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Meeting partners online is related to lower relationship satisfaction and love: Data from 50 countries

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ABSTRACT

The Internet has fundamentally reshaped how people meet and form romantic relationships. But how significant are these changes, and what do they mean for relationship quality? In a large-scale, cross-cultural study using nationally representative samples from 50 countries, we examined the prevalence of online partner meeting, the demographic correlates of this trend, and its association with relationship satisfaction and experienced love. Analyzing data from 6,646 partnered individuals ($M_{age} = 41.45$, $SD_{age} = 13.81$), we found that 16 % of participants met their partners online, with this figure rising to 21 % among those who initiated their romantic relationships after 2010. Individuals in shorter relationships and those with lower socioeconomic status (SES) were more likely to have met their partners online. We found no significant differences in the likelihood of online relationship formation based on gender or age. On average, participants who met their partners online reported lower relationship satisfaction and lower intensity of experienced love compared to those who met offline, with effect sizes ranging from small to medium. Given that online dating continues to grow worldwide, our findings underscore the need to enhance support for improving relationship quality among all couples, particularly those who met their partners online.

1. Introduction

For many individuals and across various cultures, the formation of close, lasting romantic relationships is a significant life goal (e.g., Buss, 2019; Fletcher et al., 2015; Kowal et al., 2024a; Sullivan, 1953). When pursued, the quality of these partnerships has been linked to positive outcomes in well-being (Kansky, 2018; Oravecz et al., 2020), happiness (Tamir et al., 2017), and both mental and physical health (Braithwaite et al., 2010; King & Reis, 2012).

The ways people find and choose their partners have changed dramatically over time. Historically, partner selection was largely constrained by one's immediate social environment, typically consisting of individuals in close geographic proximity (Bossard, 1932). The advent of the Internet has changed this mating landscape. Digital technologies now allow individuals to connect, communicate,

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and build romantic relationships with people they might never have encountered otherwise, significantly expanding the dating pool (Rosenfeld & Thomas, 2012). Online dating platforms and mobile applications have become important tools in the contemporary search for romantic partners, transforming not only how relationships begin, but potentially how they function and endure over time.

As digital technologies reshape how romantic relationships are initiated, researchers have increasingly turned their attention to the implications of these changes for relationship quality (Cacioppo et al., 2013; Hu et al., 2024b; Langlais et al., 2024; Potarca, 2020; Rosenfeld et al., 2019; Sharabi and Dorrance-Hall, 2024). Our study contributes to this growing literature by presenting a large-scale, cross-cultural analysis based on nationally representative samples from 50 countries. We examined whether relationship satisfaction and the intensity of experienced love differ between individuals who met their partners online versus offline. Below, we first provide a brief overview of findings on how romantic relationships have been formed in recent decades, as well as the implications of the meeting context for relationship quality.

1.1. Romantic relationship formation

Historically, romantic relationships were typically initiated within the boundaries of one's immediate social network, often involving individuals living in close geographic proximity (Bossard, 1932). People commonly met their future spouses through family and friends, at school, work, religious communities, or social venues such as bars (Rosenfeld et al., 2019). While many long-term partnerships were formed on the basis of love, in various cultural contexts, partner selection was arranged by family members and guided by practical or familial considerations (Sorokowski et al., 2024).

Retrospective data from the United States illustrate how these patterns of partner selection have changed over time. In the mid-20th century, heterosexual couples most commonly met through friends (~30 %), family (~27 %), at school (~24 %), in bars or restaurants (~13 %), through or as neighbors (~12 %), in church (~9 %), at work (~8 %), or in college (6 %).[1] By the early 21st century, however, meeting partners online had become the most common method (39 %), surpassing all traditional meeting venues. Offline encounters still played a role—particularly in bars or restaurants (27 %), through friends (20 %), and at work (11 %)—but meetings through family (7 %), school (5 %), college (4 %), church (4 %), or neighbourhoods (3 %) had declined notably (Rosenfeld et al., 2019).

Importantly, the rise of internet-facilitated partner selection is not limited to the United States but has been observed across various cultural contexts, though with considerable variation in prevalence (Low et al., 2022). For instance, Rivera (2021) reported that 71 % of Filipinos know at least one couple who met online. Gerlach (2021) found that in an international sample of 401 individuals (primarily German and Dutch), 36.7 % met their partners online (either through dating platform or social media platforms). Similarly, Qian and Hu (2025) surveyed 795 Canadians, revealing that 17.5 % met online. Potarca (2020) analyzed data from the Swedish census and found that among 3,245 Swiss respondents, 15.2 % met their partners online. In the United Kingdom, Lampard (2020) analysed responses from a nationally representative survey of 3,434 individuals and found that 6.8 % of couples who met between 2004 and 2007 had done so online—a figure that rose to 10.9 % among those who met between 2008 and 2012.

1.2. Meeting context and relationship quality

Given the profound shifts in how romantic relationships are initiated, a key question arises: does the context of meeting—online or offline—influence relationship quality? One of the earliest large-scale studies on this topic was conducted by Cacioppo et al. (2013), who analyzed data from 19,131 Americans married between 2005 and 2012. Their findings suggested small but significant differences: individuals who met their spouses online—most commonly through dating websites—were less likely to divorce and reported higher marital satisfaction than those who met offline. These results painted a favorable picture of online dating, generating optimism among scholars (Schwartz & Velotta, 2018) and the public (Thayer, 2014).

Cacioppo et al. (2013) proposed several explanations for these findings. The Internet provides access to a larger pool of potential partners, allowing individuals to be more selective and find someone who aligns with their preferences. Some studies support this notion, suggesting that people who feel their partners closely match their ideal criteria report higher relationship satisfaction (Meltzer et al., 2014). Moreover, online communication often involves greater self-disclosure, which fosters intimacy (Ogolsky & Bowers, 2013; Sprecher & Hendrick, 2004). Laboratory experiments show that individuals disclose more personal information when meeting strangers online compared to face-to-face interactions and that this self-disclosure plays a key role in eliciting positive feelings and mutual liking (McKenna et al., 2002).

However, more recent studies challenge these early conclusions. Several studies have found no significant differences in relationship satisfaction between couples who met online—via dating websites, apps, or social media—and those who met offline (Langlais et al., 2024; Potarca, 2020; Schaaij, 2021). Some studies even report higher satisfaction among individuals who met their partners offline (Hu et al., 2024b; Sharabi and Dorrance-Hall, 2024).

The very features once considered advantages of online dating may also carry disadvantages. For example, while access to a larger pool of potential partners increases choice, it may also lead to choice overload, ultimately lowering satisfaction with one's final choice (D'Angelo & Toma, 2017). Moreover, relationship satisfaction may depend less on finding a partner who matches ideal criteria and more on minimizing perceived discrepancies between one's current and potential alternative partners (Conroy-Beam et al., 2016). With such a wide variety of potentially available partners online, individuals accustomed to finding partners this way may find it

[1] Note that the percentages do not add to 100% because these categories are not mutually exclusive.

difficult not to wonder what it would be like to have a different partner. In support of this idea, Stanik and Bryant (2012) observed that individuals who perceive more mate options tend to experience greater regret regarding their current partner, which in turn may lead to lower relationship satisfaction.

Another important feature of online dating platforms is their reliance on recommendation algorithms to tailor users' profile feeds based on inferred preferences (Hu, 2024; Hu and Zhan (Shuo), 2024a). Although these algorithms can facilitate the mate–search process by suggesting profiles deemed most compatible, their unclear decision rules often compel users to engage in "algorithmic game–playing," for example by experimenting with different photos, prompts, or swipe patterns in hopes of improving visibility and match rates (Narr & Luong, 2023). Such uncertainty has been shown to increase users' feelings of helplessness and can, in some cases, undermine the development of meaningful relationships by shifting focus away from authentic interpersonal connection and toward manipulating system mechanics (Hu, 2024).

While online communication fosters self-disclosure and promotes intimacy, other relationship-building factors, such as homogamy—similarity in education, ethnicity, and religious background—remain important (Ghaderi & Mardani, 2013). Previous research has found that couples who met online are less similar in these aspects than those who met offline (Lampard, 2020; Potarca, 2020; Thomas, 2020), which can negatively affect long-term satisfaction (Felmlee, 2001). Finally, couples who meet online often receive less social support from their networks, which may contribute to lower relationship quality (Ogolsky & Bowers, 2013; Sharabi, 2024). Taken together, these mixed findings highlight the need for further investigation—particularly in diverse cultural contexts—to better understand how the meeting context shapes relationship outcomes.

1.3. Current study

This study builds on prior research by addressing key limitations in the existing literature on romantic relationship formation and quality. Much of the earlier work has relied on single samples drawn from WEIRD societies—Western, Educated, Industrialized, Rich, and Democratic—raising concerns about the generalizability of findings to the broader human population (Henrich et al., 2010). To overcome this, we conducted a large-scale, cross-cultural study spanning 50 countries, including diverse and non-WEIRD populations.

Our primary aim was to examine whether the context in which couples met—online or offline—is associated with two central indicators of relationship quality: relationship satisfaction and the intensity of experienced love (Hatfield & Rapson, 1993; Cassepp-Borges, 2023). These dimensions are widely recognized as key predictors of relationship functioning and longevity (Kahana et al., 2020; Schweizer, 2020). In addition, we controlled for a range of socio-demographic factors known to impact relationship quality, including gender, age, relationship length, socioeconomic status (SES), education, and residential area (Kowal et al., 2024a; Potarca, 2020; Kowal et al., 2025). By combining cross-cultural scope with a nuanced assessment of relationship dynamics, our study offers a more comprehensive understanding of how digital technologies intersect with intimate life across cultures.

2. Method

The study protocol was approved by the Institutional Review Board (IRB) at the Institute of Psychology, University of Wrocław. All participants provided informed consent before taking part in the survey.

2.1. Participants

Our goal was to collect data from nationally representative samples across 50 countries (see Fig. 1). To ensure balanced representation, we recruited at least 200 individuals from each country, following predefined distributions based on age (25 % aged 18–27, 25 % aged 28–37, 25 % aged 38–47, and 25 % aged 48 or older), gender (~50 % women and ~ 50 % men), and residential area (urban vs. rural, as classified by CIA data, 2024).

This resulted in a total sample of 10,482 individuals, of whom 6,646 were in romantic relationships at the time of the study and were included in the subsequent analyses. Among them, 3,301 (49.7 %) self-identified as women, 3,329 (50.1 %) as men, 10 (0.002 %) as non-binary or another gender, and 6 (0.001 %) preferred not to disclose their gender.[2] Participants' ages ranged from 18 to 73 (M = 41.45, SD = 13.81, Median = 40), and their relationship lengths varied from 1 month to 80 years (M = 11.67, SD = 10.31, Median = 9, with a median relationship start year of 2015). The majority of participants had met their romantic partners offline (n = 5,578, 84 %). Regarding relationship status, 4,483 participants (67.5 %) were married, 1,261 (19 %) were in a cohabiting relationship, 859 (13 %) were in a non-cohabiting relationship, and 37 (0.006 %) selected "other" as their relationship status. There were 5,457 (82.1 %) individuals identifying as heterosexual, 361 (5.4 %) as bisexual, 297 (4.5 %) as homosexual, 259 (3.9 %) indicated "other" as their sexual orientation, and 272 (4.1 %) preferred not to disclose their sexual orientation. A detailed breakdown of national samples is available in Table S1 in the Supplementary Materials.

2.2. Measures

Basic demographic information was collected using single-item questions (e.g., "*What is your age in years?*"; "*What is your gender?*";

[2] In the subsequent analyses, we focused on participants identifying as either woman or a man, as with 10 participants identifying as other and 6 preferring not to disclose their gender, no well-powered comparisons could be made.

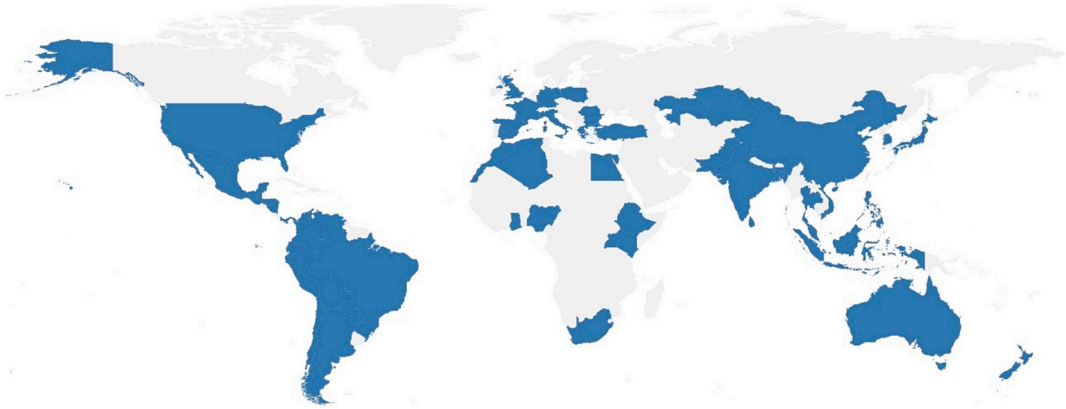

Fig. 1. Countries included in the present study.

"*How long have you been in your current romantic relationship?*"). Socioeconomic status (SES) was assessed using the MacArthur Scale of Subjective Social Status, which employs a 10-point response scale, with higher scores indicating higher SES (Adler et al., 2000). Participants' meeting context with their romantic partners was assessed using a single-item question: "*How did you meet your current romantic partner?*", with two response options: "*Online*" and "*In a traditional way (e.g., not via social media, Internet)*." Relationship satisfaction was measured with the question "*How satisfied are you with your relationship with your partner?*", using a 5-point Likert scale, ranging from "*1 – not at all*" to "*5 – extremely.*".

Intensity of experienced love was measured using the short version of the Triangular Love Scale (TLS-15), which had already undergone forward-back translation (Kowal, 2024) for 19 languages and was translated by professional experts for two additional languages, resulting in a total of 21 linguistic versions. The TLS-15 has been linguistically validated across all versions (Kowal et al., 2024b; Kowal et al., 2025). The scale consists of 15 items, with five questions assessing each of the three love components: Intimacy (McDonald's $\omega = 0.93$; exemplary item: "*I feel that my partner really understands me*"), Passion (McDonald's $\omega = 0.92$; e.g., "*My relationship with my partner is passionate*"), and Commitment (McDonald's $\omega = 0.93$; e.g., "*I view my relationship with my partner as permanent*"), Responses were recorded on a 5-point Likert scale, with higher scores indicating greater intensity of experienced love.

2.3. Procedure

Participants were recruited via an external survey company (i.e., Syno International) using its online panels in all 50 countries. Data collection took place online, and participants were compensated according to the company's standard compensation practices.

2.4. Statistical analyses

In the first step, we calculated the year each participant's romantic relationship began by subtracting their reported relationship length from 2024 (the year of data collection). We then determined the percentage of individuals who met their partners online across different years (see Fig. 2). To ensure a sufficient sample size for meaningful comparisons, we restricted further analyses to individuals whose relationships began in 2010 or later, as the percentage of online-initiated relationships consistently exceeded 10 % from that year onward. We also examined the percentage of participants who met their partners online or offline across countries (see Fig. 3) and computed average scores for the three love subscales: Intimacy, Passion, and Commitment.

In the second step, we conducted a generalized linear mixed-effects analysis, using the binary meeting variable (0–offline, 1–online) as the dependent variable, with participants' gender (0–men, 1–women), age (in years), relationship length (in years), and SES as predictors. Participants were nested within countries to account for differences in online dating prevalence across nations. In the subsequent set of models, we tested whether residential area (0–urban, 1–rural), education level (years of completed education), and relationship orientation (with heterosexual individuals as the reference category) predicted participants' meeting context, following suggestions from prior studies (e.g., Diesen et al., 2025; Potarca, 2020).

In the third step, we conducted linear mixed-effects analyses, using the maximum likelihood estimator and again nesting participants within countries. Relationship satisfaction and the love subscales were regressed onto the binary meeting variable (coded as 0–offline, 1–online). In a second set of models, we controlled for participants' gender, age, relationship length, and SES. We then explored interactions between meeting context and each of these control variables. Furthermore, we addressed prior research suggestions by testing whether residential area and education level moderated the relationship between meeting context and relationship quality (Potarca, 2020). Because searching for partners online may play an even more important role for non-heterosexual individuals (for a review, see Diesen et al., 2025), we also included a relationship orientation variable (with heterosexual individuals as the reference category) to examine whether relationship satisfaction and love intensity differ across heterosexual, bisexual, and homosexual individuals. To assess potential collinearity issues, we calculated the Variance Inflation Factor (VIF), following recommended benchmarks of VIF > 5, suggesting if there were potential issues with multicollinearity (James et al., 2021; Menard, 2001).

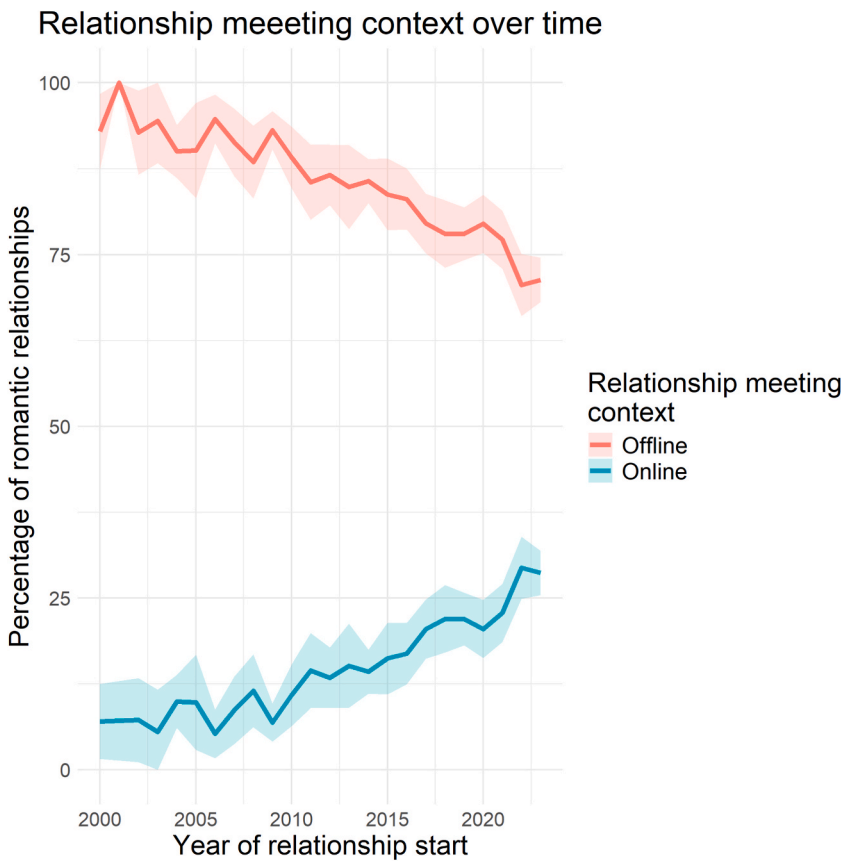

Fig. 2. Percentage of participants who met their romantic partners online or offline by the year their relationship was formed. Note. Shadow areas show 95% confidence intervals.

Lastly, we addressed a potential selection bias—individuals who met offline may have been more likely to break up and thus were less likely to participate in our study. If true, our sample could overrepresent particularly satisfied offline couples, artificially inflating differences in relationship satisfaction between offline and online couples. To account for this, we applied propensity score matching. Using logistic regression, we estimated propensity scores based on age, gender, SES, and relationship length, predicting whether participants met their partners online or offline (Haviland et al., 2008). We then applied full matching to balance groups while retaining all participants (Ho et al., 2011). Full matching ensured that individuals with similar propensity scores were weighted appropriately, minimizing bias due to differences in group sizes and covariate distributions. Finally, we repeated step three using the adjusted weights from the propensity score analysis. All statistical analyses were conducted using R (version 4.4.1).

3. Results

The generalized linear mixed-effects analysis of data from participants who formed their romantic relationships in 2010 or later showed that individuals who met their partners online were more likely to have a lower SES (log odds = -0.063, $SE = 0.022$, 95 %CI [-0.106,-0.021], $p = 0.004$) and be in shorter romantic relationships (log odds = -0.097, $SE = 0.011$, 95 %CI [-0.118,-0.076], $p < 0.001$). No significant associations were found with gender or age. Additional analyses also revealed no significant links with participants' residential area (i.e., rural vs. urban) or education. Furthermore, there were no significant differences in the likelihood of meeting one's partner online vs. offline between heterosexual, bisexual, and homosexual individuals. Detailed results of these analyses, including ICCs and pseudo r^2, are available in Tables S2-S4 in Supplementary Materials.

The linear mixed-effects models showed consistent patterns, both with and without controlling for covariates. Table 1 presents the results of the models with covariates (see Tables S5-S6 in the Supplementary Materials for detailed results and Table S7 for models without covariates). On average, individuals who met their partners offline reported higher relationship satisfaction, Intimacy, Passion, and Commitment compared to those who met online.

The estimated marginal means (EMM) for relationship satisfaction were: offline = 4.28, $SE = 0.03$, online $EMM = 4.20$, $SE = 0.04$; for Intimacy offline $EMM = 4.26$, $SE = 0.02$, online: $EMM = 4.20$, $SE = 0.03$; for Passion offline: $EMM = 4.04$, $SE = 0.03$, online: $EMM = 3.96$, $SE = 0.04$; and for Commitment offline: $EMM = 4.31$, $SE = 0.03$, online: $EMM = 4.23$, $SE = 0.03$ (see Fig. 3). These differences were small for relationship satisfaction, Intimacy, and Passion ($d = 0.43$, 95 %CI[0.36,0.50], $d = 0.35$, 95 %CI[0.28,0.43], and $d =$

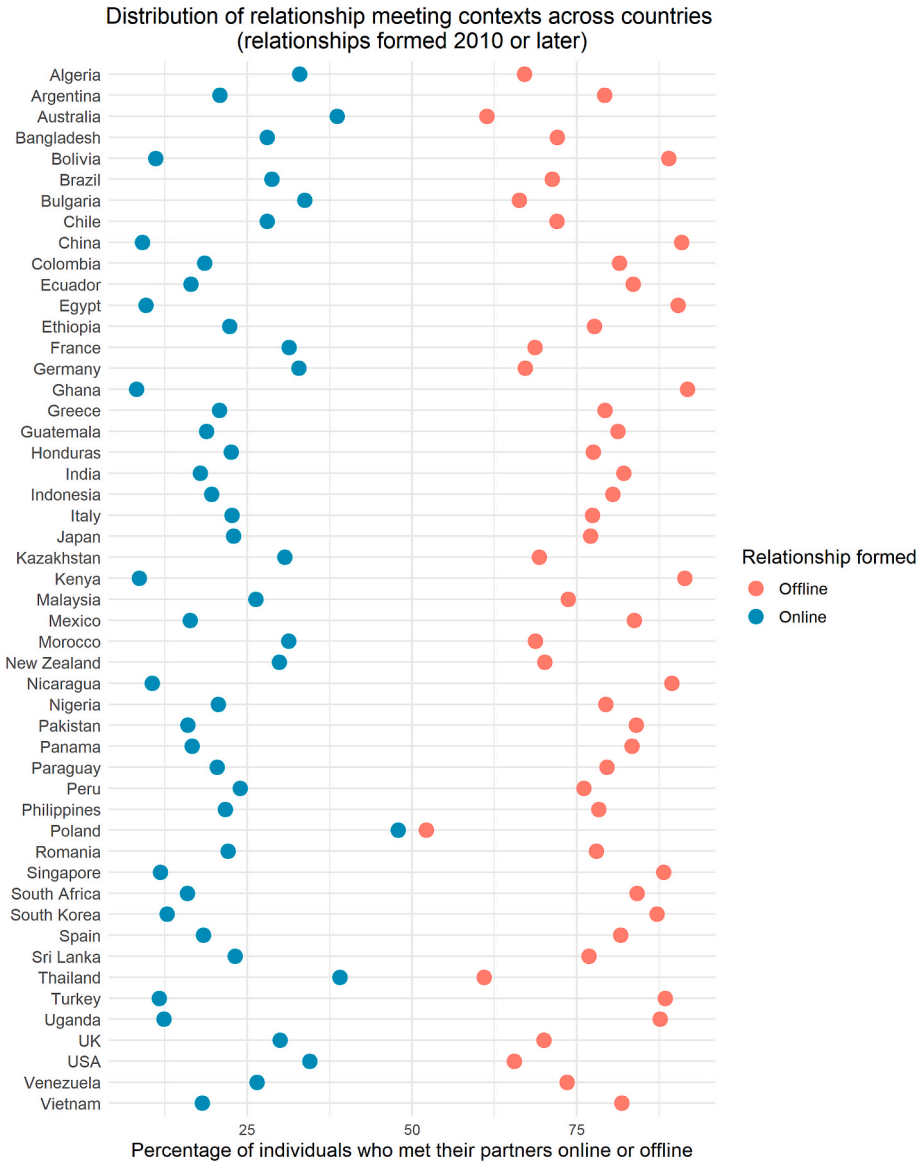

Fig. 3. Percentage of participants who met their romantic partners online vs. offline across different countries.

Table 1
Results of linear mixed-effects analyses predicting relationship satisfaction and love subscales based on how participants met their romantic partners (online vs. offline), controlling for covariates.

Fixed effect	Relationship satisfaction				Intimacy (love)			
	β	*SE*	*95 %CI*	*p*	*β*	*SE*	*95 %CI*	*p*
Offline vs. online[a]	−0.091	0.036	[-0.162,-0.020]	0.012*	−0.080	0.036	[-0.151,-0.008]	0.028*
	Passion (love)				**Commitment (love)**			
Fixed effect	*β*	*SE*	*95 %CI*	*p*	*β*	*SE*	*95 %CI*	*p*
Offline vs. online[a]	−0.087	0.036	[-0.157,-0.016]	0.016*	−0.097	0.036	[-0.169,-0.026]	0.007**

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. [a] Relationship meeting context.

0.37, 95 %CI[0.30,0.44], respectively), and moderate for Commitment ($d = 0.51$, 95 %CI[0.44,0.58]). This pattern was consistent across almost all countries. Fig. 4 presents the effect sizes (weighted Cohen's *d*) for differences in relationship satisfaction by meeting context across countries, with similar figures for love subscales available in Supplementary Materials (Figs. S1-S3).

Re-running the analyses with weights from the propensity score analysis yielded the same pattern of results: relationship

satisfaction and love intensity remained higher among those who met offline compared to those who met online (see Table S8 in the Supplementary Material). Furthermore, we did not find evidence for multicollinearity issues, as VIFs in the reported models were below 1.185, $M = 1.083$. Differences in weighted relationship satisfaction are presented in Fig. 5.

Post-hoc interaction analyses with relationship meeting context and gender showed that men who met their partners offline reported significantly higher love intensity than men who met their partners online. This difference was larger than the corresponding difference among women. Analyses of interactions between meeting context and age, using the Johnson-Neyman region of significance, indicated that differences in relationship satisfaction and love intensity were most pronounced among individuals older than approximately 33 years (specifically, 31.51 years for relationship satisfaction, 35.31 years for Intimacy, 34.04 years for Passion, and 31.62 years for Commitment). No significant interactions were found between meeting context and relationship length, SES, education, residential area, or relationship orientation (all $p > 0.05$).

4. Discussion

The present study aimed to better understand the increasingly common phenomenon of meeting romantic partners online. Using a large-scale, cross-cultural dataset from nationally representative samples across 50 countries, we examined its global prevalence and tested whether the context of partner meeting—online versus offline—is associated with relationship quality, measured in terms of satisfaction and experienced love. By extending previous research beyond WEIRD samples and accounting for key sociodemographic variables, our cross-cultural approach offers a more comprehensive view of how digital technologies may be reshaping intimate relationships worldwide.

Our results showed that, on average, 16 % of participants met their partners online, with rates ranging from 33 % in Poland to 7 % in Ghana. Among those who entered relationships in 2010 or later, the prevalence increased to 21 %, ranging from 48 % in Poland to 8 % in Ghana. Individuals who started their relationships more recently and those with lower socioeconomic status were more likely to have met their partners online. Furthermore, those who met online, on average, reported lower relationship satisfaction and lower levels of love—across its three components: Intimacy, Passion, and Commitment—compared to those who met offline. These effects were small for relationship satisfaction, Intimacy, and Passion, but moderate for Commitment. Importantly, these differences remained significant even after controlling for a broad set of demographic covariates, including gender, age, relationship length, socioeconomic status, education, residential area, and sexual orientation.

The prevalence of meeting romantic partners online observed in our study is consistent with previous research. For instance, Cacioppo and colleagues (2013) found that nearly one-third of American marriages between 2005 and 2012 began online. Similarly, Rosenfeld and colleagues (2019) suggested that in 2017, 39 % of American adults initiated romantic relationships online. Our data extend these findings, showing a continued increase in the prevalence of meeting partners online over time. By 2023, 29 % of participants across all countries and 50 % of those in the U.S. reported meeting their partners online. This increase aligns with the growing popularity of online dating discussed in previous research (Bruch & Newman, 2019; Schwartz & Velotta, 2018). Given these trends, we anticipate that the prevalence of meeting one's partner online will continue to rise globally.

Interestingly, our findings contradict prior work suggesting that individuals in rural areas are more likely to seek partners online due to geographic constraints (e.g., Potarca, 2020). In our study, individuals from rural and urban areas were equally likely to meet their partners online. Similarly, we found no evidence that younger individuals are more inclined to meet partners online, challenging previous results (Cacioppo et al., 2013; Sharabi & Dorrance-Hall, 2024). This suggests that navigating online spaces has become

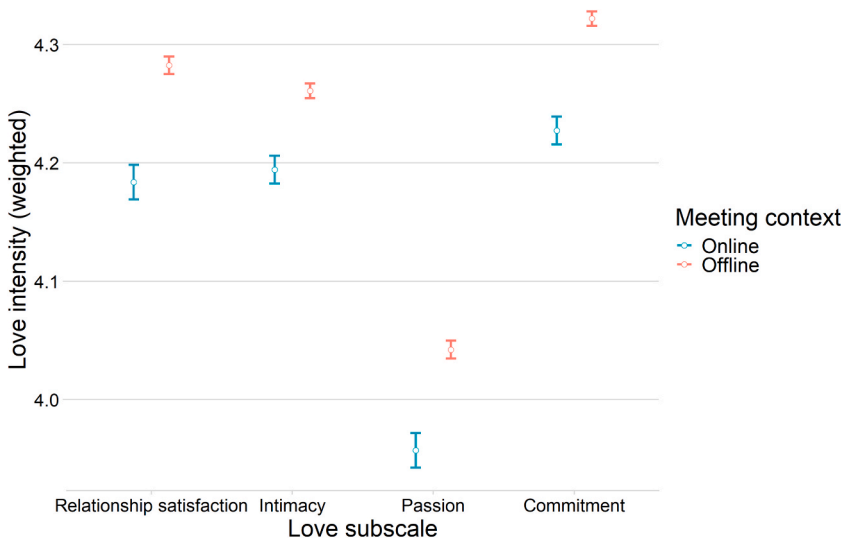

Fig. 4. Relationship satisfaction and love intensity (measured by Intimacy, Passion, and Commitment) based on how participants met their romantic partners (online vs. offline), controlling for covariates. Note. Error bars represent 95% confidence intervals.

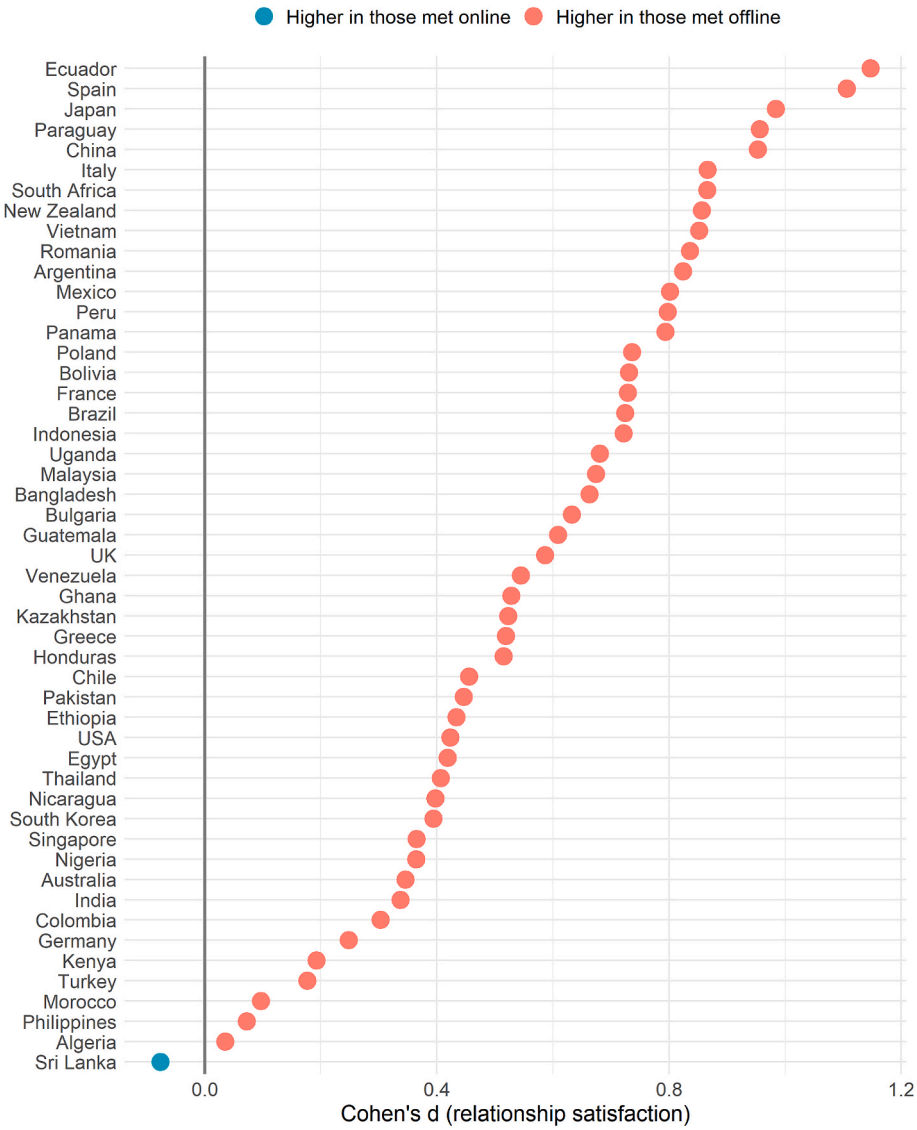

Fig. 5. Differences in weighted relationship satisfaction between individuals who met their partners online vs. offline across countries.

accessible across residential settings as well as age groups. We also observed no gender differences in the likelihood of meeting a partner online—which is unsurprising, given that most of our sample was heterosexual, and online partner meeting in heterosexual contexts typically involves similar levels of participation from both men and women. However, previous research has shown gender differences in motivations for online dating (Weitbrecht & Whitton, 2020), suggesting that even if similar proportions of men and women seek partners online, the underlying motivations may differ. This warrants further investigation into how these differing intentions might shape relationship outcomes.

Our findings indicate that individuals who met their partners online reported lower relationship satisfaction and lower levels of love compared to those who met offline. While these differences were generally small, the effect for commitment was moderate in size. Several mechanisms may help explain why relationships initiated online are, on average, associated with lower satisfaction and reduced feelings of love.

One contributing factor may be lower levels of homogamy among "online couples". Prior studies have shown that individuals who meet their partners online tend to be less similar in terms of education, ethnicity, and religious background than those who meet offline (Lampard, 2020; Potarca, 2017; Thomas, 2020). This reduced similarity can make it harder to build shared routines, gain social approval, or align values—factors that are known to foster relationship stability and satisfaction (Blackwell & Lichter, 2004; Ruffieux et al., 2014). Offline relationships, in contrast, often emerge from shared social networks, which increases the likelihood of meeting partners with similar backgrounds and worldviews.

A second possible explanation involves the overabundance of choice in online dating environments. While a larger dating pool

allows for more precise matching, it can also lead to choice overload—making it harder for individuals to commit confidently to a partner (D'Angelo & Toma, 2017). Instead of engaging in a thorough selection process, people may rely on heuristics, such as prioritizing physical attractiveness (Jonason et al., 2017) or may overlook meaningful but less obvious compatibility factors that might have been more apparent in face-to-face interactions. This kind of fast-paced decision-making may reduce the likelihood of forming deep, lasting bonds.

Additionally, online interactions can involve deception. Misrepresentation in online dating profiles is common, with 53 % of users admitting to lying, most frequently about age, height/weight, and job/income (eHarmony Editorial Team, 2021). These inaccuracies are harder to conceal in face-to-face meetings, especially when shared social circles enable easier verification of personal details. When initial expectations based on online interactions are violated in real life, it may erode trust and overall relationship quality (Mosley et al., 2020).

Even after a long-term relationship has formed, the availability of alternative partners may continue to affect online-initiated couples. Individuals who have successfully navigated digital dating platforms may remain aware of the vast number of potential alternatives, making them more prone to comparison and regret (Stanik & Bryant, 2012). This aligns with the Investment Model (Rusbult et al., 1998), which highlights that the availability of attractive alternatives undermines commitment. Offline couples, in contrast, may be less accustomed or motivated to explore such alternatives.

Our findings regarding the higher relationship quality of offline-initiated relationships align with recent studies on online dating and mobile dating apps (Hu et al., 2024b; Sharabi and Dorrance-Hall, 2024) but contrast with earlier research which suggested higher marital satisfaction among couples who met online (Cacioppo et al., 2013). This discrepancy could reflect changes in online dating culture over the past two decades. In Cacioppo and colleagues' (2013) study, online dating primarily involved dating websites. With their matching algorithms, meticulously prepared profiles, and careful process of finding a potential partner, online dating platforms differ from mobile dating apps (Sharabi & Dorrance-Hall, 2024). Contemporary mobile dating apps emphasize fast-paced, gamified interactions and a more commercialized approach to partner selection (Narr, 2022). The term "swipe culture" aptly describes the immediate, appearance-focused decision-making prevalent on such platforms (van Hooff, 2020). Such shifts in digital dating environments may help explain why more recent studies, including ours, find less favorable outcomes for relationships that begin online.

Motivations for online mating have shifted over time. While early users sought lifelong partners, modern users increasingly pursue casual relationships (Hobbs et al., 2017). This change in relational goals may help explain the lower relationship quality observed among those who meet their partners online (Langlais et al., 2024). Public perceptions of online dating have mirrored this evolution, moving from initial fear of meeting strangers to acceptance and, more recently, renewed concerns about the prevalence of interest in short-term, non-committed relationships (Hobbs et al., 2017; Rosenfeld, 2018). Some dating platforms and apps, more than others, have developed reputations as spaces primarily for casual interactions rather than serious partnerships. Future research should account for these varying online contexts—distinguishing between dating websites, which are often linked to long-term intentions, and mobile apps, which are frequently tied to short-term goals (Finkel et al., 2012; Potarca, 2017).

Our findings may also reflect broader societal and economic transformations that reach far beyond mere technological innovation or "swipe culture" (Rodrigues & Baldi, 2017). Some scholars argue that one of the markers of the current era is the phenomenon of "Cold Intimacy"—a shift toward rational, calculated decision-making in romantic contexts (Carter & Smith, 2024). In this model, individuals evaluate relationships based on perceived benefits, assessing compatibility and long-term potential with a pragmatic lens. The structure of online dating—with its constant stream of potential alternatives—may facilitate this transactional mindset (Palmer, 2020). In this respect, digital mate selection resembles arranged marriages, which remain common in many non-Western societies. Yet, research suggests that such marriages can foster comparable levels of love to free-choice couples (Sorokowski et al., 2024), suggesting that the dichotomy between emotional and instrumental relationship formation may be overly simplistic.

In addition, digital technologies now offer alternative avenues for fulfilling needs traditionally met within romantic relationships. Emotional closeness can be accessed through online friendships (Kislev, 2019), while sexual gratification can often be sought through online pornography (Hald et al., 2014). This availability of external sources of intimacy and pleasure may reduce the perceived necessity of investing deeply in a romantic relationship. Cultural trends also contribute to this dynamic. One prominent example is the rise of "Cheap Sex"—a term used to describe increasingly accessible, low-cost sexual encounters (Regnerus, 2017). Factors such as the widespread availability of contraception, the destigmatization of non-marital sex, and shifting gender roles may all influence the dynamics of romantic relationships (Rudman & Glick, 2021). Importantly, these cultural shifts are often reinforced by narratives promoted in digital media.

Ultimately, the quality and stability of romantic relationships cannot be fully understood without considering the broader social, cultural, and technological landscape in which they unfold. Regardless of whether a couple meets online or offline, their relationship is embedded in a complex web of digital habits, socio-economic pressures, and evolving cultural norms. These intersecting forces warrant sustained interdisciplinary attention as they continue to reshape the meaning and practice of intimacy in the modern world. One promising direction, however, is to identify the conditions under which online dating leads to the most satisfying outcomes – for instance, by refining matching algorithms and enhancing users' awareness of how these algorithms operate (Hu and Zhan (Shuo), 2024a; Tong et al., 2016).

5. Limitations

While this study advances our understanding of online romantic partner meeting, several limitations should be acknowledged. First, our binary categorization of meeting context—online versus offline—did not account for nuanced digital contexts. Future research should differentiate between platforms such as dating apps, mobile dating apps, and social media to better understand how

specific settings influence relationship quality. Second, although our sample includes participants from 50 countries, it does not represent the entire global population. Furthermore, the use of online recruitment introduces selection bias by underrepresenting individuals without internet access—who are, by definition, more likely to meet partners offline. Third, while propensity score weighting addressed some concerns, such as SES-related relationship dissolution (Amato & Previti, 2003), other unmeasured variables may still have influenced the results. For example, individuals who choose to date online may differ systematically from those who date offline in terms of mate value, attachment style, self-esteem, or personality traits. These differences could, in turn, shape relationship outcomes independently of the meeting context.

Fourth, we did not collect data on participants' partners, preventing us from directly assessing homogamy. Although prior research suggests that homogamous couples report higher satisfaction (Ghaderi & Mardani, 2013), future studies should examine this potential mediator. Fifth, our sample consisted primarily of heterosexual individuals. However, prior research suggests that online venues play a particularly important role for sexual minorities in partner selection (Diesen et al., 2025). Future research should examine whether the patterns observed here generalize to non-heterosexual populations. Finally, our cross-sectional design limits causal inferences. Longitudinal studies tracking relationship trajectories—from initial attraction through later stages—would offer valuable insights into the dynamics of online- and offline-initiated relationships.

5.1. Conclusions

The way people form romantic relationships is undergoing a global transformation, with online platforms playing an increasingly central role. Using large-scale, cross-cultural data from 50 countries, our study offers a comprehensive view of how meeting partners online relates to relationship quality. While online venues offer unprecedented opportunities for connection—especially across geographic and social boundaries—our findings suggest that relationships initiated offline are, on average, characterised by higher satisfaction and more intense feelings of love.

These differences may reflect multiple factors, including lower levels of homogamy, greater choice overload, and shifting expectations in digital contexts. Yet, it would be premature to conclude that online-initiated relationships are inherently less fulfilling. The online dating landscape is diverse and continually evolving, shaped by users' intentions, platform design, and broader cultural norms.

Future research should continue to explore how specific online meeting contexts, motivations, and user experiences shape relationship outcomes. Longitudinal studies, in particular, are needed to track how relationships initiated online develop over time. In the meantime, efforts to foster healthy, satisfying partnerships—regardless of how couples meet—remain essential. High-quality romantic relationships play a crucial role in individual well-being and long-term stability, making this an important area for continued scientific and societal attention.

CRediT authorship contribution statement

Marta Kowal: Writing – review & editing, Writing – original draft, Visualization, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Piotr Sorokowski:** Writing – review & editing, Supervision, Project administration, Funding acquisition, Conceptualization. **Adam Bode:** Writing – review & editing. **Michal Misiak:** Writing – review & editing, Funding acquisition, Conceptualization. **W.P. Malecki:** Writing – review & editing, Funding acquisition, Conceptualization. **Agnieszka Sorokowska:** Writing – review & editing, Funding acquisition, Conceptualization. **S. Craig Roberts:** Writing – review & editing, Supervision, Funding acquisition.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability.

Data has been made publicly available at the OSF: https://osf.io/uzf37.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tele.2025.102309.

Data availability

Data has been made publicly available at the OSF: https://osf.io/uzf37.

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