Psychreg Journal of Psychology OPEN ACCESS

Volume 10, Issue 1, June 2026 ISSN 2515-138X | pjp.psychreg.org

RESEARCH ARTICLE

Dating apps and psychological well-being: age-related differences in self-esteem, depression, and anxiety

Jay Campisi*, Anneliese Rohane, Kimberly Carmona, Dorian Alexie, Matthew North, Devyn Decker, Gena Nichols, Karin Streifel, Bethany Lucas, Allison Hall, Elizabeth Buchholz, Ariel Wooldridge, Lea Stenerson, & Allyson Sterling

Regis University (United States)

* **Correspondence:** jcampisi@regis.edu

Cite as: Campisi, J., Rohane, A., Carmona, K., Alexie, D., North, M., Decker, D., Nichols, G., Streifel, K., Lucas, B., Hall, A., Buchholz, E., Wooldridge, A., Stenerson, L., & Sterling, A. (2026). Dating apps and psychological well-being: age-related differences in self-esteem, depression, and anxiety. *Psychreg Journal of Psychology*, *10*(1), 1 to 14. https://doi.org/rm6b

ABSTRACT

Humans are increasingly using technology such as dating applications (i.e., dating apps) as ways to make romantic and social connections. While younger individuals were initially the most frequent users of dating apps, older adults have recently started using these apps as well. Although psychological health can fluctuate throughout the lifespan, most notably with increased challenges felt at midlife, it remains unclear if dating app usage relates to key psychological outcomes across different age groups and sexes. Therefore, we examined whether dating app usage was associated with differences in self-esteem, symptoms of depression and anxiety, and quality of life among adults, and whether these associations varied by age and sex. A cross-sectional survey of 289 adults (age 18-65 years) assessed self-esteem (Rosenberg Self-Esteem Scale), depression (PHQ-9), anxiety (GAD-7), and quality of life (WHOQOL-BREF). Participants were categorised by dating app usage, age group, and sex. Individuals who used dating apps reported significantly higher self-esteem, lower levels of depression and anxiety, and greater psychological well-being and life satisfaction compared to non-users. These differences were most pronounced in adults aged 25–54. The association between dating app use and psychological outcomes varied somewhat by sex, with women in the 25–44 age range demonstrating the greatest association with dating app use and psychological health. Our results indicate that dating app usage is positively associated with multiple dimensions of psychological well-being among adults, particularly in middle adulthood. Collectively these findings suggest that dating apps may serve not only as social tools but also as mechanisms of emotional and psychological support.

Keywords: dating; depression; quality of life; self-esteem; social media

For most of human history, life revolved around small, close-knit hunter-gatherer bands with deep, enduring social bonds (Sapolsky, 2021). The shift to agriculture expanded populations and introduced interactions among people who were no longer intimately familiar (Herrera & Garcia-Bertrand, 2018; Sapolsky, 2021). This move from small groups to large, impersonal societies laid the groundwork for modern social dynamics, including those shaped by technology. Just as farming and urbanisation required navigating relationships with strangers, digital technology has amplified this dynamic, allowing humans to connect with vast networks of people they have never met in person (Herrera & Garcia-Bertrand, 2018; Sapolsky, 2021). The pace of this transformation has accelerated dramatically over the past two decades, with smartphones and internet connectivity making social interaction available at any time and in any place, fundamentally altering how people seek companionship and form attachments. For instance, while introductions once relied on mutual friends or community proximity, online dating has become the most common way to meet romantic partners (Albury et al., 2019; Rosenfeld et al., 2019).

The shift in the social patterns of dating gives rise to many questions regarding the impact of these online interactions on the psychological health of individuals who partake in them. Questions remain around the impact of social media use in general on psychological health as well as how dating apps in particular influence well-being (Barrada & Castro, 2020). The design features of dating apps, including algorithmic matching, profile curation, and the gamified nature of swiping, may introduce unique

Received: 16 September 2025 | Accepted: 10 November 2025 | Published: 01 June 2026

© The Author(s). Published by Psychreg Ltd under CC BY-NC-ND 4.0.

psychological pressures that differ from other forms of social media use, such as heightened appearance-based evaluation and repeated experiences of rejection or validation. While a number of studies demonstrate that online dating is associated with positive impacts on mental health and well-being (Bonilla-Zorita et al., 2023; Cacioppo et al., 2013; Sumter et al., 2017; Watson et al., 2019), others have found negative associations (Ciocca et al., 2020; Echevarria et al., 2023; Huang et al., 2023; Lauckner et al., 2019), and still others found that dating app users demonstrated no or very small differences in emotional health compared to non-users (Barrada & Castro, 2020). However, the majority of these studies were conducted on adolescents or young adults and did not include comparisons based on sex, leaving a gap in our understanding of how dating app use affects females and males in midlife and beyond.

Adults in midlife and older adulthood have increasingly turned to online platforms to form romantic or social connections (Dhoest, 2022; Marston et al., 2020), and it is unclear how technology-mediated dating might intersect with broader life-stage challenges and psychosocial factors. Midlife, in particular, has been identified as a period of increased psychological vulnerability, often characterised by a dip in life satisfaction, increased stress, and shifts in social roles (Lachman, 2004). Although the concept of a midlife crisis has historically been stereotyped as a male phenomenon, marked by career dissatisfaction, impulsive decision-making, and existential questioning, more recent research indicates that women often experience a midlife crisis as well, and that men and women may navigate these challenges in distinct ways (Kiesow et al., 2021; Lachman, 2004). For men, midlife distress often centres on perceived failures in achievement, status, or control, and may manifest through externalising behaviours such as risk-taking or changing relationships. In contrast, women in midlife are more likely to face internalised stressors, including caregiving burdens, changes in familial roles such as empty nest transitions, and hormonal changes related to perimenopause (Kiesow et al., 2021; Lachman, 2004). These differing social and biological pressures may contribute to sex-specific differences in mental health, with numerous studies demonstrating that women show higher internalising symptoms such as anxiety and depression during this life stage compared with men (Corcoran et al., 2021; Relojo-Howell & Stoyanova, 2019; Salk et al., 2017). The extent to which dating app use may serve as either a buffer against or a contributor to these midlife stressors remains poorly understood, particularly when considered separately for men and women. These patterns underscore the importance of considering sex as a key factor when examining how midlife individuals engage with coping mechanisms such as dating app use, and how these modalities may affect psychological well-being.

Given the notion of a U-shape in happiness, where well-being is highest for people in their 20s, decreasing to its nadir in midlife, and then rising into older age starting around 60 (Blanchflower & Oswald, 2008; Lachman, 2004), as well as known differences in psychological well-being across sexes (Corcoran et al., 2021; Salk et al., 2017), it is important to examine how dating app use may intersect with age and sex to influence psychological health across the adult lifespan. Notably, older adults using dating apps may bring different motivational orientations to the experience, including a greater focus on companionship and emotional connection rather than short-term encounters, which may in turn produce distinct psychological outcomes compared with younger users. Therefore, the purpose of this study was to investigate whether self-esteem, mental health (depression and anxiety symptoms), and quality of life differed by age, dating app usage, and sex among adults.

METHOD

Participants

Participants were 289 individuals recruited online using Mechanical Turk (MTurk; www.mturk.com), an online platform run by Amazon (www.amazon.com) (Campisi et al., 2015). Participants were at least 18 years old, United States residents, non-married, non-pregnant and members of the MTurk.com website (see Table 1). MTurk is a platform in which employers ("requesters") post-small human intelligence tasks ("HITs") and employees ("workers") perform those tasks for compensation (Paolacci et al., 2010). Participants were paid $0.75 for completing the experiment. All procedures were approved by the University Institution Review Board. Our previous research (Campisi et al., 2012, 2015) as well as power calculations indicate that this sample size is sufficient to demonstrate differences between

groups. Sample sizes were calculated based on a 90% power at an alpha level of 0.05 to detect meaningful differences. This power value is equivalent to a probability of <10% of committing a type-II error. Studies suggest that MTurk samples are more diverse than college student samples (Paolacci et al., 2010) and the quality of data provided by MTurk samples and samples drawn from college and adult populations has been reported to be equivalent (Buhrmester et al., 2011; Sprouse, 2011).

Procedures

All participants completed an informed consent, reported basic demographic information (Table 1) and then completed four online questionnaires. First, all participants completed the Rosenberg Self-Esteem Scale, a 10-item self-report assessment that measures global self-esteem (Rosenberg, 1965). The questionnaire uses a four-point Likert scale ranging from 0 (strongly disagree) to 3 (strongly agree) and is scored on a metric ranging from 0 (poor) to 30 (excellent). The scale is scored by adding the items after reverse-scoring the negatively worded items. The following classification of values was utilised as a standard: Low self-esteem (10–16 points); Average self-esteem (17–33 points), High self-esteem (34–40 points) (Šagát et al., 2021).

Participants then completed the Patient Health Questionnaire-9 (PHQ-9), a 9-item self-report measure of symptoms attributed to depression (Kroenke et al., 2001). The PHQ-9 was administered to assess depressive symptoms over the last 2 weeks (Kroenke et al., 2001). Respondents indicated, on a 0–3 scale, the frequency with which they experienced the following symptoms: (a) anhedonia, (b) depressed mood, (c) sleep disturbance, (d) fatigue, (e) appetite changes, (f) low self-esteem, (g) concentration problems, (h) psychomotor disturbances, and (i) suicidal ideation. Total scores range from 0 to 27, with scores ≥10 representing clinically significant depressive symptoms (Kroenke et al., 2001). Furthermore, the PHQ-9 is validated as a depressive symptom severity measure (total score 1–4: minimal depression, 5–9: mild depression, 10–14: moderate depression, 15–19: moderately severe depression, and 20–27: severe depression; Kroenke et al., 2001).

Participants also completed the Generalized Anxiety Disorder-7 (GAD-7) Assessment which is a 7-item self-report assessment measuring symptoms related to worry and anxiety (Spitzer et al., 2006). The GAD-7 evaluates the frequency of anxiety symptoms, such as worrying, over the past 2 weeks. Items responses are a 4-point Likert scale (0 = not at all to 3 = nearly every day); item responses are summed to determine the total scale score. The total score can range from 0 to 21; scores ≥10 is considered a reasonable cut-point in screening for GAD per DSM-5 criteria (Byrd-Bredbenner et al., 2021).

Lastly, all participants completed the World Health Organization Quality of Life Scale Abbreviated Version (WHOQOL-Bref) (Skevington et al., 2004). The WHOQOL-Bref is a widely used self-report questionnaire developed by the World Health Organization. Two general questions include subjective evaluations of overall quality of life ("How would you rate your overall quality of life?") and overall satisfaction with health ("How satisfied are you with your health?"). The additional questions assess four QOL domains, including physical health (6 items), psychological health (6 items), social relationships (3 items), and environment (8 items). Each question is rated on a 1–5 Likert-type response scale, with higher scores indicating better QOL. Domain scores were calculated by taking the average raw scores and multiplying by four (Campisi et al., 2015; Skevington et al., 2004). Thus, domain scores ranged from 4–20, with higher scores indicating better QOL.

Data analysis

Participants were placed into age groups (18-24, 25-44, 45-54, 55+) for analysis purposes that reflect meaningful development, social, and technological life stages that may influence attitudes, behaviours, and experiences (Campisi et al., 2015). To examine sex and age-related differences in self-perceptions initial analysis utilised analysis of variance (ANOVA) to determine if main effects were present on the measured subscales. We also used ANOVAs to examine the relationship between participants using dating apps, ageing, sex and the measured subscales. Alpha was set at 0.05. When statistical significance was determined with ANOVA, Fisher's PLSD post-hoc analysis was conducted to examine which groups differed. Figures are shown as mean ± standard error bars.

RESULTS

Demographics and dating app use

Table 1 summarises the demographic and social network dating app use patterns of the participants who completed the study. Of the 288 participants who completed the survey (averaging 21.2 minutes to complete), the majority were male (59%) and reported currently using a social media dating application (58% of all participants). While a slightly higher percentage of the male participants (64%) reported ever using dating apps compared to females (47%) both groups of users that were using the dating apps had similar motivations for using them (Table 1). There were no differences in the percentage of users using or motivations for using a dating app by age brackets.

Table 1

Demographic characteristics of participants

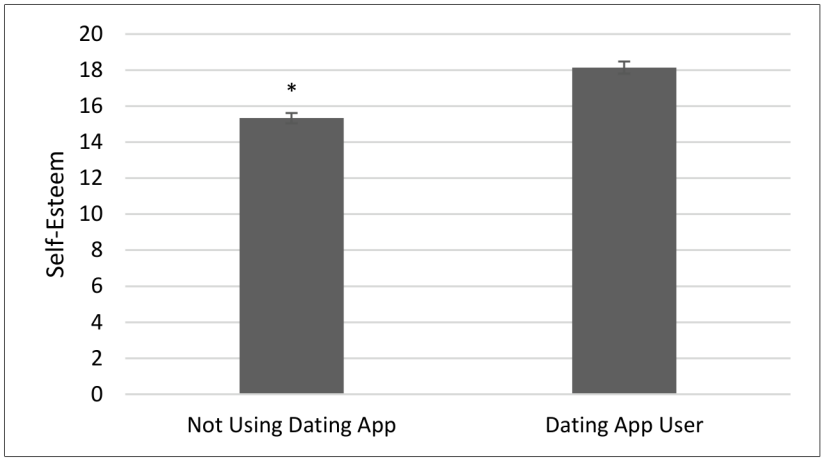
	Characteristic	Number (%)
Sex		
	Male	170 (59)
	Female	118 (41)
Age		
	18–24 years	20 (7%)
	25–44 years	197 (68%)
	45–54 years	47 (16%)
	55+ years	24 (8%)
Dating app use		
	Current dating app user	167 (58%)
	Not using dating app	121 (42%)
	Males using dating app	111 (64% of males)
	Females using dating app	56 (47% of females)

Self-esteem

Self-esteem varied significantly across age groups, with the 45–54 age group reporting the lowest levels compared to all other brackets (F [3,284] = 5.07, p = 0.0019). As shown in Figure 1, self-esteem was significantly higher in those who reported using a dating app compared to non-users (F [1,286] = 36.57, p < 0.0001), and this pattern held across most age brackets, with app users reporting higher self-esteem in all groups except the 18–24 age bracket (p < 0.05). Self-esteem also differed significantly between females and males (16.32 vs 17.42; p = 0.02), and the positive association between dating app use and self-esteem was observed in both sexes, particularly among males aged 45–54 and females aged 25–44 and 45–54 (all p < 0.05).

Figure 1

Self-esteem scores in dating app users and non-users. Figures are shown as mean ± standard error bars (= p < 0.05).*



Participants completed the Rosenberg Self-Esteem Scale. ANOVA revealed that self-esteem was significantly different across age groups and was significantly higher in those who reported using a

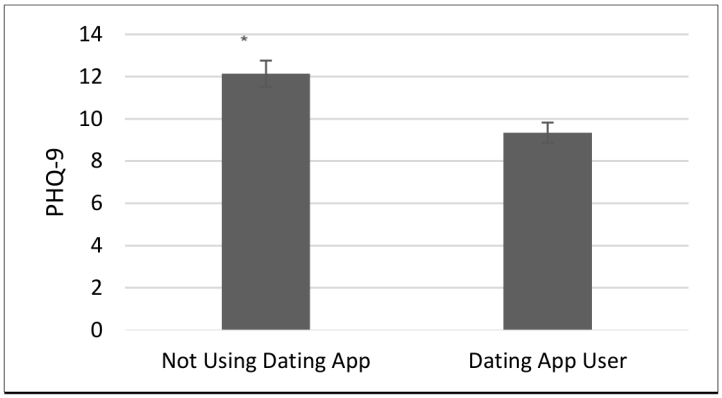
dating app compared to those who do not use dating apps. This observation was consistent across multiple age brackets and for both sexes.

Signs and symptoms of depression

Depression symptomology was significantly different across age groups, with the 45–54 age group reporting the highest levels compared to all other brackets (F [3,284] = 4.26, p = 0.005). As shown in Figure 2, Depression symptoms were significantly higher in non-users of dating apps compared to users F (1,286) = 12.98, p = 0.0004), with app users reporting lower depression symptoms particularly in the 25–44 and 45–54 age brackets (p < 0.05). This pattern was broadly consistent across both sexes, with males aged 25–44 and females aged 25–44 and 45–54 who used dating apps reporting fewer signs of depression compared to non-users (all p < 0.05).

Figure 2

Depression symptoms in dating app users and non-users.



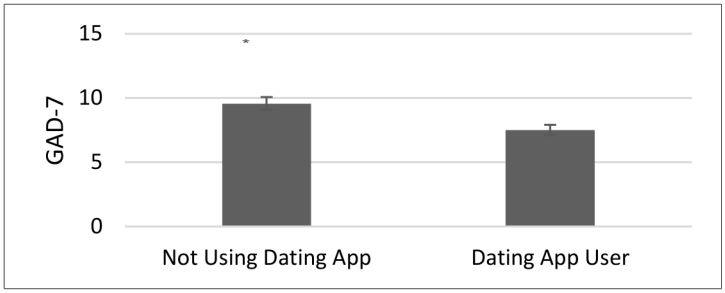
Participants completed the PHQ-9 to investigate common signs and symptoms of depression. ANOVA revealed that depression symptomology was significantly different across age groups and was significantly higher in those who reported not using a dating app compared to those who did use dating apps. This pattern was consistent across age multiple age brackets and for both sexes.

Signs and symptoms of anxiety

The frequency of anxiety symptoms was significantly different across age groups, with the 45–54 age group reporting the highest levels compared to the 25–44 (p = 0.01) and 55+ (p = 0.002) age brackets (F [3,284] = 3.75, p = 0.01). As shown in Figure 3, anxiety symptoms were significantly higher in non-users of dating apps compared to users (F [1,286] = 10.349, p = 0.001), with app users reporting less frequent anxiety symptoms particularly in the 25–44 and 45–54 age brackets (p < 0.05). This pattern was specific to females, with women aged 25–44 and 45–54 who used dating apps reporting less frequent anxiety symptoms compared to non-users (p < 0.05 for both), while no significant difference was observed in males.

Figure 3

Anxiety symptoms in dating app users and non-users



Participants completed the GAD-7 to investigate the frequency of symptoms of worry and anxiety. ANOVA revealed that frequency of anxiety symptoms was significantly different across age groups and that frequency of anxiety symptoms was significantly higher in those who reported not

using a dating app compared to those who did use dating apps. There was a trend for this observation across age brackets ($p = 0.1$). Females (25-44, 45-54), but not males, demonstrated similar responses demonstrating that users of dating apps reported less frequent anxiety symptoms.

Quality of life

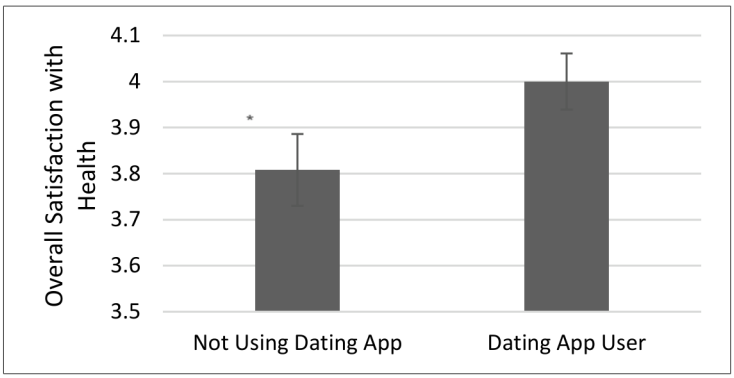
Completion of the WHOQOL-Bref allowed us to examine subjective evaluations of overall quality of life, overall satisfaction with health, as well as four QOL domains (physical health, psychological health, social relationships, and environment). While no differences were observed in overall QOL scores (data not shown), analysis of subscales found similar patterns as described above.

Overall satisfaction with life and health

Overall satisfaction with life and health was significantly different across age groups, with the 45–54 age group reporting the lowest levels compared to the 25–44 (p = 0.0054) and 55+ (p = 0.0053) age brackets (F [3,284] = 3.459, $p = 0.01$). As shown in Figure 4, overall satisfaction with life and health was significantly higher in dating app users compared to non-users (F [1,286] = 3.859, $p = 0.05$), with the 45–54 age group showing the most pronounced difference (4.00 vs 3.45; $p = 0.04$). This age-dependent finding was observed in both sexes, with males aged 45–54 and females aged 25–44 who used dating apps reporting higher satisfaction compared to non-users ($p < 0.05$ for both).

Figure 4

Overall satisfaction with life and health in dating app users and non-users



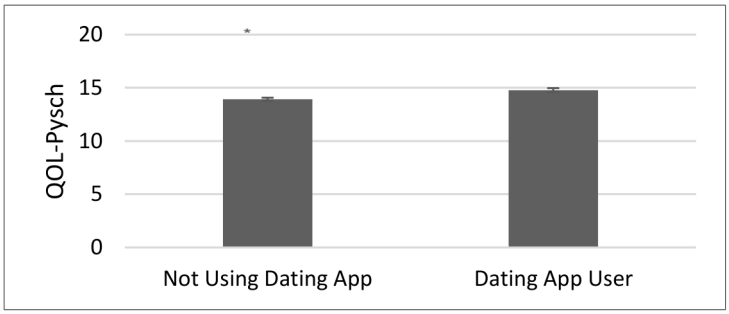
A section of the WHOQOL-Bref examined how participants rated their overall satisfaction with health. ANOVA revealed that participants rated their overall satisfaction with life and health differently across age groups ($p = 0.01$). Analysis also indicated that overall satisfaction with life and health was significantly higher in those who reported using a dating app compared to those who did not use dating apps ($p = 0.05$). Participants in the 45–54 age group who reported using dating apps had higher satisfaction with their life and health compared with age-matched participants who did not use dating apps ($p = 0.04$) and this age-dependent finding was observed in both males (45-54; $p < 0.05$) and females (25–44; $p < 0.05$).

Physical and psychological health

No differences were observed in self-reported physical health across age groups (p = 0.9), and overall psychological health scores did not differ significantly by age group ($p = 0.5$). As shown in Figure 5, dating app users reported higher levels of psychological health compared to non-users (F [1,286] = 10.828, $p = 0.001$), with this pattern consistent across age brackets (F [1,280] = 5.571, $p = 0.01$) and most pronounced in the 25–44 and 45–54 age groups ($p < 0.05$). No significant differences in psychological health were observed between sexes overall; however, females aged 25–44 who used dating apps reported notably higher levels of psychological health compared to age-matched non-users ($p < 0.001$).

Figure 5

Psychological health scores in dating app users and non-users



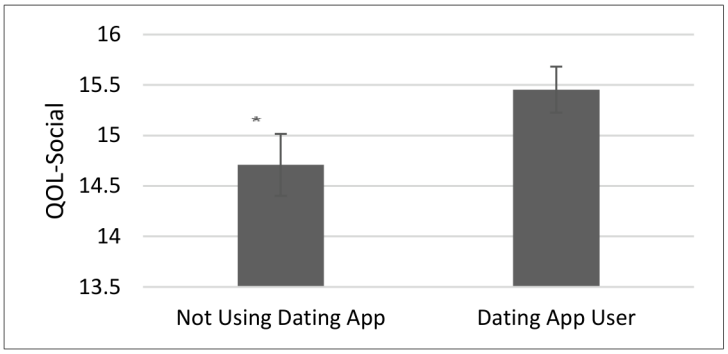
A section of the WHOQOL-Bref examined how participants rated their psychological QOL. ANOVA revealed that participants rated their overall psychological health the same across age groups (p = 0.5); however, those who reported using a dating app reported higher levels of psychological health compared to those who did not use dating apps (p = 0.001; p = 0.01). Post-hoc analyses indicated that the users of dating apps had lower depression symptoms in both the 25–44 and 45–54 age brackets both (p < 0.05). Significant differences were not observed between sexes overall, although females aged 25–44 who used dating apps reported higher levels of psychological heath (p < 0.001) compared to age-matched females that did not use dating apps. Figure is shown as mean ± standard error bars * = p < 0.05)

Social relationships and environmental

Overall social relationship scores did not differ significantly across age groups (p = 0.7). As shown in Figure 6, dating app users reported higher levels of social relationships compared to non-users (F (1,286) = 3.95, p = 0.04), with this pattern most evident in the 18–24 age bracket (p = 0.03) and a trend observed in the 25–44 age bracket (p = 0.01). No significant differences in social relationship scores were observed between sexes overall; however, males aged 18–24 who used dating apps reported higher social relationship levels compared to age-matched non-users (p = 0.05). No differences were observed in self-reported environmental scores across age groups or by dating app use.

Figure 6

Social relationship scores in dating app users and non-users



A section of the WHOQOL-Bref examined how participants rated their QOL in the context of social relationships. ANOVA revealed that participants rated their overall social relationships the same across age groups (p = 0.7). Those who reported using a dating app reported higher levels of social relationships compared to those who did not use dating apps (p = 0.04) and this observation tended to be consistent across age brackets (p = 0.1). Significant differences were not observed between sexes overall although men aged 18–24 who used dating apps reported higher social relationship levels (p = 0.05) compared to age-matched men who did not use dating apps.

While the overall pattern of results was consistent across sexes, some sex differences emerged. Male participants generally reported higher self-esteem scores than females, and this difference persisted across most age groups. However, both male and female users of dating apps showed higher self-esteem and lower depressive symptomology

compared to non-users, particularly in midlife (ages 45–54). Notably, midlife females who used dating apps also reported lower anxiety and greater psychological well-being compared to age-matched non-users, suggesting potential sex-specific benefits of dating app engagement during this life stage. Taken together, the results suggest a consistent pattern in which midlife (45–54) participants, especially those using dating apps, report the lowest levels of depressive and anxiety symptoms and the highest levels of self-esteem, psychological health, and life satisfaction. Although younger users (18–24) showed fewer psychological differences by dating app use, the midlife group appeared to benefit most across multiple well-being measures. These findings highlight midlife as a key period where social connection through dating apps may be linked to enhanced self-perception and emotional health.

DISCUSSION

The proliferation of social media and dating apps has resulted in new ways for humans to interact and can seemingly both improve and worsen mental health, depending on context. On the one hand, dating apps provide a fast and easy way to meet a potential romantic partner and evidence suggests that relationships started online can be healthy and benefit dating app users psychologically (Bonilla-Zorita et al., 2023; Cacioppo et al., 2013; Campisi et al., 2015; Sumter et al., 2017; Watson et al., 2019). However, dating apps also have the potential of putting people at risk for experiencing sexual harassment, assault, and psychological distress (Ciocca et al., 2020; Echevarria et al., 2023; Gewirtz-Meydan et al., 2024; Huang et al., 2023; Lauckner et al., 2019). To date, most of the research examining the effects of dating apps on psychological health has been conducted on younger users and has not accounted for differences between males and females.

The results from the current study suggest that in our cross-section of adults aged 18–65 (Table 1), self-esteem varied significantly by age, with the 45–54 age group reporting the lowest levels (Figure 1). These results are consistent with the idea of a U-shape in psychological well-being, wherein life satisfaction declines through midlife before recovering in later adulthood (Blanchflower & Oswald, 20082008; Lachman, 2004). The dip observed in the 45–54 group may reflect the convergence of multiple stressors typical of this life stage, including shifting occupational roles, changing family structures, and the onset of age-related health concerns. Interestingly, dating app users reported significantly higher self-esteem than non-users overall and within every age group except the 18–24 group. One possible explanation is that for younger adults, whose social networks and romantic opportunities are already relatively abundant, dating app use confers less additional psychological benefit. In contrast, for adults in the 25–54 range, the structured social affordances of dating apps may provide a meaningful source of positive self-regard and interpersonal validation. This positive association was observed in both males and females and was most pronounced in the 25–54 age range, suggesting a beneficial link between dating app use and self-esteem during mid-adulthood.

Depression symptoms peaked in the 45–54 age group, mirroring the pattern observed with self-esteem (Figure 2). Similarly, dating app users reported significantly fewer symptoms of depression overall, with strong effects in the 25–44 and 45–54 age groups. Both males and females in these brackets experienced this benefit, suggesting a mental health buffer provided by app engagement during midlife. This is consistent with broader evidence that social connectedness is a protective factor against depressive symptoms (Cacioppo et al., 2013), and it raises the possibility that dating apps may function not merely as romantic search tools but as platforms that sustain a sense of social engagement and perceived desirability, both of which are relevant to mood regulation in midlife.

A similar pattern was observed when examining symptoms of anxiety (Figure 3). Consistent with previous literature (Blanchflower & Oswald, 2008; Lachman, 2004), anxiety symptoms varied across age groups. In our study, anxiety levels were highest in the 45–54 group, perhaps reflective of the psychosocial pressures associated with midlife, and lower in dating app users overall. The sex-specific nature of this finding is noteworthy. The effect was strongest in females aged 25–54, while males did not show a significant difference, consistent with previous reports indicating differences in psychological well-being across sexes (Corcoran et al., 2021; Salk et al., 2017). Women in this age range are disproportionately exposed to internalising stressors such as caregiving responsibilities, perimenopause, and shifts in social identity, and it is plausible that the social engagement facilitated by dating apps

provides a counterweight to these pressures. The absence of a similar effect in males may reflect sex differences in how social connection is sought and experienced, with men potentially relying on different coping strategies or deriving well-being benefits through mechanisms not fully captured in the current study.

Life satisfaction scores were lowest in the 45–54 age group but dating app use was associated with higher satisfaction overall (Figure 4). This benefit was particularly evident in midlife adults aged 45–54 for both males and females, reinforcing the potential value of dating apps in counteracting midlife dissatisfaction. It is possible that the challenges facing this age group, such as increased feelings of isolation and loneliness, are partially addressed through these online social communities. Research consistently links loneliness to poorer health outcomes across multiple domains (Cacioppo et al., 2013), and to the extent that dating apps reduce perceived isolation, they may contribute to meaningful improvements in subjective well-being.

While no age group differences were found in overall psychological health (Figure 5), dating app users reported better psychological health overall, especially in the 25–54 age range. The effect was especially pronounced in women aged 25–44, a finding that warrants further investigation. Women in this group may experience particular benefit from the agency and social visibility that dating apps afford, especially during a life stage that can involve significant renegotiation of personal identity and social roles. Overall social relationship scores did not differ by age or sex, but dating app users reported higher levels of social connection, especially in younger males (Figure 6). A trend towards stronger social ties was also seen in 25–44-year-olds, suggesting dating app use may enhance social engagement in early and mid-adulthood. The finding that environmental satisfaction did not vary by age or dating app use suggests that the psychological benefits of app use are specific to interpersonal and emotional domains rather than broader contextual factors.

Taken as a whole, these findings challenge conventional assumptions that digital dating is primarily beneficial to younger users and instead suggest that midlife adults may derive unique psychological benefits from engaging with digital platforms. The pattern of results points to a consistent theme: the psychological well-being advantages associated with dating app use are most evident precisely in the age groups where psychological vulnerability is greatest. This inverse relationship between baseline well-being and the magnitude of benefit associated with app use is theoretically meaningful and deserves systematic examination in future research. Because the association between dating app use and positive psychological outcomes was strongest in women aged 25–44, this group merits closer attention. Given that women in this age range often face unique social and biological pressures (Kiesow et al., 2021; Lachman, 2004), future studies should examine the specific features of dating app use, such as frequency, type of interaction, and motivational orientation, that may be driving the psychological benefits observed here. Whether these benefits are mediated by increased social contact, enhanced feelings of attractiveness, or a broader sense of agency in romantic life remains an open and important question.

CONCLUSION

Several limitations must be considered when interpreting these findings, which also suggest clear directions for future inquiry. The cross-sectional and correlational design restricts data collection to a single point in time, precluding any causal inferences. It is entirely plausible that individuals possessing higher self-esteem or superior psychological health are simply more predisposed to engage with digital dating platforms. Future longitudinal or experimental research is essential to determine whether app use actively promotes these psychological benefits. Furthermore, the reliance on self-report measures may introduce biases compared with objective assessments of well-being (Bonilla-Zorita et al., 2023). The conceptualisation of dating app use as a binary variable (user versus non-user) also represents a constraint; it does not capture variations in usage frequency, specific platform types, or distinct user motivations, all of which heavily influence psychological outcomes (Campisi et al., 2015). Finally, several unmeasured confounding variables, including physical health, socioeconomic status, relationship status, and baseline stress levels, were not controlled for in the analysis (Fleshner et al., 2003; Johnshoy et al., 2020).

Despite these limitations, this study provides valuable evidence that the psychological implications of digital dating are not uniform

across the adult lifespan. The findings challenge conventional, youth-centric paradigms by highlighting middle adulthood as a distinct developmental period where digital social engagement intersects positively with well-being. This demonstrates that the impact of digital dating is highly context-dependent and variable across different demographics (Barrada & Castro 2020). While existing literature frequently emphasises online vulnerabilities such as body dissatisfaction or superficial interactions (Ciocca et al., 2020; Echevarria et al., 2023; Gewirtz-Meydan et al., 2024; Huang et al., 2023; Lauckner et al., 2019), the present data indicate that for midlife adults, particularly women aged 25–44, these platforms can serve as mechanisms supporting emotional and social well-being. Ultimately, as the demographics of digital communication platforms continue to diversify, these insights underscore the necessity for age-informed and sex-sensitive frameworks within behavioural research and clinical practice. Future studies should move beyond binary classifications of technology usage to explore the precise behavioural and emotional mechanisms through which digital interaction influences psychological health throughout the life course.

Acknowledgements: We would like to thank the participants.

Conflict of interests: None declared

Ethical approval: Regis University

Funding: None declared

REFERENCES

Albury, K., Byron, P., McCosker, A., Pym, T., Walshe, J., & Race, K. (2019). *Safety, risk and wellbeing on dating apps: Final report*. Swinburne University of Technology. https://doi.org/10.25916/5dd324c1b33bb

Barrada, J. R., & Castro, Á. (2020). Tinder users: Sociodemographic, psychological, and psychosexual characteristics. *International Journal of Environmental Research and Public Health, 17*(21), Article 8047. https://doi.org/10.3390/ijerph17218047

Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine, 66*(8), 1733–1749. https://doi.org/10.1016/j.socscimed.2008.01.030

Bonilla-Zorita, G., Griffiths, M. D., & Kuss, D. J. (2023). Dating app use and wellbeing: An application-based pilot study employing ecological momentary assessment and objective measures of use. *International Journal of Environmental Research and Public Health, 20*(9), Article 5631. https://doi.org/10.3390/ijerph20095631

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*(1), 3–5. https://doi.org/10.1177/1745691610393980

Byrd-Bredbenner, C., Eck, K., & Quick, V. (2021). GAD-7, GAD-2, and GAD-mini: Psychometric properties and norms of university students in the United States. *General Hospital Psychiatry, 69*, 61–66. https://doi.org/10.1016/j.genhosppsych.2021.01.002

Cacioppo, J. T., Cacioppo, S., Gonzaga, G. C., Ogburn, E. L., & VanderWeele, T. J. (2013). Marital satisfaction and break-ups differ across online and offline meeting venues. *Proceedings of the National Academy of Sciences, 110*(25), 10135–10140. https://doi.org/10.1073/pnas.1222447110

Campisi, J., Bynog, P., & McGehee, H., et al. (2012). Facebook, stress, and incidence of upper respiratory infection in undergraduate college students. *Cyberpsychology, Behavior, and Social Networking, 15*(12), 675–681. https://doi.org/10.1089/cyber.2012.0156

Campisi, J., Folan, D., Diehl, G., Kable, T., & Rademeyer, C. (2015). Social media users have different experiences, motivations, and quality of life. *Psychiatry Research, 228*(3), 774–780. https://doi.org/10.1016/j.psychres.2015.04.042

Ciocca, G., Robilotta, A., Fontanesi, L., Sansone, A., D'Antuono, L., Limoncin, E., Nimbi, F., Simonelli, C., Di Lorenzo, G., Siracusano, A., & Jannini, E. A. (2020). Sexological aspects related to Tinder use: A comprehensive review of the literature. *Sexual Medicine Reviews, 8*(3), 367–378. https://doi.org/10.1016/j.sxmr.2019.12.004

Corcoran, J., Marinescu, I., Vogelsang, C., Kim, J. C., & Morgan, S. (2021). Prevalence of depression in women with low income living in developed countries. *Depression and Anxiety, 38*(10), 1046–1053. https://doi.org/10.1002/da.23208

Dhoest, A. (2022). Dating in motion: Online dating through the lives of different generations of men who have sex with men. *Sexuality & Culture, 26*(6), 1981–1999. https://doi.org/10.1007/s12119-022-09979-1

Echevarria, S. G., Peterson, R., & Woerner, J. (2023). College students' experiences of dating app facilitated sexual violence and associations with mental health symptoms and well-being. *The Journal of Sex Research, 60*(8), 1193–1205. https://doi.org/10.1080/00224499.2022.2130858

Fleshner, M., Campisi, J., & Johnson, J. D. (2003). Can exercise stress facilitate innate immunity? A functional role for stress-induced extracellular Hsp72. *Exercise Immunology Review, 9*, 6–24.

Gewirtz-Meydan, A., Volman-Pampanel, D., Opuda, E., & Tarshish, N. (2024). Dating apps: A new emerging platform for sexual harassment? A scoping review. *Trauma, Violence, & Abuse, 25*(1), 752–763. https://doi.org/10.1177/15248380231162969

Herrera, R. J., & Garcia-Bertrand, R. (2018). *Ancestral DNA, human origins, and migrations*. Elsevier.

Huang, T. F., Hou, C. Y., Chang, F. C., Chiu, C. H., Chen, P. H., Chiang, J. T., Miao, N. F., Chuang, H. Y., Chang, Y. J., Chang, H., & Chen, H. C. (2023). Adolescent use of dating applications and the associations with online victimisation and psychological distress. *Behavioral Sciences, 13*(11), Article 903. https://doi.org/10.3390/bs13110903

Johnshoy, Q., Moroze, E., Kaser, I., Tanabe, A., Adkisson, C., Hutzley, S., Cole, C., Garces, S., Stewart, K., & Campisi, J. (2020). Social media use following exposure to an acute stressor facilitates recovery from the stress response. *Physiology & Behavior, 223*, Article 113012. https://doi.org/10.1016/j.physbeh.2020.113012

Kiesow, H., Uddin, L. Q., Bernhardt, B. C., Kable, J., & Bzdok, D. (2021). Dissecting the midlife crisis: Disentangling social, personality and demographic determinants in social brain anatomy. *Communications Biology, 4*(1), Article 728. https://doi.org/10.1038/s42003-021-02206-x

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Lachman, M. E. (2004). Development in midlife. *Annual Review of Psychology, 55*, 305–331. https://doi.org/10.1146/annurev.psych.55.090902.141521

Lauckner, C., Truszczynski, N., Lambert, D., Kottamasu, V., Meherally, S., Schipani-McLaughlin, A., & Hansen, N. (2019). "Catfishing", cyberbullying, and coercion: An exploration of the risks associated with dating app use among rural sexual minority males. *Journal of Gay & Lesbian Mental Health, 23*(3), 289–306. https://doi.org/10.1080/19359705.2019.1587729

Marston, H. R., Niles-Yokum, K., Earle, S., Gomez, B., & Lee, D. M. (2020). OK Cupid, stop bumbling around and match me Tinder: Using dating apps across the life course. *Gerontology and Geriatric Medicine, 6*,

2333721420947498. https://doi.org/10.1177/2333721420947498

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making, 5*(5), 411–419. https://doi.org/10.1017/S1930297500002205

Relojo-Howell, D. & Stoyanova, S. (2019). Expressive writing as an anxiety-reduction intervention on test anxiety and the mediating role of first language and self-criticism in a Bulgarian sample. *Journal of Educational Sciences & Psychology, 1*(4), 1–6. https://doi.org/ghhp

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.

Rosenfeld, M. J., Thomas, R. J., & Hausen, S. (2019). Disintermediating your friends: How online dating in the United States displaces other ways of meeting. *Proceedings of the National Academy of Sciences, 116*(36), 17753–17758. https://doi.org/10.1073/pnas.1908630116

Šagát, P., Bartik, P., Lazić, A., Tohănean, D. I., Koronas, V., Turcu, I., Knjaz, D., Alexe, C. I., & Curițianu, I. M. (2021). Self-esteem, individual versus team sports. *International Journal of Environmental Research and Public Health, 18*(24), Article 12915. https://doi.org/10.3390/ijerph182412915

Salk, R. H., Hyde, J. S., & Abramson, L. Y. (2017). Gender differences in depression in representative national samples: Meta-analyses of diagnoses and symptoms. *Psychological Bulletin, 143*(8), 783–822. https://doi.org/10.1037/bul0000102

Sapolsky, R. M. (2021). Glucocorticoids, the evolution of the stress-response, and the primate predicament. *Neurobiology of Stress, 14*, Article 100320. https://doi.org/10.1016/j.ynstr.2021.100320

Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. *Quality of Life Research, 13*(2), 299–310. https://doi.org/10.1023/B:QURE.0000018486.91360.00

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalised anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Sprouse, J. (2011). A validation of Amazon Mechanical Turk for the collection of acceptability judgments in linguistic theory. *Behavior Research Methods, 43*(1), 155–167. https://doi.org/10.3758/s13428-010-0039-7

Sumter, S. R., Vandenbosch, L., & Ligtenberg, L. (2017). Love me Tinder: Untangling emerging adults' motivations for using the dating application Tinder. *Telematics and Informatics, 34*(1), 67–78. https://doi.org/10.1016/j.tele.2016.04.009

Watson, R. J., Shahin, Y. M., & Arbeit, M. R. (2019). Hookup initiation and emotional outcomes differ across LGB young men and women. *Sexualities, 22*(5–6), 932–950. https://doi.org/10.1177/1363460718774528