prolific automatically replacing participants by new ones when they did not finish their submissions.⁶

Out of 368 submissions, only 353 could be considered for further analysis.⁷ Participants' countries of residence were the UK ($n = 173$), USA ($n = 117$), Ireland ($n = 6$), Australia ($n = 19$), Canada ($n = 31$), and New Zealand ($n = 3$). Four participants' residences were not recorded by Prolific. Participants indicated that their ethnicities were White ($n = 205$), Asian ($n = 71$), Black ($n = 34$), Mixed ($n = 20$), and Other ($n =$

⁶ These are submissions of participants who did not press the *submit* button at the end of the survey ($n = 18$). Participants who pressed the *submit* button at the end but skipped one or more questions were not replaced by Prolific.

⁷ One participant had three submissions, with the most recent ones ($n = 2$) being incomplete and thus removed. Another participant had two submissions, both of which were removed ($n = 2$) because she had seen two of the vignettes before finishing the survey on her second attempt. Participants who did not fill the survey past the consent form ($n = 4$) were removed. Participants who did not press the *submit* button at the end of the survey despite filling it out ($n = 12$) were asked via Prolific to re-confirm their consent. Those who withdrew their consent ($n = 3$) and who did not respond ($n = 4$) were excluded.

17). Six participants' ethnicities were not recorded. Their age ranged from 18 and 29 years ($M_{\text{age}} = 24.26$, $SD = 2.91$, $n_{\text{missing}} = 4$).

Design

The present study is a controlled experiment with a 2x3 factorial design that was conducted via an online survey. The independent variables (IVs) are the mode (FtF or online) and environment (non-dating, neutral, or dating). Participants were randomly assigned to one out of six dating initiation vignettes through Qualtrics (see Appendix A): a repair shop (FtF/non-dating), lecture room (FtF/neutral), speed-dating event (FtF/dating), LinkedIn (online/non-dating), Instagram (online/neutral), or Tinder (online/dating). The dependent variable (DV) is the response of the participants to the different dating initiations. The mediator between the IVs and DV is the extent of expectancy violations. Possible confounding variables include participants' exposure to the online platform or place mentioned in the narrative that they were assigned to, the frequency of their FtF or online dating participation, and the frequency of their experienced harassment in dating contexts. This study was reviewed and approved by the Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Groningen (EC-BSS) under the research code "PSY-2223-S-0442". The study was pre-registered at OSF prior to any data collection.⁸ The AI system ChatGPT 3.5 was used as a supportive tool for data analyses in R to find packages, functions, fix coding errors, and generate example code.⁹ No content generated by AI technologies has been presented as my own work.

Procedure

⁸ Link to pre-registration: <https://osf.io/7zr6j>

⁹ Link to ChatGPT 3.5: <https://chat.openai.com/>

At the start of the study, participants were informed that the study's (supposed) purpose is to gain more insights into how young women would react to and feel about interactions with men in different contexts. After their consent was acquired, every participant was randomly shown one out of six fictional dating initiations by men, which they were told to be real. Afterwards they had to fill out the Expectancy Violations Scale (Spitzberg & Canary, 1985; Canary & Spitzberg, 1987)¹⁰, answer questions regarding their responses to the dating initiation that they read earlier, three open-ended questions, manipulation checks measuring whether participants perceived the interactions the way they were intended to be perceived, followed by some demographic questions. To minimize accidental non-response, participants were alerted whenever they did not answer a question. However, they were not forced to answer and were allowed to skip them. At the end of the study, participants were debriefed about the true intentions of the study and how they were deceived. They were thanked for their participation and given the option to comment on the study.

Measurement¹¹

Instruments¹²

Expectancy Violations Scale. Similar to DelGreco & Denes (2020), the extent of expectancy violations will be measured by the appropriateness items developed by Spitzberg and Canary (1985) and Canary and Spitzberg (1987). For this study, 13 out of 17 items were used and slightly adapted (Cronbach's $\alpha = .98$) to match the vignettes.¹³

¹⁰ This scale is referred to as *appropriateness measures* by the authors.

¹¹ All survey questions can be found in Appendix A.

¹² All instruments utilized a 7-point Likert scale from -3 (*strongly disagree*) to 3 (*strongly agree*) except for the open-ended questions.

¹³ Four items were removed due to being incompatible with the narratives presented in the vignettes.

Participants had to specify to what extent they agreed with the statements (e.g., “He did not violate any of my expectations”).

Responses to the Dating Initiations. To measure participants’ affective responses to the dating initiations, they had to evaluate to what extent they would feel seven different affects like happiness or anger (Cronbach’s $\alpha = .95$). To measure their behavioural responses (two items, $r = .77, p < .001$), all participants had to assess to what extent they would accept the young man’s proposal to go on a date. Depending on whether participants were assigned to the FtF or online mode, they had to indicate to what extent they would (try to) leave their location as quickly as possible or block the man.

Open-Ended Questions. To better comprehend participants’ responses, which could be influenced by other variables other than the vignettes, they were asked to answer three open-ended questions on why they would tend to accept or decline the proposal, whether they have any considerations regarding the narrative playing out in this specific location or online platform (depending on the assigned vignette), and if they had any other considerations regarding the presented situation. These questions are only for exploratory purposes.

Extent of Perceiving a (Non-)Dating Environment. As a manipulation check, participants had to indicate to what extent they would consider the setting in which the narrative took place as a typical dating environment.

Perceived Realism. As another manipulation check, participants’ perceptions of whether they thought the narratives in the study were realistic needed to be measured. Similar to DelGreco & Denes (2020), participants’ perceived realism was assessed through Green’s (2004) scale, which they adapted from Elliott et al. (1983). For the

present study, five out of Green's (2004) eight adapted items were used and slightly modified (Cronbach's $\alpha = .85$) to fit the vignettes.¹⁴ Participants had to report to what extent they agreed with the items (e.g., "The narrative is realistic and believable").

Demographic and Control Variables¹⁵

Age. Participants were asked to indicate their age bracket. Additionally, Prolific separately recorded participants' age.

Exposure to Online Platform or Place. Depending on which mode (FtF or online) participants were assigned to, they had to indicate how often they were using the online platform (LinkedIn, Instagram, or Tinder), or how often they go to a place, setting or a similar environment (repair shop, lecture, or speed-dating event) that was mentioned in the narrative.

Frequency of Online or FtF Dating. Depending on which mode (FtF or online) participants were assigned to, they also had to specify how frequently they participated in online dating on dating or other platforms, or how frequently they participate in FtF dating.

Frequency of Experienced Harassment in Dating Contexts. Depending on which mode (FtF or online) participants were assigned to, they were asked to indicate the frequency of their experienced harassment in the context of online or FtF dating.

Results

Data Preparation

¹⁴ Three items were removed due to being incompatible with the narratives presented in the vignettes.

¹⁵ All demographic and control variables were measured on a 7-point scale from *never* to *very often* except for age.

Since only complete cases are considered for regression analyses, five submissions with missing values were removed, which lowered the sample size to 348. Six outliers with values between - 1 and -1.4 were found for *Perceived Realism*.¹⁶ Furthermore, 25 outliers with the values being 6 or 7 were found for *Frequency of Online or FtF Dating*, which indicate a high frequency of dating participation. These outliers were accounted for by analysing the data with and without them. No major differences in the results were found after comparing the analyses.

The remaining participants had been distributed to the experimental conditions as follows: Online/Dating ($n = 57$), FtF/Dating ($n = 58$), Online/Neutral ($n = 53$), FtF/Neutral ($n = 61$), Online/Non-Dating ($n = 63$), and FtF/Non-Dating ($n = 56$). Descriptive statistics for the mediator and DVs for each experimental condition can be found in Table 1. See Appendix B for the descriptive statistics of age, the covariates, and manipulation checks. See Table 2 for a correlation matrix with all measured continuous variables. Moreover, the distributions of the mediator and DVs were notably skewed, which might have biased the results of the regression analysis. To see whether these skewed distributions affected the results, the full moderated mediation model were later checked for violations of the linearity, normality, and homoscedasticity assumptions via plots and by comparing the non-bootstrap with the bootstrap results for the model parameters, as the latter are robust against these violations.

¹⁶ All outliers were detected using the robust method by Wilcox and Keselman (2003), which is based on the median and median absolute deviation. The R package for these calculations can be downloaded from the website of the USC Dornsife (<https://dornsife.usc.edu/rwilcox/>).

Table 1

Means and Standard Deviations for Expectancy Violations and Responses to the Dating Initiations for each Experimental Condition

Variables	All Conditions combined	Online/Dating	FtF/Dating	Online/Neutral	FtF/Neutral	Online/Non-Dating	FtF/Non-Dating
Expectancy Violations Scale	-0.71 (1.71)	-2.23 (0.97)	-2.17 (0.88)	-0.86 (1.33)	-1.00 (1.18)	1.23 (1.01)	0.64 (1.22)
Affective Responses to the Dating Initiations	0.84 (1.57)	2.00 (1.00)	2.05 (0.89)	0.90 (1.39)	1.13 (1.19)	-0.81 (1.10)	-0.12 (1.34)
Behavioural Responses to the Dating Initiations	0.27 (1.76)	1.67 (1.20)	1.69 (1.20)	0.23 (1.38)	0.60 (1.29)	-1.45 (1.26)	-1.00 (1.35)

Table 2*Pearson Correlation Matrix of all Continuous Variables*

Variables	1	2	3	4	5	6	7	8	9
1. Expectancy Violations	—								
2. Affective Responses	-0.93***	—							
3. Behavioural Responses	-0.86***	0.89***	—						
4. Exposure to Online Platform or Place	0.20***	-0.19***	-0.20***	—					
5. Frequency of Online or FtF Dating	0.00	0.03	0.03	0.25***	—				
6. Frequency of Experienced Harassment in Dating Contexts	0.28***	-0.29***	-0.29***	0.20***	0.39***	—			
7. Extent of Perceiving a (Non-)Dating Environment	-0.67***	0.63***	0.64***	-0.00	0.08	-0.14**	—		
8. Perceived Realism	-0.31***	0.30***	0.25***	0.05	0.11*	0.08	0.34***	—	
9. Age	-0.00	0.05	0.08	-0.08	0.15**	0.17**	0.04	0.01	—

* $p < .05$. ** $p < .01$. *** $p < .001$.

Manipulation Checks

Separate Analyses of Variance (ANOVA) for participants' *extent of perceiving a (non-)dating environment* and *perceived realism* were performed to check whether the manipulations of the IVs were successful. The ANOVA revealed that participants' *extent of perceiving a (non-)dating environment* for each level of environment were significantly different from each other, $F(2, 345) = 147.20, p < .001, \eta^2 = .46$. Two pairwise comparisons¹⁷ showed that participants who were in the dating conditions ($M = 1.51, SD = 1.39$) perceived the environment in the narratives as more of a dating environment than participants in the neutral ($M = 0.25, SD = 1.62$) followed by the non-dating conditions ($M = -1.80, SD = 1.46$), $t(220.99) = 6.36, p < .001, 95\% CI [0.87, 1.66]$ and $t(226.04) = 10.10, p < .001, 95\% CI [1.65, 2.44]$. Regarding participants' perceived realism, one sample t tests showed that all the means of the six experimental conditions (see Appendix B) were above the neutral mid-point of the measurement scale.¹⁸ Thus, participants perceived all narratives as realistic. To conclude, the manipulations of the IVs were successful.

Hypothesis Testing

¹⁷ No corrections were made.

¹⁸ One sample t test results for each of the six experimental conditions:

Online/Dating: $t(56) = 21.63, p < .001, 95\% CI [2.04, 2.45]$

FtF/Dating: $t(57) = 12.67, p < .001, 95\% CI [1.38, 1.90]$

Online/Neutral: $t(52) = 15.97, p < .001, 95\% CI [1.64, 2.11]$

FtF/Neutral: $t(60) = 10.53, p < .001, 95\% CI [1.22, 1.80]$

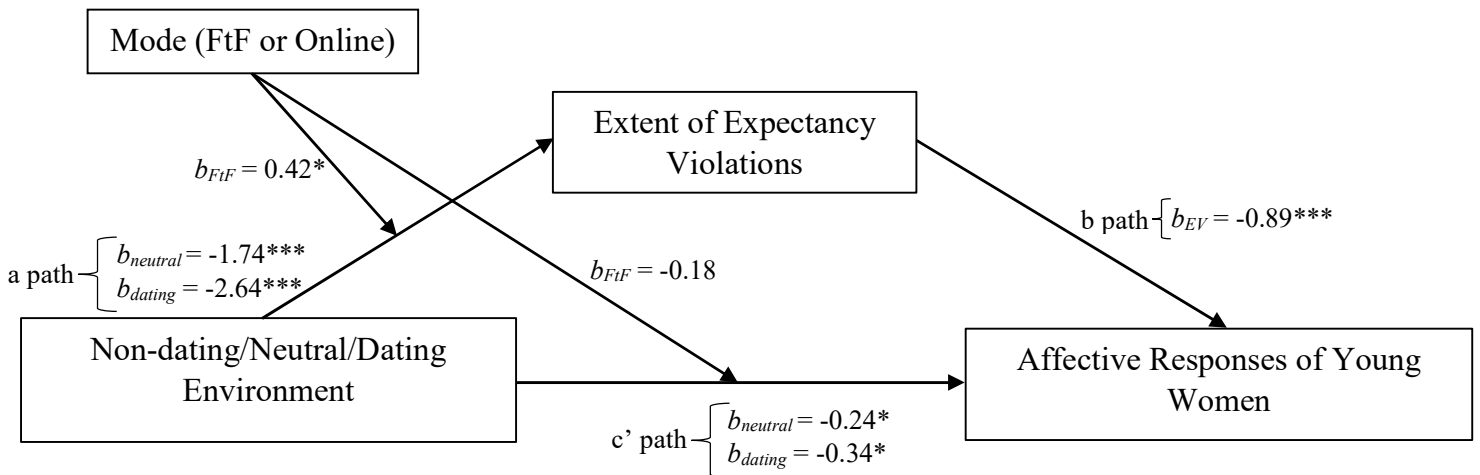
Online/Non-Dating: $t(62) = 10.31, p < .001, 95\% CI [1.08, 1.60]$

FtF/Non-Dating: $t(55) = 10.06, p < .001, 95\% CI [1.23, 1.84]$

To test our hypotheses, a combination of *t* tests, ANOVA, and moderated mediation analyses with the PROCESS macro Version 4.3.1 for R (Hayes, 2022) was used.¹⁹ For the moderated mediation analyses, all continuous variables were centered first, and both DVs were analysed separately. The results can be found in Appendix C. A graphical representation of the summarized results can be found in Figure 1 and 2.

Figure 1

Moderated Mediation Model with Affective Responses as the Dependent Variable



Note. The a and c' path of the model have two regression coefficients (*b*) because the Environment has three levels. The effect size of the moderation for the a path is $\Delta R^2 = .006$. The effect size of the moderation for the c' path is $\Delta R^2 = .0001$. Both are not statistically significant. The indexes of moderated mediation are 0.44 (Neutral

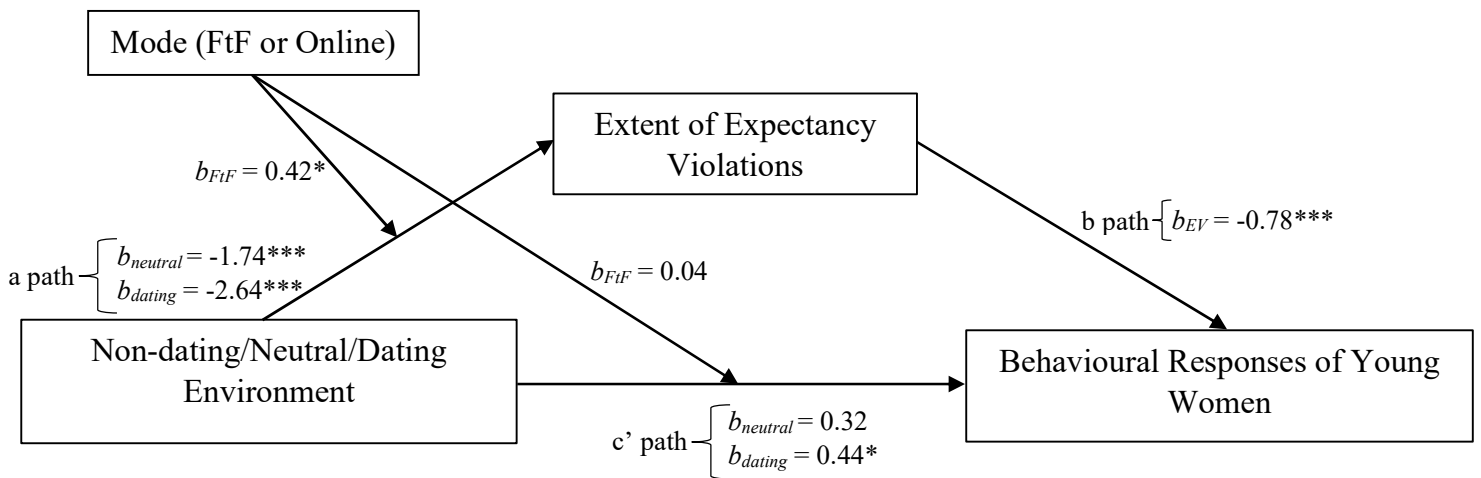
¹⁹ Model number 8 was chosen, and the number of bootstrap samples was set to 10,000. Since the bootstrapping approach was used in the PROCESS macro, a random seed was set ('654321') to always receive the same result when the R code is executed multiple times.

Environment) and 0.53 (Dating Environment), of which only the latter is statistically significant.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 2

Moderated Mediation Model with Behavioural Responses as the Dependent Variable



Note. The a and c' path of the model have two regression coefficients (b) because the Environment has three levels. The effect size of the moderation for the a path is $\Delta R^2 = .006$. The effect size of the moderation for the c' path is $\Delta R^2 = .0008$. Both are not statistically significant. The indexes of moderated mediation are 0.39 (Neutral Environment) and 0.47 (Dating Environment), of which only the latter is statistically significant.

* $p < .05$. ** $p < .01$. *** $p < .001$.

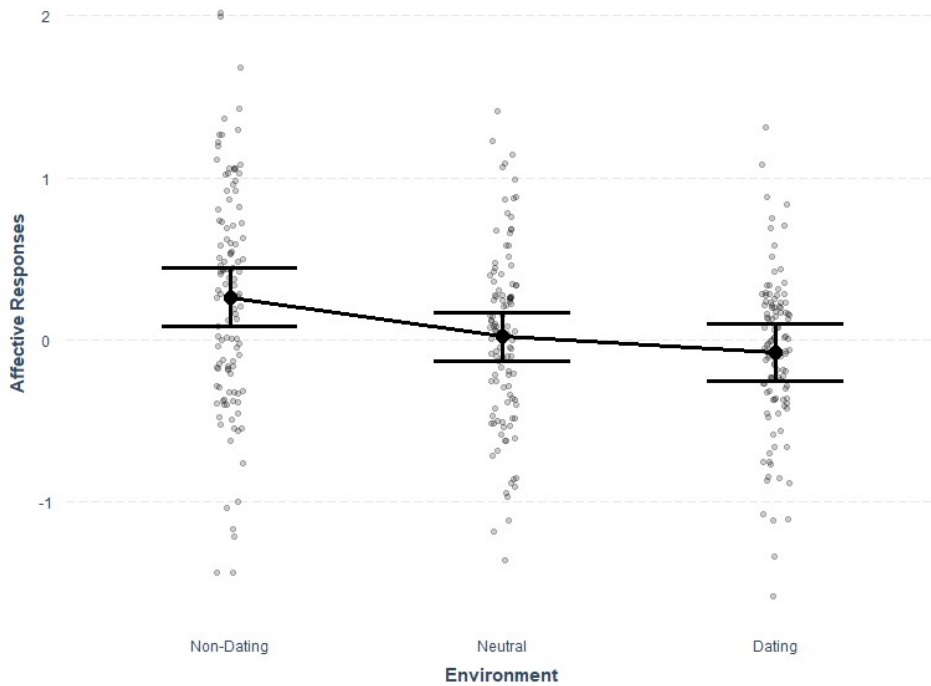
The Effect of the Environment on Participants' Responses (H1)

An ANOVA showed that there was a significant difference between participants in the non-dating ($M = -0.48, SD = 1.26$), neutral ($M = 1.02, SD = 1.29$), and dating environments ($M = 2.03, SD = 0.94$) regarding their *affective responses*, $F(2, 345) = 135.7, p < .001, \eta^2 = .44$. Two pairwise comparisons²⁰ revealed that affective responses are more positive in the dating environments, followed by the neutral, and then the non-dating environments, $t(206.96) = 6.74, p < .001, 95\% CI [0.71, 1.30]$ and $t(230.09) = 9.01, p < .001, 95\% CI [1.18, 1.84]$. Even though this finding was consistent with H1, moderated mediation analyses with the PROCESS macro showed some unexpected differences when expectancy violations were included in the model (see Appendix C, Table C1). According to these results, participants who were assigned to dating environments had more negative affective responses than participants in non-dating environments, $b = -0.34, t(338) = -2.55, p = .011, 95\% CI [-0.61, -0.08]$. Moreover, participants in neutral environments had more negative affective responses than participants in the non-dating environment, $b = -0.24, t(338) = -1.98, p = .049, 95\% CI [-0.49, -0.002]$. This means that participants affectively responded more negatively to dating initiations in dating than in neutral environments followed by non-dating environments (see Figure 3). The overall regression model explained 87% of the variance in participants' affective responses, $F(9, 338) = 247.49, p < .001, R^2 = .87$.

²⁰ No corrections were made.

Figure 3

Scatterplot showing the Relationship between Environment and Affective Responses



Note. The Environment is plotted against the partial residuals of Affective Responses including error bars.

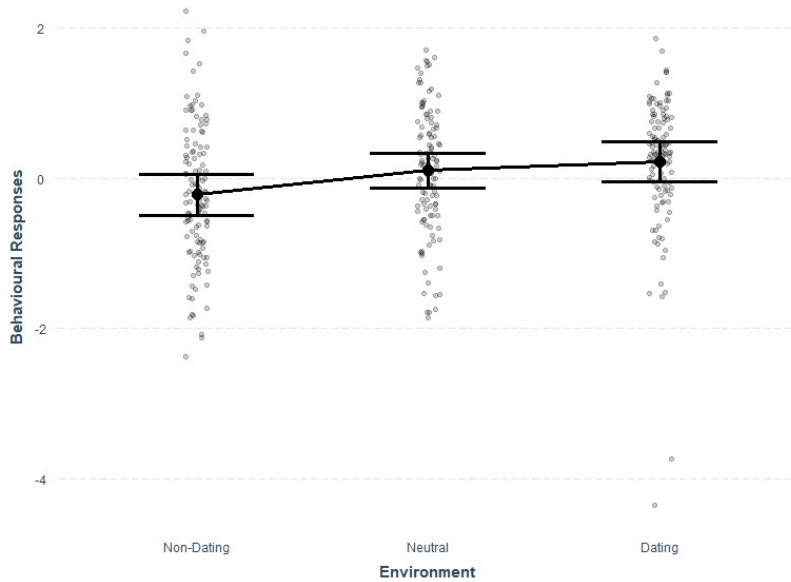
An ANOVA showed that there was a significant difference between participants in the non-dating ($M = -1.24$, $SD = 1.31$), neutral ($M = 0.43$, $SD = 1.34$), and dating environments ($M = 1.68$, $SD = 1.20$) regarding their *behavioural responses*, $F(2, 345) = 152.5$, $p < .001$, $\eta^2 = .47$. Two pairwise comparisons²¹ revealed that behavioural responses are more positive in the dating environments, followed by the neutral, and then the non-dating environments, $t(223.62) = 7.48$, $p < .001$, 95% CI [0.92, 1.58] and $t(230.13) = 9.58$, $p < .001$, 95% CI [1.32, 2.01]. This means that behavioural responses

²¹ No corrections were made.

were more positive in the dating environments, followed by the neutral, and then the non-dating environments. Moderated mediation analyses with PROCESS showed the same pattern when expectancy violations were included in the model (see Appendix C, Table C2). According to these results, participants who were assigned to dating environments had more positive behavioural responses than participants in non-dating environments, $b = 0.44$, $t(338) = 2.12$, $p = .035$, 95% CI [0.03, 0.85]. Moreover, participants in neutral environments had more positive behavioural responses than participants in the non-dating environment, although this was not statistically significant, $b = 0.32$, $t(338) = 1.68$, $p = .094$, 95% CI [- 0.05, 0.69]. This means that participants behaviourally responded more positively to dating initiations in dating than in neutral environments followed by non-dating environments (see Figure 4). However, due to the environment having a negative effect on affective responses and a positive effect on behavioural responses, there was only partial support for H1. The overall regression model accounted for 75% of the variance in participants' behavioural responses, $F(9, 338) = 112.55$, $p < .001$, $R^2 = .75$.

Figure 4

Scatterplot showing the Relationship between Environment and Behavioural Responses



Note. The Environment is plotted against the partial residuals of Behavioural Responses including error bars.

The Mediating Effect of Expectancy Violations (H2)

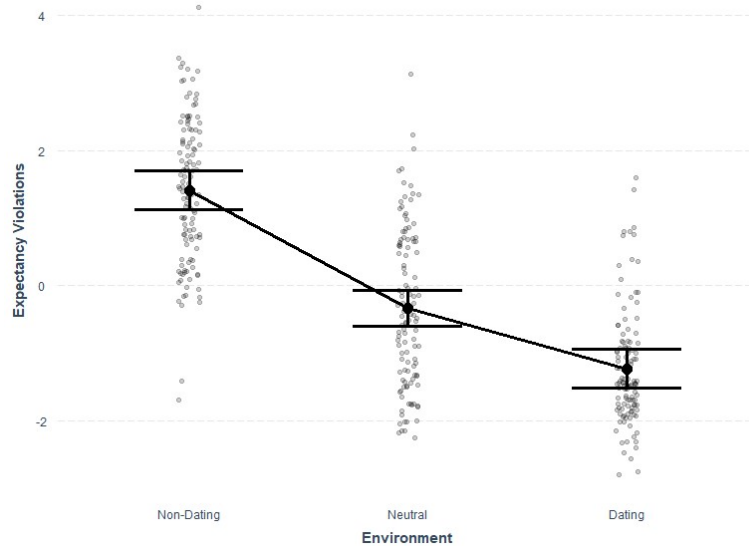
An ANOVA showed that there was a significant difference between participants in the non-dating ($M = 0.95$, $SD = 1.15$), neutral ($M = -0.94$, $SD = 1.25$), and dating environments ($M = -2.20$, $SD = 0.93$) regarding their expectancy violations scores, $F(2, 345) = 237.4$, $p < .001$, $\eta^2 = .58$. Two pairwise comparisons²² revealed that expectancy violations are higher in the non-dating environments, followed by the neutral, and then the dating environments, $t(227.27) = 12.01$, $p < .001$, 95% CI [1.58, 2.20] and $t(208.34) = 8.71$, $p < .001$, 95% CI [0.98, 1.55]. In fact, one sample t tests revealed that

²² No corrections were made.

participants in the neutral and dating environments did not perceive the presented dating initiations as expectancy violations at all as their scores were negative and below the neutral mid-point of the measurement scale, $t_{\text{neutral}}(113) = -8.00, p < .001, 95\% \text{ CI } [-1.17, -0.70]$ and $t_{\text{dating}}(114) = -25.50, p < .001, 95\% \text{ CI } [-2.37, -2.03]$. Moderated mediation analyses with PROCESS showed the same pattern (see Appendix C, Table C1 or C2). According to these results, participants who were assigned to dating environments had lower expectancy violations scores than participants in non-dating environments, $b = -2.64, t(339) = -13.25, p < .001, 95\% \text{ CI } [-3.03, -2.25]$. Moreover, participants in neutral environments had lower expectancy violation scores than participants in the non-dating environment, $b = -1.74, t(339) = -8.57, p < .001, 95\% \text{ CI } [-2.15, -1.34]$. This means that participants had a higher degree of expectancy violations in non-dating than in neutral environments followed by dating environments (see Figure 5). The overall regression model explained 63% of the variance in participants' expectancy violation scores, $F(8, 339) = 73.00, p < .001, R^2 = .63$.

Figure 5

Scatterplot showing the Relationship between Environment and Expectancy Violations

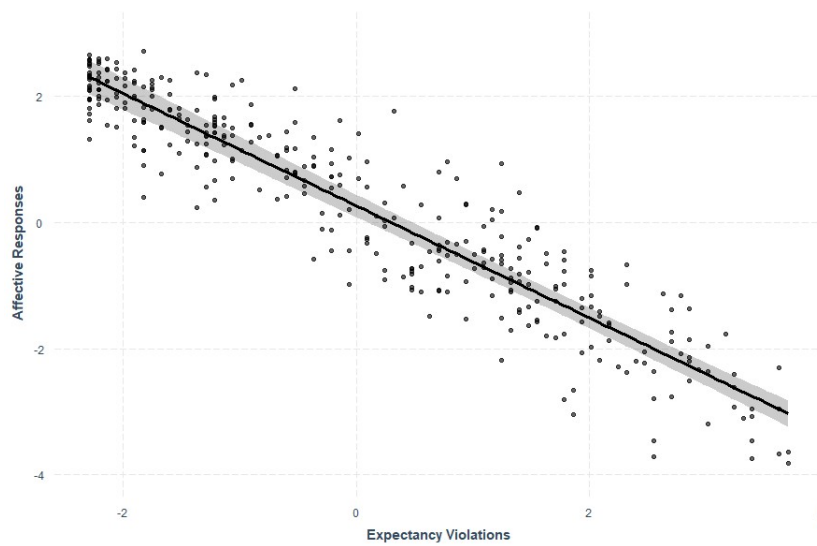


Note. The Environment is plotted against the partial residuals of Expectancy Violations including error bars.

As depicted by the high negative correlations between expectancy violations and participants' affective ($r = -.93, p < .001$) and behavioural responses ($r = -.86, p < .001$), higher expectancy violation scores were associated with more negative affective and behavioural responses. Moderated mediation analyses with PROCESS showed the same pattern (see Appendix C, Table C1 and C2). According to these results, participants with higher expectancy violation scores had more negative affective and behavioural responses, $b_{Affect} = -0.89, t(338) = -29.82, p < .001, 95\% \text{ CI } [-0.95, -0.83]$ and $b_{Behaviour} = -0.78, t(338) = -16.96, p < .001, 95\% \text{ CI } [-0.87, -0.69]$. This means that participants had more negative affective and behavioural responses when they perceived a higher degree of expectancy violations (see Figure 6 and 7).

Figure 6

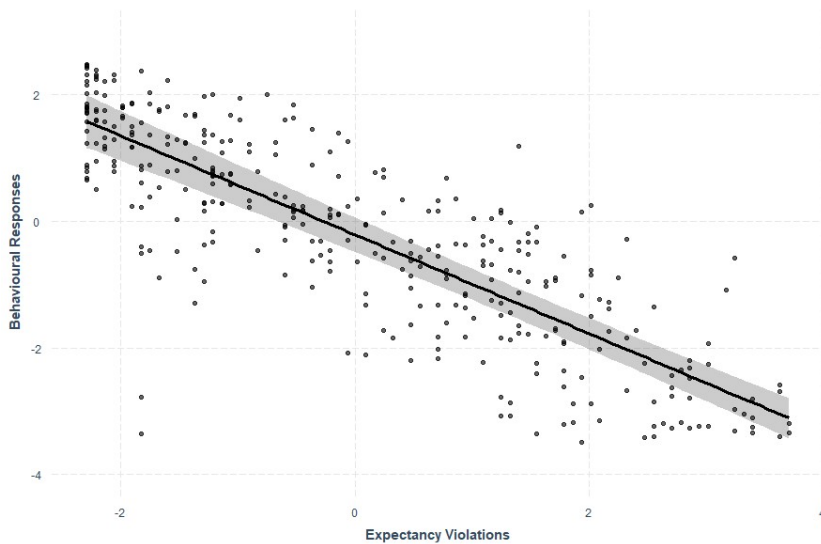
Scatterplot showing the Relationship between Expectancy Violations and Affective Responses



Note. Expectancy Violations is plotted against the partial residuals of Affective Responses including error bars.

Figure 7

Scatterplot showing the Relationship between Expectancy Violations and Behavioural Responses



Note. Expectancy Violations is plotted against the partial residuals of Behavioural Responses including error bars.

Additionally, we found significant *positive conditional indirect effects* of all levels of the environment for each mode on the affective and behavioural responses as none of the 95% confidence intervals included zero (see Appendix C, Table C3). We also found significant *negative conditional direct effects* of each level of the environment on affective responses but only when moderated by the FtF mode (see Appendix C, Table C4). Regarding the behavioural responses, we found weak evidence for *positive conditional direct effects* of each level of the environment when moderated by the FtF mode. That is, only the positive conditional direct effect of the dating environment and FtF mode on the behavioural responses was statistically significant (see Appendix C, Table C4). We did not find significant conditional direct effects of

any level of the environment on the behavioural responses when moderated by the online mode (see Appendix C, Table C4).

To sum up, the analyses show that expectancy violations at least partially mediated the effect of the environment on participants' affective and behavioural responses to dating initiations, which partly supported H2. Furthermore, there are *positive indirect effects* of the environment on both affective and behavioural responses. Meanwhile, the environment has a *negative direct effect* on affective responses and a *positive direct effect* on behavioural responses but only when these relationships are moderated by the FtF mode.

The Moderating Effect of the Mode (H3)

A *t* test showed that there was a significant difference between participants in the FtF ($M = 1.03, SD = 1.45$) and online modes ($M = 0.64, SD = 1.66$) regarding their affective responses, $t(338.91) = 2.35, p = .020, 95\% CI [0.06, 0.72]$. This means that affective responses were more positive in the FtF than in the online mode. However, moderated mediation analyses with PROCESS showed a different pattern (see Appendix C, Table C1). According to these results, the mode did not have an effect on participants' affective responses, $b = -0.18, t(338) = -1.63, p = .103, 95\% CI [-0.40, 0.04]$. This means that participants who were assigned to the online mode did not differ from participants in the FtF mode regarding their affective responses. Moreover, there was no significant interaction effect of the environment and mode on participants' affective responses, $\Delta R^2 = .0001, F(2, 338) = 0.13, p = .881$. Taken together, these findings showed that the mode did not moderate the relationship between the environment and participants' affective responses.

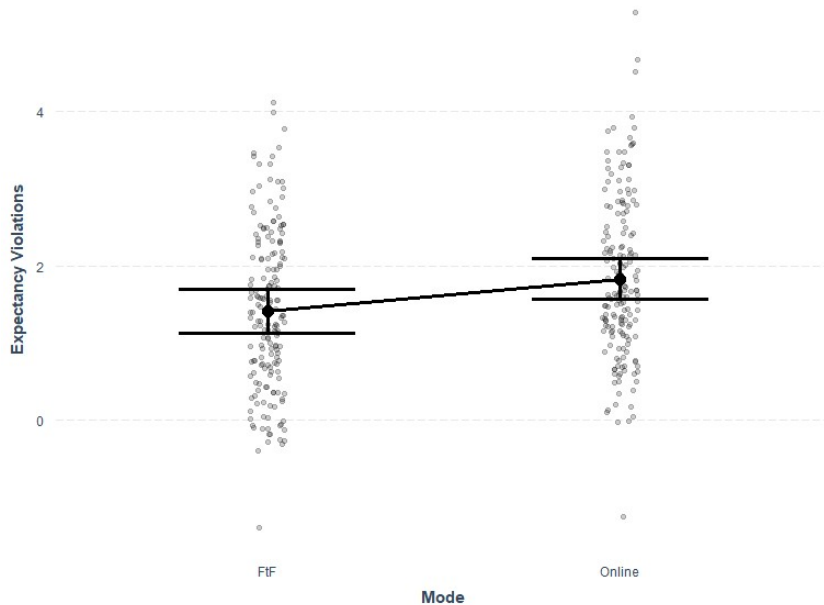
A *t* test showed that there is a marginally significant difference between participants in the FtF ($M = 0.45, SD = 1.68$) and online modes ($M = 0.09, SD = 1.82$) regarding their behavioural responses, $t(342.97) = 1.91, p = .057, 95\% CI [-0.01, 0.73]$. This means that participants in the FtF mode may have had more positive behavioural responses than participants in the online mode. However, moderated mediation analyses with PROCESS (see Appendix C, Table C2) revealed that there was no effect of the mode on participants' behavioural responses, $b = 0.04, t(338) = 0.21, p = .831, 95\% CI [-0.30, 0.37]$. This means that participants in the online mode did not differ from participants in the FtF mode regarding their behavioural responses. Moreover, there was no significant interaction effect of the environment and mode on participants' behavioural responses, $\Delta R^2 = .0008, F(2, 338) = 0.55, p = .575$. To sum up, these findings showed that the mode did not moderate the relationship between the environment and participants' affective and behavioural responses. Thus, there was no support for H3a.

A *t* test showed that there was not a significant difference between participants in the FtF ($M = -0.86, SD = 1.59$) and online modes ($M = -0.55, SD = 1.83$) concerning their expectancy violations scores, $t(338.19) = -1.68, p = .095, 95\% CI [-0.67, 0.05]$. This means that participants in the FtF and online modes had approximately the same expectancy violations scores. However, moderated mediation analyses with PROCESS (see Appendix C, Table C1 or C2) revealed that participants in the online mode had higher expectancy violation scores than participants in the FtF mode, $b = 0.42, t(339) = 2.07, p = .039, 95\% CI [0.02, 0.81]$ (see Figure 8). Yet, there was no significant interaction effect of the environment and mode on participants' expectancy violation scores, $\Delta R^2 = .006, F(2, 339) = 2.70, p = .069$. Hence, the mode did not moderate the

relationship between the environment and expectancy violations, which means that there was no support for H3b. Though, the environment and mode independently predicted expectancy violations. Taken together, H3a and H3b were not supported by the data. As such, the entire H3 had no support. Assumption checks for ensuring the validity of the statistical analyses were performed. No major violations have been found (see Appendix D).

Figure 8

Scatterplot showing the Relationship between the Mode and Expectancy Violations



Note. The Mode is plotted against the partial residuals of Expectancy Violations including error bars.

Exploratory Analyses

Additional Quantitative Analyses

In addition, we found that affective and behavioural responses were very strongly correlated with each other ($r = .89, p < .001$) and that participants overall had slightly more positive affective ($M = 0.84, SD = 1.57$) than behavioural responses ($M = 0.27, SD = 1.76$), which means that participants' affective and behavioural responses to dating initiations were not always consistent, $t(685.13) = 4.51, p < .001, 95\% CI [0.32, 0.82]$. Unsurprisingly, there was a significant difference between the FtF ($M = 2.79, SD = 1.74$) and online mode ($M = 3.18, SD = 1.91$) regarding participants' frequency of experienced harassment, which showed that participants experienced more harassment when they dated online compared to FtF, $t(342.15) = -2.02, p = .044, 95\% CI [-0.78, -0.01]$. Interestingly, an ANOVA also found a significant difference between the non-dating ($M = 3.27, SD = 1.91$), neutral ($M = 3.07, SD = 1.83$), and dating environments ($M = 2.61, SD = 1.72$) regarding participants' frequency of experienced harassment, $F(2, 345) = 4.03, p = .019, \eta^2 = .02$. A t test showed that participants assigned to the non-dating environments had experienced more overall dating harassment than participants in the dating environments, $t(230.81) = 2.79, p = .006, 95\% CI [0.19, 1.13]$.²³ When this variable was removed as a covariate from the main analyses in PROCESS, the overall conclusions for the hypotheses did not change.

Analysis of Participants' Answers to the Open-Ended Questions

Due to time and space constraints, only a brief manual analysis of participants' answers to the open-ended questions was done. The goal was not to obtain complete and comprehensive results but to form an initial impression of the data. Hence, a formal codebook was not used. Given the overlap in participants' answers across the three

²³ The other two comparisons (non-dating versus neutral environment, neutral versus dating environment) were not statistically significant. No corrections were made.

open-ended questions, all answers were pooled together and then divided into six groups based on participants' vignette assignments.²⁴ For each group, the answers were then read to identify initial broad themes with examples. Additionally, similarities across these six groups were identified and documented. A few important, interesting and potentially problematic trends in participants' answers were also spotted that could affect our conclusions.

Similarities between Participants' Answers for all Vignettes.

First, there were some similarities between participants' answers even though they were assigned to different vignettes. Many participants mentioned that they lacked too much contextual information and seemed to have difficulties deciding on how to answer the questionnaires.²⁵ Many also gave examples on how they would have answered if certain requirements were met, such as how their decision to accept the proposal would depend on the characteristics of the young man, how they felt at that moment (e.g., being "in the mood", feeling safe, and feeling comfortable), and/or if they enjoyed the conversation. Many participants also mentioned that the male protagonist was too straightforward or that he rushed the dating proposal, which was often viewed negatively.

Analysis of Participants' Answers in the Online Vignettes.

Regarding the online modes/vignettes, many participants noted that they were concerned about safety when meeting online acquaintances in person. They often

²⁴ Often participants also referred back to their answers to other open-ended questions, gave no answer, or reported that they do not understand the question.

²⁵ Some participants did not specify what information they were missing. Others mentioned that they would need to know whether there was (mutual) attraction or a "connection", whether the young man was (physically) attractive, how he looked like, what his personality and behaviour during the encounter was like, and how the conversation went.

mentioned that online acquaintances cannot be trusted as one does not know who or how they truly are. Often, participants recommended to meet them in public spaces and letting friends and/or family know about their whereabouts.

Regarding Tinder specifically, many participants noted that Tinder is more for hook-ups than for (serious) dating. These answers often had a negative connotation. For example, participants were often wary of the young man's intentions of whether he was pursuing a hook-up or a more serious relationship. However, others thought that the interaction was normal and appropriate. They said that a date is a natural next step, and that Tinder is for dating purposes. Furthermore, some said that using Tinder implies that they are interested in dating and that this would make them more inclined to accept the proposal.

In general, some participants seemed to perceive dating requests on Instagram as a normal or common way of meeting new people nowadays, while others found it rather strange and unconventional. There was one participant in the Instagram vignette who remarked that they would have likely been flattered and then moved on implying that they would reject the young man despite having positive feelings.

Looking at the answers in the LinkedIn vignette, participants answered mostly in a negative way and very similarly. For instance, they thought that the young man in the narrative was lying about the reasons of contacting the female protagonist, that he contacted her under false pretences, that he was suspicious, creepy, violating, predatory, and unprofessional. Many participants emphasized the fact that LinkedIn is not a dating site but intended for professional connections and employment. Some participants also felt frustrated as this is another example of women being disrespected professionally.

Analysis of Participants' Answers in the FtF Vignettes.

Similar to the Tinder vignette, many participants thought that the interaction was normal and appropriate and that a speed-dating event is for dating purposes. Some also mentioned that they would have perceived the interaction in a more negative light if it occurred in a different context. Others said that participating in such an event implies that they are open to meeting new people and dating, which made them more inclined to react positively to the proposal.

In the lecture room vignette, many participants explained that the male protagonist was making the situation awkward as the female protagonist cannot leave or escape the lecture room without drawing any attention, or that it is embarrassing because other people were present. Some also pointed out that it would also be awkward if things do not work out, since both protagonists would be forced to stay seated next to each other for the remainder of the class, or because they would have to attend the same class together again. Many other participants said that they would have felt flattered by the proposal and found the location to be a safe environment due to it being a public space regardless of whether they would accept or decline the proposal. Additionally, many participants mentioned that the male protagonist could have asked to spend time with the female protagonist first instead of asking her on a date. Examples that were mentioned include eating lunch, drinking coffee, and studying together.

In the repair shop vignette, few participants viewed the young man's "boldness", as they have called it, as a positive quality. One participant in the repair shop vignette even pointed out that they would feel flattered regardless of them accepting or declining the dating proposal. However, many other participants reported that the situation was inappropriate, uncomfortable, unsafe, unexpected, and strange. Some mentioned that there was a power imbalance in the repair shop vignette, since the male protagonist, or

repair person, would be in possession of their property and the female protagonist would be unable to leave quickly due to that. They also reported that they would not visit that particular shop again.

Discussion

The goal of this study was to determine the influences of the *online* versus *FtF* modes and *dating* versus *non-dating* environments on young women's responses to dating initiations. Furthermore, we wanted to assess the effects of expectancy violations on these responses. First, we expected that dating initiations taking place in *non-dating* environments (e.g., professional context) should lead to more negative responses than in *neutral* (e.g., ambiguous contexts) and *dating* environments (e.g., romantic contexts). We also predicted that dating initiations taking place in *neutral* environments should lead to more negative responses than in *dating* environments. That is, negative emotional and behavioural responses should increase as follows: dating, neutral, and non-dating environment (H1). Our findings partially support this hypothesis. Young women feel less negative emotions, such as discomfort and anger, when young men romantically approach them in *less dating appropriate* contexts (e.g., professional contexts like repair shops and LinkedIn) than in *neutral* contexts (e.g., ambiguous contexts like lecture rooms and Instagram) followed by *more appropriate* contexts (e.g., romantic contexts like speed-dating events and Tinder), which is the opposite of our predictions in H1. However, young women would still be less inclined to accept a dating proposal and less inclined to continue the interaction in *less appropriate contexts* than in *neutral* contexts followed by *more appropriate* contexts, which is in line with H1.

Secondly, we predicted that negative expectancy violations would mediate the effect of the environment on young women's responses to dating initiations (H2). The results partly support this hypothesis as we found that when young women are approached in less dating appropriate, neutral, and more appropriate contexts, their emotions and behaviours to dating initiations are partly due to the extent of their perceived negative expectancy violations. This means that young women's expectations are more likely to be negatively violated when they receive a dating proposal in *less appropriate* contexts than in *neutral* contexts followed by *more appropriate* contexts. In fact, young women do not perceive any negative violations of their expectations in *neutral* and *appropriate* contexts at all. When young women's expectations are negatively violated, they feel more negative emotions, are less inclined to accept a dating proposal and less inclined to continue the interaction with the man that approached them.

Thirdly, we hypothesized that there should be more support for this mediation effect in the *online* than the *FtF* mode. Specifically, paths a and c should be weaker *FtF* than *online*. That is, the effect of the environment on the response of the participants should be weaker *FtF* than *online* (H3a). Additionally, the effect of the environment on expectancy violations should be weaker *FtF* than *online* (H3b). Our findings are inconsistent with H3, H3a, and H3b. The influence of the context on young women's feelings and behaviours does not depend on whether they receive young men's dating proposals in person or on an online platform (H3a). Moreover, the influence of the context on whether a dating proposal negatively violates young women's expectations stays the same, regardless of whether the communication occurred online or in person (H3b). However similar to the effect of the context, the mode of communication

independently determines whether the proposal negatively violates young women's expectations. Namely, a dating proposal is more likely to negatively violate young women's expectations if this is done through an online platform rather than FtF.

Overview of Exploratory Findings

Apart from our main findings, we also found that young women have overall more positive emotional than behavioural responses in any context. This implies that young women's emotions and behaviours to dating initiations do not always have to match. For example, in a given context a young woman might view a dating proposal in a positive light but still reject it. Furthermore, participants had experienced more harassment when dating online than dating in person. Surprisingly, we also found that participants assigned to the *less appropriate* contexts for dating initiations experienced more overall dating harassment in the past than participants in the *neutral* contexts, followed by participants in the *more appropriate* contexts. It is possible that participants could have been primed by our vignettes. Namely, past situations in which participants were harassed might have become more salient memories after reading the vignettes. As a result, they might have reported a more inflated or biased frequency regarding their past experiences of dating harassment. On the other hand, this finding might be due to chance, which would be a type I error. To prevent potential priming effects in future research, participants should be asked questions about the frequency of their previous experiences of dating harassment before experimental manipulations are introduced. Nevertheless, researchers should still be careful with the interpretation of their results because such a question could also prime participants. For instance, they might view a presented romantic interaction in a more negative light when asked this question beforehand than when they are asked this question later or not at all.

Regarding participants' answers to the open-ended questions, a few important trends emerged. In the online vignettes, participants often mentioned that they were concerned about their safety and proposed measures to keep them safe like meeting their online acquaintance in a public space. Participants view Tinder as a hook-up app rather than an app for (serious) dating while other participants viewed the interaction they read as normal and appropriate. Their opinions on Instagram were mixed. Some pointed out that dating proposals on Instagram were normal and common, while others said that it is strange and unconventional. The LinkedIn vignette produced more unanimous opinions than the Tinder and Instagram vignettes. Most thought that the young man in the narrative was unprofessional and emphasized that LinkedIn is not a dating site. Participants' opinions about the FtF vignettes were similar to the opinions in online vignettes. For example, similar to the Tinder vignette many participants viewed the interaction in the speed-dating vignette as normal and appropriate. Similar to the Instagram vignette, participants had mixed opinions about the interaction in the lecture room vignette. Some mentioned that they would have felt awkward or embarrassed while others would have felt flattered and thought that it was a safe environment to receive such a proposal. The repair shop vignette evoked similar opinions like the LinkedIn vignette as participants pointed out that the interaction was inappropriate, uncomfortable and unsafe. Though few participants praised the young man in the narrative for his "boldness".

Theoretical Implications

First of all, this study contributes to the existing literature on online and FtF dating experiences from the perspective of young heterosexual cisgender women by providing first empirical evidence that young women have expectations in which

situations they should be romantically approached by men and how they would react in these situations. Namely they do not expect to be romantically approached when the context is inappropriate, for example, in professional contexts such as repair shops or LinkedIn. However, they expect romantic advances in dating appropriate or romantic contexts, like speed-dating events or Tinder, since their inherent purpose is to facilitate romantic connections. Romantic advances in more neutral or ambiguous contexts, like educational institutions or Instagram, are also expected but not as much as in the more appropriate contexts. Furthermore, this study also contributes to the EVT literature (see Burgoon, 1993, 2015; Burgoon et al., 2010), as it shows that young women perceive romantic advances by men in inappropriate contexts as negative expectancy violations. The EVT explains why anecdotal evidence suggests that women perceive online platforms like Instagram as more appropriate for romantic encounters (see Levin, 2016; Lefroy, 2022; Espada, 2023) than other platforms like LinkedIn (see Engle, 2017; Huang, 2018; Woolf, 2023). Furthermore, the current study supports anecdotal evidence reported in the media (e.g., Huang, 2018; Espada, 2023) on the appropriateness of different online platforms with regards to dating and adds to the scarce literature on this topic. It also adds to this field by comparing romantic interactions on these online platforms to similar FtF interactions.

Even though we were not able to provide evidence that young women respond more negatively to online than FtF dating initiations, we were able to demonstrate, similar to Cali et al. (2013), that online dating is still stigmatized because young women perceive more negative violations of their expectations when they receive dating proposals or romantic advances through online platforms than FtF. Despite previous research suggesting that online dating is replacing traditional ways of dating for

heterosexual people by becoming more prevalent with time (e.g., Rosenfeld & Thomas, 2012), we demonstrated that young women still have negative views about online dating through the presence of expectancy violations.

More surprisingly, we found that the relationship between the environment and the affective responses reverses with the inclusion of expectancy violations as the mediator, while this is not the case for the relationship between the environment and the behavioural responses. There is the possibility that young women perceive dating initiations in non-dating environments as less conventional rather than inappropriate. Thus, they might see these contexts as more romantic and have more positive feelings than in neutral or dating environments. The answers of some participants hint towards this possibility as they indicated that they would feel flattered even if they would have declined the dating offer. It would not be improbable that other participants might have felt similarly. However, this is only based on speculation and not a conclusion that can be drawn from our current results. Further research would be needed to confirm these assumptions.

Practical Implications

From a practical point of view, our findings can help understand which environments or contexts young women expect to be approached romantically. Our findings can also support professional online platforms to create a safer and less frustrating atmosphere for their female users by adjusting their guidelines on what type of behaviour should or should not be tolerated, similar to how it has been done in professional FtF contexts (e.g., Zipkin, 2018). For example, LinkedIn could punish users for engaging in romantic behaviours on their platform, which could result in more

pleasant experiences for women. However, it is up to the platforms themselves on how they want to design and implement punishments.

Additionally, since young men seem to be unaware sometimes of how their actions are perceived by young women (DelGreco et al., 2021) and are also particularly unsuccessful at finding a partner compared to young women and older men (Gelles-Watnick, 2023), the findings of this study could help young men to gain a better understanding of young women's perceptions about being romantically approached and where it is appropriate to do so. For example, it would be appropriate propose a date in more neutral or ambiguous contexts such as a lecture room or Instagram, but not in more professional contexts such as a repair shop or LinkedIn. This knowledge, in turn, might help to increase young men's (online) dating success, which could improve their well-being, as being in a romantic relationship is associated with increased happiness, life satisfaction, and better mental and physical health outcomes (Gómez-López et al., 2019). However, whether educating young men about these insights can aid them in increasing their dating success still needs to be investigated in future studies.

Strengths, Limitations and Future Research

First, a key strengths of this study is that all observed effects can be attributed to our experimental manipulations, namely the contexts that were presented to the participants in the vignettes, since we kept many confounders such as personal characteristics and relationship factors (Burgoon, 2015) in the vignettes constant. In other words, we did not provide too much information or hints about the young man's personal characteristics such as physical attractiveness, intelligence, status, etc. (Burgoon, 2015) and established that there was no prior relationship between him and the protagonist. Additionally, we only provided descriptions of the protagonists'

interactions to prevent the introduction of confounds as online and FtF interactions differ in many aspects²⁶, and because the way people express themselves via texts online can affect how others see them in terms of conscientiousness, openness, intelligence, emotional stability, etc. (Fullwood et al., 2015). Moreover, since we used an experiment to test our hypotheses, we have evidence suggesting causal relationships between our study variables. Another strength of our study is that participants' answers to the open-ended questions provided more insights into our quantitative results. For example, one notable reason why some participants responded unfavourably in the online/non-dating condition was because they felt disrespected professionally as women when romantically approached on LinkedIn. Additional insights gained from these questions, such as participants' safety concerns in online dating, also align with previous research indicating the potential risk of encountering dangerous individuals online (Finkel et al., 2012). Participants' answers to these questions also helped us to identify areas needing improvement in follow-up studies. For example, another dating platform that is not perceived as a hook-up app could be used for the online/dating condition (instead of Tinder) to prevent possible confounds in the future as we did not intend for the Tinder vignette to be perceived in this way by the participants.

The strength of our study is further reinforced by a series of studies investigating similar concepts that were conducted concurrently and without our knowledge. The authors Adams and Gillath (2024) empirically developed a list of 48 settings for relationship initiation ordered by their appropriateness. Similar to our findings, they

²⁶ Online and FtF interactions differ in aspects such as conversational flow, ambiguity, and (non)verbal social cues (Roos, et al., 2020a; Roos, et al., 2020b). As such, translating an interaction from one mode to another is difficult (Roos et al., 2022) and might introduce several confounds.

identified “dating app/site” (1st place on the list) as a highly appropriate setting, while “workplace” (42nd place) and “LinkedIn” (46th place) were classified as low appropriate settings.²⁷ Although they described “social media” (10th place) and “school/campus” (15th place) as highly appropriate settings rather than moderately appropriate settings as we did, these settings still ranked significantly lower than “dating app/site” and higher than “LinkedIn” and “workplace”, which supports our findings. Similar to our approach, these authors used their list to conduct a vignette study with high, moderate, and low setting appropriateness to investigate dating initiation success (likelihood of accepting the proposal) but also varied characteristics of the initiator and the nature of the initiator’s proposition in order to investigate potential main and interaction effects. Despite their findings being similar to ours, they did not account for the role of the mode of communication, nor did they consider the mediating role of expectancy violations. They also did not measure participants’ emotional reactions to the dating proposals. Thus, our research still provides a unique perspective and complements the studies of Adams and Gillath (2024).

Unfortunately, the decisions we made regarding our study design might have led us to find insufficient evidence for the proposed moderation and full mediation effects. Participants were not actually put into the situations portrayed in the vignettes. Instead, they had to assume the female protagonist’s point of view, which might have reduced the intensity of their reactions. For instance, many participants mentioned that they lacked too much contextual information and seemed to have difficulties deciding on how to answer the questionnaires. Thus, any effects of the moderator and mediator could have been alleviated and harder to detect. Future research could vary the personal

²⁷ The settings are placed in quotation marks to indicate the authors’ exact phrasing.

characteristics of the young man²⁸ and/or construct an experiment in such a way that participants are the female protagonists themselves, who are playing out the encounter with a young man in different contexts. On the other hand, it is also possible that our study lacked sufficient power instead and that the moderating and mediating effects were even smaller than what we had accounted for. Especially complex models, such as the moderated mediation model in our study, require much larger sample sizes to detect very small effects compared to simple(r) mediation models (e.g., Sim et al., 2022). Subsequent research could recruit even more participants to increase power and investigate whether more concrete evidence for moderation and full mediation can be found.

Other limitations of this study concern the generalizability of the findings to other populations. The findings might not be generalizable to women from older age groups since older people use online dating less (McClain & Gelles-Watnick, 2023), which might be due to them being less familiar with and potentially having more stigmatized attitudes towards online dating. Therefore, it is possible that a moderating effect for the mode of communication could be easier to detect with a sample of women who are a bit older. On the other hand, older people might also engage less in online dating because they are also less likely to be single than younger people (Gelles-Watnick, 2023). Thus, their inclusion might lead to results similar to the present study. Future research could assess whether or how the results would change if women, who are older than 29 years, are included in the study.

²⁸ While working on the final version of this thesis, we discovered that Adams and Gillath (2024) varied some characteristics of the initiator, e.g., attractiveness.

It would also be interesting to see how men would respond to the dating initiations presented in our study. Based on DelGreco et al.'s (2021) results, one could assume that men would probably respond more favourably to the dating initiations irrespective of the presented experimental condition since they do not seem to be aware that some contexts might be more inappropriate than others when approaching women. Future research could examine whether this would be the case.²⁹ Another group worth investigating in the future would be members of the LGBTQIA+ community. There is some evidence that suggests that they face more difficulties finding a romantic partner and rely more on online than FtF dating (Rosenfeld & Thomas, 2012; McClain & Gelles-Watnick, 2023). Thus, they might view or respond more favourably, or at least differently, to some contexts than heterosexual cisgender women or men.

Conclusion

Despite online dating becoming more and more prevalent, young heterosexual cisgender women still seem to hold negative views towards online compared to in-person dating. They also do not hold favorable views towards romantic advances in professional contexts. So, young men should think carefully whether they want to risk being rejected or blocked when they approach young women in professional contexts. Rather they should aim to ask women out in more ambiguous contexts or turn to speed-dating events or dating apps if they want to increase their chances for a date.

²⁹ While working on the final version of this thesis, we discovered that the studies of Adams and Gillath (2024) already found that men rated a variety of initiation settings as more appropriate than women. However, they did not consider the same variables as we did (e.g., mode of communication, expectancy violations).

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Appendix A

Vignettes and Survey Questions

Vignettes (adapted from Cali et al., 2013)

Interaction in a repair shop (FtF/Non-Dating)

“L., who was single at the time, took her laptop to a repair shop because of a minor issue. A male shopkeeper who she did not know introduced himself as O. They talked for a bit about how her laptop was damaged while he was fixing it. After he was done, he asked her if she would like to go on a date with him.”

Interaction in a lecture room (FtF/Neutral):

“L., who was single at the time, was sitting in a full lecture room of her university and waiting for the lecture to start. A male student who she did not know sat down on the seat next to her. During the break, he introduced himself as O. They talked for a bit about their studies and the lecture content. She learned that he was around her age and after a while, he asked her if she would like to go on a date with him.”

Interaction in a speed dating event (FtF/Dating):

“L. was single at the time and decided to participate in a speed dating event at her university. During this event, a male student who she did not know approached her and introduced himself as O. They talked for a bit and she learned that he was around her age. After a while, he asked her if she would like to go on a date with him.”

Interaction on LinkedIn (Online/Non-Dating):

“L., who was single at the time, received a message from a male LinkedIn user who she did not know. He introduced himself as O. and explained that he was looking for a job position similar to hers. They talked for a bit about the company that she is working at and about other companies offering a similar position. She learned that he was around her age and after a while, he asked her if she would like to go on a date with him.”

Interaction on Instagram (Online/Neutral):

“L., who was single at the time, was into photography and used Instagram to share her creations. One day she received a message from a male follower who she did not know. He introduced himself as O. They talked for a bit about her photos and she learned that he was around her age. After a while, he asked her if she would like to go on a date with him.”

Interaction on Tinder (Online/Dating):

“L. was single at the time and decided to create a profile on the dating app Tinder. After completing her own profile, she swiped through other profiles until she matched with a guy called O., who was around her age. They talked for a bit and after a while, he asked her if she would like to go on a date with him.”

Expectancy Violations Scale (adapted from Spitzberg & Canary, 1985; Canary & Spitzberg, 1987; inspired by DelGreco & Denes, 2020)

Please think back of O.'s behaviour as described on the previous page. To what extent do you agree or disagree with the below statements? There are no right or wrong answers!

1. Some of his behaviour seemed out of place in the narrative.
2. Everything he did was appropriate.
3. His request to go on a date was very suitable to the situation.
4. Some of the things he did were awkward.
5. His communication was very proper.
6. He did some things that should not have been done.
7. Some of the things he did were inappropriate.
8. Some of the things he did would be embarrassing to me if I was L.
9. Some of the things he did were in bad taste.
10. He did not violate any of my expectations.
11. The way he behaved was unsuitable.
12. The things he did were all in good taste as far as I'm concerned.
13. Some of the things he did were simply improper.

Responses to the Dating Initiations

The following statements concern your reaction to the interaction between L. and O.

Again, please indicate to what extent you agree or disagree. There are no right or wrong answers!

Affective Responses:

1. If I was L., this situation would make me feel uncomfortable.
2. If I was L., this situation would make me feel unsafe.

3. If I was L., this situation would make me feel happy.
4. If I was L., this situation would make me feel angry.
5. If I was L., this situation would make me feel upset.
6. If I was L., this situation would make me feel disgusted.
7. If I was L., this situation would make me feel flattered.

Behavioural Responses:

8. If I was L., I would accept his proposal.
9. *(If assigned to Online mode:)* If I was L., I would block him. **OR**
(If assigned to FtF mode:) If I was L., I would (try to) leave this place as quickly as possible.

Open-Ended Questions

Below you will find 3 open-ended questions. Please think back of the interaction that you read previously and answer the questions to the best of your ability. There are no right or wrong answers!

1. Why would you tend to accept/decline O.'s proposal if you were L.?
2. *(Depending on the assigned vignette:)* Do you have any considerations regarding the narrative playing out in a repair shop/lecture room/speed dating event/on LinkedIn/Instagram/ Tinder?
3. Do you have any other considerations regarding the situation presented in the narrative?

Extent of Perceiving a (Non-)Dating Environment

The below statement concerns the setting in which the encounter between L. and O. took place. Please indicate to what extent you agree or disagree with the statement by selecting the option that describes your thoughts and feelings the best. There are no right or wrong answers!

- Regardless of the actual behaviours shown in the encounter, I would consider this a typical dating environment in general.

Perceived Realism (adapted from Elliott et al., 1983; Green, 2004; inspired by DelGreco & Denes, 2020)

Below you will find some statements. Please indicate whether you agree or disagree with these statements by selecting the option that describes your thoughts and feelings the best. There are no right or wrong answers!

1. The narrative is realistic and believable.
2. The setting for the narrative just doesn't seem real.
3. People in this narrative are like people I might actually know.
4. Events that actually have happened or could happen are shown in this narrative.
5. I have a hard time believing the people in this narrative are real because the situation is so far-fetched.

Age

What is your age bracket?

- 18-21 years
- 22-25 years
- 26-29 years

Exposure to Online Platform or Place

- *(If assigned to Online mode:)* How frequently do you use the online platform that was mentioned in the narrative?

OR

- *(If assigned to FtF mode:)* How frequently do you go to the place/setting (or a similar environment) that was mentioned in the narrative?

Frequency of Online or FtF Dating

- *(If assigned to Online mode:)* How frequently do you participate in online dating (on any dating platform or other online platforms)?

OR

- *(If assigned to FtF mode:)* How frequently do you participate in face-to-face dating (not online)?

Frequency of Experienced Harassment in Dating Contexts

- *(If assigned to Online mode:)* How frequently have you experienced harassment in the context of online dating (e.g., receiving unsolicited sexually explicit content, being called offensive names, threatened, etc.)?

OR

- *(If assigned to FtF mode:)* How frequently have you experienced harassment in the context of face-to-face dating (not online) (e.g., receiving unsolicited sexually explicit content, being called offensive names, threatened, etc.)?

Appendix B

Means and Standard Deviations of Age, the Covariates, and Manipulation Checks for
each Experimental Condition

Variables	All Conditions combined	Online, Dating	FtF, Dating	Online, Neutral	FtF, Neutral	Online, Non-Dating	FtF, Non- Dating
Age	24.26 (2.91)	24.35 (2.95)	24.41 (2.98)	24.19 (3.28)	24.21 (2.67)	24.37 (2.74)	24.02 (2.99)
Exposure to Online Platform or Place*	3.42 (2.22)	2.56 (1.87)	1.81 (1.41)	5.94 (1.68)	4.05 (2.20)	3.95 (2.00)	2.29 (1.07)
Frequency of Online or FtF Dating*	2.88 (1.73)	3.18 (2.00)	2.43 (1.31)	3.04 (2.05)	2.92 (1.57)	2.95 (1.84)	2.79 (1.46)
- Online	3.05 (1.95)	—	—	—	—	—	—
- FtF	2.71 (1.46)	—	—	—	—	—	—
Frequency of Experienced Harassment in Dating Contexts*	2.99 (1.84)	2.95 (1.84)	2.28 (1.53)	3.25 (1.93)	2.92 (1.74)	3.35 (1.98)	3.18 (1.84)
- Online	3.18 (1.91)	—	—	—	—	—	—
- FtF	2.79 (1.74)	—	—	—	—	—	—
Extent of Perceiving a (Non-)Dating Environment	- 0.03 (2.02)	1.74 (1.20)	1.29 (1.52)	0.43 (1.68)	0.08 (1.56)	- 2.03 (1.46)	- 1.54 (1.43)
Perceived Realism	1.68 (1.03)	2.25 (0.78)	1.64 (0.98)	1.87 (0.85)	1.51 (1.12)	1.34 (1.03)	1.53 (1.14)

Note. All variables marked with * were measured with questions that were different for participants assigned to the online and FtF conditions. See method section for more information.

Appendix C

Moderated Mediation Results (using PROCESS)

Table C1

Moderated Mediation Results (Model Parameters) for Affective Responses to the Dating Initiations

Variables	Path a			Path b/c'		
	<i>b</i> (SE)	95% CI	<i>p</i>	<i>b</i> (SE)	95% CI	<i>p</i>
Intercept	1.41 (0.15)	[1.12, 1.70]	< .001	0.26 (0.09)	[0.09, 0.44]	.004
Independent Variables:						
Neutral Environment ^a	-1.74 (0.20)	[-2.15, -1.34]	< .001	-0.24 (0.12)	[-0.49, -0.002]	.049
Dating Environment ^a	-2.64 (0.20)	[-3.03, -2.25]	< .001	-0.34 (0.13)	[-0.61, -0.08]	.011
Online Mode ^b	0.42 (0.20)	[0.02, 0.81]	.039	-0.18 (0.11)	[-0.40, 0.04]	.103
Mediator:						
Expectancy Violations	—	—	—	-0.89 (0.03)	[-0.95, -0.83]	< .001
Interaction Terms:						
Neutral Environment*Online Mode	-0.50 (0.28)	[-1.04, 0.04]	.071	0.07 (0.15)	[-0.23, 0.37]	.634
Dating Environment*Online Mode	-0.60 (0.28)	[-1.15, -0.05]	.033	0.06 (0.15)	[-0.24, 0.36]	.708
Covariates:						
Exposure to Online Platform or Place	0.09 (0.03)	[0.03, 0.16]	.007	0.01 (0.02)	[-0.03, 0.04]	.697
Frequency of Online or FtF Dating	-0.10 (0.04)	[-0.18, -0.03]	.005	0.06 (0.02)	[0.02, 0.10]	.005
Frequency of Experienced Harassment in Dating Contexts	0.18 (0.03)	[0.12, 0.25]	< .001	-0.05 (0.02)	[-0.09, -0.01]	.011
	<i>F</i>		73.00			247.49
	<i>df1, df2</i>		8, 339			9, 338
	<i>R</i> ²		.63			.87
	<i>p</i>		< .001			< .001

Note. All continuous variables are centered. *N* = 348. CI = confidence interval.

^a The reference group for the environment is *non-dating*.

^b The reference group for the mode is *FtF*.

Table C2

Moderated Mediation Results (Model Parameters) for the Behavioural Responses to the Dating Initiations

Variables	Path a			Path b/c'		
	<i>b</i> (SE)	95% CI	<i>p</i>	<i>b</i> (SE)	95% CI	<i>p</i>
Intercept	1.41 (0.15)	[1.12, 1.70]	< .001	-0.21 (0.14)	[-0.49, 0.06]	.124
Independent Variables:						
Neutral Environment ^a	-1.74 (0.20)	[-2.15, -1.34]	< .001	0.32 (0.19)	[-0.05, 0.69]	.094
Dating Environment ^a	-2.64 (0.20)	[-3.03, -2.25]	< .001	0.44 (0.21)	[0.03, 0.85]	.035
Online Mode ^b	0.42 (0.20)	[0.02, 0.81]	.039	0.04 (0.17)	[-0.30, 0.37]	.831
Mediator:						
Expectancy Violations	—	—	—	-0.78 (0.05)	[-0.87, -0.69]	< .001
Interaction Terms:						
Neutral Environment*Online Mode	-0.50 (0.28)	[-1.04, 0.04]	.071	-0.25 (0.24)	[-0.71, 0.22]	.296
Dating Environment*Online Mode	-0.60 (0.28)	[-1.15, -0.05]	.033	-0.10 (0.24)	[-0.56, 0.37]	.680
Covariates:						
Exposure to Online Platform or Place	0.09 (0.03)	[0.03, 0.16]	.007	-0.02 (0.03)	[-0.08, 0.04]	.492
Frequency of Online or FtF Dating	-0.10 (0.04)	[-0.18, -0.03]	.005	0.08 (0.03)	[0.01, 0.14]	.017
Frequency of Experienced Harassment in Dating Contexts	0.18 (0.03)	[0.12, 0.25]	< .001	-0.08 (0.03)	[-0.14, -0.02]	.007
	<i>F</i>		73.00			112.55
	<i>df1, df2</i>		8, 339			9, 338
	<i>R</i> ²		.63			.75
	<i>p</i>		< .001			< .001

Note. All continuous variables are centered. *N* = 348. CI = confidence interval.

^a The reference group for the environment is *non-dating*.

^b The reference group for the mode is *FtF*.

Table C3

Conditional Indirect Effects of the Environment on the Affective and Behavioural Responses with Indexes of Moderated Mediation

Variables	Affective Responses			Behavioural Responses		
	Effect (<i>SE</i>)	Index (<i>SE</i>)	95% CI	Effect (<i>SE</i>)	Index (<i>SE</i>)	95% CI
Neutral Environment x FtF Mode	1.55 (0.21)	—	[1.13, 1.96]	1.36 (0.20)	—	[0.98, 1.75]
Neutral Environment x Online Mode	1.99 (0.20)	—	[1.59, 2.38]	1.75 (0.19)	—	[1.38, 2.15]
Index of Moderated Mediation (Neutral Environment) ^a	—	0.44 (0.27)	[- 0.08, 0.95]	—	0.39 (0.23)	[- 0.07, 0.85]
Dating Environment x FtF Mode	2.34 (0.20)	—	[1.96, 2.75]	2.06 (0.21)	—	[1.66, 2.48]
Dating Environment x Online Mode	2.87 (0.19)	—	[2.50, 3.24]	2.52 (0.20)	—	[2.14, 2.93]
Index of Moderated Mediation (Dating Environment) ^a	—	0.53 (0.22)	[0.08, 0.97]	—	0.47 (0.20)	[0.08, 0.84]

Note. All values in this table are based on bootstrapping. CI = confidence interval.

^a The index of moderated mediation is the difference between the two conditional indirect effects of the same environment level.

Table C4

Conditional Direct Effects of the Environment on the Affective and Behavioural Responses

Variables	Affective Responses			Behavioural Responses		
	Effect (<i>SE</i>)	95% CI	<i>p</i>	Effect (<i>SE</i>)	95% CI	<i>p</i>
Neutral Environment x FtF Mode	-0.24 (0.12)	[-0.49, -0.002]	.049	0.32 (0.19)	[-0.05, 0.69]	.094
Neutral Environment x Online Mode	-0.17 (0.13)	[-0.43, 0.09]	.195	0.07 (0.20)	[-0.33, 0.47]	.717
Dating Environment x FtF Mode	-0.34 (0.13)	[-0.61, -0.08]	.011	0.44 (0.21)	[0.03, 0.85]	.035
Dating Environment x Online Mode	-0.29 (0.15)	[-0.57, 0.00]	.051	0.34 (0.22)	[-0.10, 0.78]	.129

Note. CI = confidence interval.

Appendix D

Assumption Checks

Linearity, Normality and Homoscedasticity

Despite the mediator and DVs having skewed distributions, there are no problematic violations of the linearity, normality and homoscedasticity assumptions for path a and b/c' of the moderated mediation model. Furthermore, there are no changes in the overall conclusions for the hypotheses after comparing the non-bootstrap (see Appendix C) with the bootstrap results of the model parameters, which are robust against model assumption violations.

Outliers and Influential Points

When the six outliers of *Perceived Realism* and 25 outliers of *Frequency of Online or FtF Dating* were removed from the dataset, re-analyses of the moderation mediation model did not change the overall conclusions of the hypotheses.³⁰ The re-analyses were done separately for each type of outlier. Furthermore, one influential point was found after the main analysis (with all previously found outliers included) was completed. A re-analysis of the dataset without this observation showed no changes for the overall conclusions of the hypotheses.

³⁰ Even though the conclusions of the hypotheses did not change, the main effect of the mode on expectancy violations was not statistically significant anymore when the 25 outliers of *Frequency of Online or FtF Dating* were removed, $b = 0.35$, $t(314) = 1.68$, $p = .094$, 95% CI [-0.06, 0.75].