Pure & Applied Psychology Research Insights, e-ISSN: 3107-7625
January-June 2025 | Volume: 01, Issue: 01, Page No.: 11-24
https://doi.org/10.64006/papri/1102

ORIGINAL ARTICLE|*Received:17th March. 2025 | Revised: 02nd April. 2025 | Accepted: 21st April. 2025 | Published: 06th June. 2025*

Integrating Social Presence Theory and Need to Belong Theory to understand Dating Site Usage among Indian Youth

Sharon[1], Teena Bagga [2]

ABSTRACT

This study investigates the psychological and social variables influencing dating site usage, emphasizing the roles of Need to Belong, Social Presence, and Self-Esteem, with age as a moderating factor. A structural equation model (SEM) combined with conditional process modeling revealed that while Social Presence and Self-Esteem significantly impacted user engagement, Need to Belong showed no direct association with dating app usage. Social Presence positively correlated with usage, supporting theories of immediacy and emotional connectedness in digital spaces. In contrast, lower Self-Esteem was associated with higher platform participation, suggesting compensatory behaviours linked to self-presentation and reduced fear of rejection. Moderation analysis highlighted age-based differences, confirming that older users respond differently to social and emotional cues. Theoretical implications challenge the traditional application of belongingness theory and extend social comparison and social presence frameworks into online intimacy. Behaviourally, findings revealed high levels of cross-platform adoption, limited use of premium features, and persistent concerns about trust and profile authenticity. These results offer actionable insights for dating app design, emphasizing inclusive features and emotional security. The study contributes to the evolving discourse on digital relationships, especially within collectivist cultures.

Keywords: dating site usage, social presence, self-esteem, need to belong, online intimacy, psychological factors, user behaviour, collectivist culture, trust, social comparison theory, belongingness theory

INTRODUCTION

The well-being of an individual is closely linked to the quality of their relationships and the extent of their engagement in social interactions. This connection has contributed to the emergence of online dating apps, which offer new avenues for connecting with others and finding romantic partner ultimately impacting users' health and well-being (Castro & Barrada, 2020). The popularity of dating platforms has grown significantly in recent years, becoming an increasingly accepted method for pursuing romantic relationships and a normalized facet of social belonging. As of 2025, online dating has become the most common way couples meet, with over 50% of engaged couples reporting they met through dating apps, up from 39% in 2017. This reflects a dramatic shift in romantic behaviour, driven by the convenience, reach, and algorithmic matching offered by platforms like Tinder, Bumble, and Hinge. In India, 30% of engaged couples now meet online, according to a 2024 survey by WedMeGood, a leading wedding planning platform. This includes connections made through dating apps, matrimonial websites, and social media platforms. While 60% still meet through traditional offline methods like family introductions, workplace interactions, and social gatherings the digital shift is unmistakable. Interestingly, Millennials tend to prefer dating apps for their structure and control, while Gen Z leans toward social media-based connections, such as direct messages and lifestyle-driven interactions. This generational divide reflects evolving preferences in how romantic relationships are initiated and sustained.

[1] ✉ Department of Psychology, Galgotia University, Uttar Pradesh, India, sharantitus@yahoo.com
[2] Professor, Department of Management Studies, Jamia Millia Islamia, Delhi, India, tbagga@jmi.ac.in

How to cite: Sharon, & Bagga, T. (2025). Integrating social presence theory and need to belong theory to understand dating site usage among Indian youth. *Pure & Applied Psychology Research Insights*, *1*(1), 11–24. https://doi.org/10.64006/papri/1102

These platforms help foster virtual communities that offer social support to individuals who struggle to form connections in their daily routines. Online dating apps are particularly beneficial for users constrained by specific preferences such as religious beliefs, cultural background or for those who are introverted or shy. These platforms contribute to higher self-esteem and an enhanced sense of well-being. Globally, over 239.9 million individuals between the ages of 24 and 35 use dating apps daily, and projections estimate this figure will rise to 279.8 million by 2024 (Rosenfeld, Thomas, & Hausen, 2019; Smith, 2016).

Tinder, launched in 2013 by Hatch Labs a startup incubator revolutionized the dating app industry through its intuitive swipe-based interface. Although Hatch Labs also owns Match.com, Plenty of Fish, and OkCupid, Tinder continues to be the dominant platform. In 2022, the global dating app market generated $4.94 billion in revenue, with Tinder boasting over 300 million active users and more than 20 million premium subscribers. Tinder remains the most downloaded dating app, followed by Bumble. Tinder holds approximately 29.17% of market share, Bumble accounts for about 26.04%, and Hinge captures 18.75%, with the remaining market divided among OkCupid, Grindr, Match, and others.

In India, the rise of Tinder and other mobile dating applications (MDAs) reflects a growing demand for accessible and convenient ways to form social connections. Despite the influence of traditional cultural norms, digital innovation has surged—making India the second-largest internet user base globally. A considerable portion of this activity comes from MDAs, often referred to as "proximity dating applications," which utilize location-based technologies to facilitate interactions for friendship, casual sex, or long-term relationships.

Tinder leads the Indian market, with 7.5 million swipes daily and a high average message exchange per match. Cities like Delhi, Mumbai, Gurugram, and Bengaluru rank among the top ten markets with the highest number of "super-liked" profiles (Tinder, 2024). The gamified interface of Tinder—where swiping right signifies interest—contributes to its appeal. While the basic version is free, premium subscriptions like Tinder Gold increase matching opportunities significantly.

THEORETICAL BACKGROUND

Social Presence Theory

Social Presence Theory helps explain how individuals cultivate meaningful interpersonal relationships in environments lacking physical co-presence. In digitally mediated interactions such as dating platforms users form impressions and emotional connections without traditional nonverbal cues, making the sense of “presence” more complex and subjective.

Originally introduced by Short, Williams, and Christie (1976), social presence is defined as *“the level of importance or prominence that a person has in a social interaction, and the resulting significance of the relationship between the individuals involved.”* Their model, while foundational, faced limitations in accounting for how technology design influences mediated social experiences.

Two central dimensions inform social presence:

- Intimacy, shaped by proximity, eye contact, and emotional expression (Argyle & Dean, 1965).
- Immediacy, reflecting psychological closeness between the communicator and the subject (Short et al., 1976).

Lowenthal (2010) expanded the theory by framing social presence on a continuum—emphasizing emotional connection in real-time, even without physical proximity. This view aligns with Media Richness Theory, which posits that the richness of a communication medium—its ability to deliver feedback, personalization, and varied language influences the depth of interaction (Daft, 1984; Lowenthal, 2010). In the context of dating apps, social presence enhances perceived intimacy, trust, and authenticity key factors influencing user decisions and satisfaction.

Need to Belong Theory

The Need to Belong Theory identifies interpersonal attachment as a fundamental human motivation linked to emotional health and behavioural stability. Belongingness is multidimensional, encompassing various predictors and outcomes that collectively shape personal well-being.

Positioned belongingness at the midpoint of his hierarchy of needs, highlighting it as essential for achieving self-actualization. Without first fulfilling safety and social needs, individuals cannot attain their full potential. Importantly, belongingness is not purely relational—it also interacts with loneliness, which Rokach (2004) described as a subjective, unpleasant emotional state resulting from a mismatch between desired and actual social connections.

Especially, Large social networks do not guarantee emotional satisfaction, while small but intimate networks may meet belonging needs. Objective conditions, such as living alone or prolonged solitude, are strong predictors of loneliness even when subjective feelings vary.

Western studies show that approximately one in four individuals report chronic loneliness (Lim et al., 2023), with significant impacts on mental health, cognition, and behaviour. Social exclusion disrupts emotional regulation and intensifies cognitive focus on relationships. Even non-social stimuli can undermine the internal sense of belonging. Ultimately, the Need to Belong Theory affirms that humans are innately social beings who seek meaningful, sustained connections beyond superficial interactions.

Self-Esteem Theory

Self-esteem reflects an individual's evaluation of their own worth. It comprises: Global self-esteem, referring to overall self-appraisal and domain-specific self-esteem, involving perceived value in specific contexts (e.g., social, academic).

Self-esteem is shaped not by objective achievements, but by perceived evaluations from others especially within interpersonal interactions. It is central to the self-verification process, wherein individuals seek affirmation of their identity and social roles. Three conceptual pillars frame self-esteem:

1. Self-Identity Theory: Focuses on identity construction through social affiliation and role fulfillment (Burke & Tully, 1977; Stets & Burke, 2000).
2. Self-Competence: Reflects one's belief in their capabilities and experiential value, distinct from Bandura's (1977) self-efficacy concept, which emphasizes confidence in action execution. Stanley and Murphy (1997) further divide competence into environmental responsiveness and autonomous goal pursuit.
3. Self-Liking: Involves personal perceptions of social significance and moral worth. As Rosenberg (1965) stated, it is *"the feeling that one is good enough."* This judgment is both personal and culturally shaped, with maturity emerging when individuals internalize their worth through broader societal associations.

These constructs underpin the design of self-esteem scales, which evaluate how individuals perceive their confidence and acceptance. Self-esteem is thus considered a unidimensional concept, integrating competence and liking into a generalized self-valuation rather than distinct subcomponents.

Conceptual Framework and Hypothesis Development

The conceptual framework (Figure1) integrates three primary constructs-Social Presence, Need to Belong, and Self-Esteem as predictors of Dating Site Usage (DSU), and evaluates how Age moderates these relationships. This multivariate model is reflective in nature, capturing both direct influences and interaction effects that shape user engagement within online dating environments

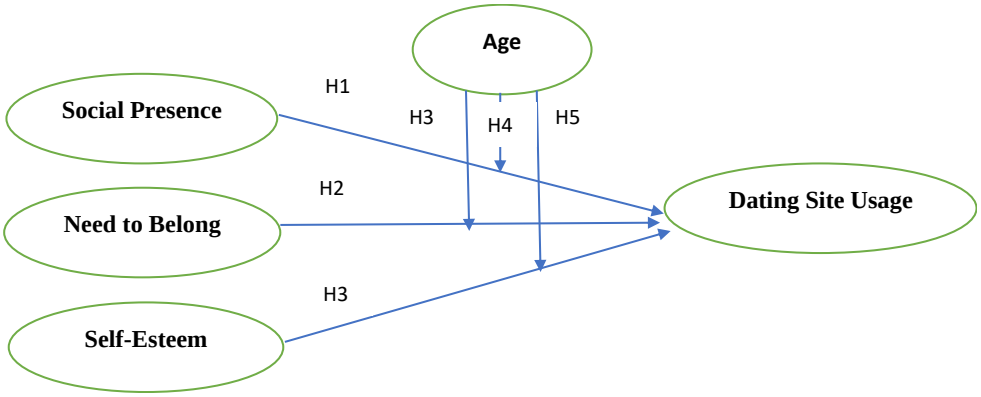

Figure 1: *Conceptual Framework*

Social Presence and Dating Site Usage

Social Presence Theory posits that the ability to convey emotional and cognitive presence through digital interfaces facilitates trust, intimacy, and immediacy (Nowak & Biocca, 2003; Srivastava & Chandra, 2018). Within dating platforms, perceived social presence strengthens user confidence in relational authenticity. Trust emerges not from nonverbal cues but through interactive design, responsive feedback, and shared engagement. Research suggests that platforms which enhance immediacy and engagement yield higher adoption rates (Chen et al., 2018). The literature indicates that perceived presence in digital communities enhances relational expectations and leads to stronger platform retention (Argyle & Dean, 1965; Finkel et al., 2012).

H1: Social Presence is positively associated with Dating Site Usage.

Need to Belong and Dating Site Usage

The Need to Belong Theory, as articulated by Baumeister and Leary (1995), emphasizes the fundamental human desire to form enduring social bonds. It suggests that unmet belongingness drives individuals toward compensatory social behaviours, including digital interaction. Dating platforms, with their niche communities and low emotional cost, offer avenues for managing loneliness and perceived exclusion (Adler, 1930; Ferguson, 1989). While the theory aligns with broader trends in online socializing, its predictive power in dating contexts remains contested. Nonetheless, it offers a framework to investigate relational motivation and community affiliation.

H2: Need to Belong is positively associated with Dating Site Usage.

Self-Esteem and Dating Site Usage

Self-Esteem functions as a regulatory mechanism for interpersonal valuation and acceptance, per Sociometer Theory (Zeigler-Hill, 2011). Individuals with lower self-esteem are often drawn to digital dating platforms where curated self-presentations can mitigate face-to-face anxieties. However, idealized profiles may widen the gap between actual and projected self-concept, leading to distress and diminished relational authenticity (Burke & Tully, 1997). This negative emotional cycle positions self-esteem as a behavioural determinant in platform choice and engagement style.

H3: Self-Esteem is negatively associated with Dating Site Usage.

Moderating Role of Age

Age introduces variability in how users perceive and engage with dating platforms. The psychological impact of social presence, belongingness, and self-esteem may vary across life stages. Younger users may prioritize immediacy and digital fluency, whereas older users may seek trustworthiness and emotional security. Age, therefore, serves as a conditional moderator, shaping the strength and direction of the core relationships.

- H4: Age moderates the relationship between Social Presence and Dating Site Usage.
- H5: Age moderates the relationship between Need to Belong and Dating Site Usage.
- H6: Age moderates the relationship between Self-Esteem and Dating Site Usage.

METHODOLOGY

The present study employed a quantitative survey design to explore the predictive influence of three key psychosocial constructs, Need to Belong (NTB), Social Presence (SP), and Self-Esteem (SE) on the usage of online dating platforms. To operationalize the constructs, the study utilized standardized and validated scales, which were modified to suit the online dating context. All variables were measured using a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Mean scores were computed for each construct to facilitate statistical comparison and structural modelling. Age and gender were introduced as control variables to identify demographic influences on dating site engagement and mitigate confounding effects.

The Need to Belong Scale (Leary et al., 2013) comprised 9 items assessing an individual's desire for social connection and acceptance. Higher scores indicated a stronger drive for interpersonal belongingness. Although no definitive cutoff scores exist, the scale has been widely used to examine relational motivations and their connection to well-being in diverse cultural contexts.

The Social Presence Scale (Tu, 2002) aimed to assess virtual social interaction quality. It included 7 items grouped into three subdimensions: social context, online communication, and interactivity. The score range (12–60) reflected how immersed and socially engaged participants felt in virtual environments. A higher cumulative score suggested a more vivid sense of connection, especially relevant in dating site dynamics.

The Self-Esteem Scale (Rosenberg, 1965) consisted of 8 items designed to capture both affirming and critical self-perceptions related to worth, competence, and acceptance. Scoring was conducted on the same 5-point scale, with total scores ranging from 10 to 40, where higher values denoted greater self-confidence.

Four constructs were central to the research framework: Need to Belong, Social Presence, Self-Esteem, and Dating Site Usage (DSU). Of these, DSU was treated as the dependent variable, while NTB, SP, and SE served as independent predictors. Age was incorporated as a control variable given its potential confounding role, especially as belongingness needs and comfort with digital interaction may vary significantly across age groups.

During a eight week timeframe from March to April 2024, data was gathered from among 500 respondents and only 345 resulted in complete response. The data collected was then carefully examined for incomplete responses and outliers and 169 responses were deemed unstable, which resulted in only 176 responses which were in usable format thereby implying that approximately 32.4% of the responses generated was used for further analysis, adhering to the SEM guidelines set by (Allison, 2003).

Data analysis was performed using SmartPLS and SPSS, applying the Structural Equation Modeling (SEM) approach. In the initial phase, the measurement model was evaluated using factor loadings, Cronbach's alpha, composite reliability, and convergent/discriminant validity. Subsequently, the structural model was assessed via R^2 values and path coefficients, which confirmed hypothesized relationships between predictors and outcomes. The model was validated through direct hypothesis testing using path analysis (Hair et al., 2022), offering robust insights into the psychological mechanisms underlying dating site usage.

RESULTS

This section outlines key findings from the primary analysis of responses collected from 176 individuals regarding their experiences and perceptions of dating site usage. The data reveals substantial adoption and engagement, coupled with evolving attitudes toward trust, authenticity, and relationship goals.

Sample Characteristics

The demographic profile of respondents in Table 1 reflects a well-distributed sample, with 32.4% identified as stable and actively engaged. The gender ratio is nearly balanced, with males (51.1%) slightly outnumbering females (48.9%) by 2.2%, suggesting that dating app usage in this cohort leans marginally toward a male perspective. Age-wise, the data indicate that 68.2% of participants belong to the 18–25-year age bracket showing that younger adults are the most active on dating platforms, while 31.7% are above 25, including a notable subset aged 40 and above.

Sexual orientation analysis highlights inclusivity, with 10.8% identifying as LGBTQ+, suggesting that dating platforms are increasingly recognized as viable spaces for same-gender partnerships. Education levels reveal that a substantial majority (60.2%) hold postgraduate degrees, indicating that well-educated individuals potentially more informed about the dynamics of digital intimacy constitute the dominant user base. Income patterns show that 78.4% fall within the 1–10 lakh range, predominantly comprising students and early-career professionals. Interestingly, participation declines with rising income, implying that higher socioeconomic status may be inversely associated with dating app engagement.

Table 1: *Demographics of the Respondents*

Aspects	Frequency	Percent	Cumulative Percent
Gender			
Male	90	51.1	51.1
Female	86	48.9	100
Age			
18-25yrs	120	68.2	68.2
25-30yrs	27	15.3	83.5
30-34yrs	8	4.5	88.1
>34yrs	21	11.9	100
Sexual orientation			
Heterosexual	157	89.2	89.2
Bisexual	7	4	93.2
Pansexual	4	2.3	95.5
Homosexual	6	3.4	98.9
Asexual	2	1.1	100
Qualification			
Primary	5	2.8	2.8
Secondary	7	4	6.8
Graduation	56	31.8	38.6
Post Graduation	106	60.2	98.9
Ph.D.	2	1.1	100
Profession			
Student	110	62.5	62.5
Employed	55	31.3	93.5
Unemployed	6	3.4	97.2
Homemaker	4	2.3	99.4
Retired	1	0.6	100
Income			

How to cite: Sharon, & Bagga, T. (2025). Integrating social presence theory and need to belong theory to understand dating site usage among Indian youth. *Pure & Applied Psychology Research Insights*, *1*(1), 11–24. https://doi.org/10.64006/papri/1102

Aspects	Frequency	Percent	Cumulative Percent
1Lakhs-10Lakhs	138	78.4	78.4
10Lakhs-20Lakhs	20	11.4	89.8
20Lakhs-25Lakhs	6	3.4	93.2
>25Lakhs	12	6.8	100

Adoption and Preferences

Among the respondents, 63.1% expressed clear favorability toward dating apps as a means of meeting new people, with only 14.8% remaining neutral. This trend suggests a shift in societal outlook where modern approaches to intimacy and connection are increasingly embraced, superseding traditional constraints. Interestingly, 90% of participants reported being active on more than one dating platform, underscoring a broadened pursuit of social presence and diverse relationship opportunities. Only 10% cited a lack of trust in swipe-based interactions as their reason for abstaining.

Usage of Premium Features

In terms of paid subscriptions, 10.2% of respondents opted for premium access to dating apps, primarily to unlock advanced features. However, the majority, 83% used free versions and still successfully navigated connections. This disparity highlights an emphasis on accessible online interaction without monetary investment.

Trustworthiness in Online Encounters

Trust emerged as a critical determinant of online dating satisfaction. According to data collected (table 2), 36.6% of respondents deemed their matches "not at all trustworthy," while 28.6% classified them as "moderately trustworthy." Only 5.1% identified their partners as "extremely trustworthy." These findings affirm concerns regarding misrepresentation and underscore the role of perceived authenticity in shaping dating outcomes.

Table 2: *Trustworthiness in Online Encounters*

Trust Level	Frequency	Valid Percent
Not at all trustworthy	64	36.6%
Moderately trustworthy	50	28.6%
Slightly trustworthy	37	21.1%
Quietly trustworthy	15	8.6%
Extremely trustworthy	9	5.1%

Authenticity of User Profiles

Concerns around profile authenticity were also evaluated (Table 3). A substantial 74% of respondents indicated they did not create fake profiles, suggesting an overall inclination toward honesty and genuine representation. Only a small proportion (11.6%) admitted to falsehoods, while others remained uncertain or selective.

.

Table 3: *Authenticity of User Profiles*

Response	Frequency	Valid Percent
No	**128**	**74.0%**

How to cite: Sharon, & Bagga, T. (2025). Integrating social presence theory and need to belong theory to understand dating site usage among Indian youth. *Pure & Applied Psychology Research Insights*, *1*(1), 11–24. https://doi.org/10.64006/papri/1102

Yes	**20**	**11.6%**
Maybe	**7**	**4.0%**
Sometimes	**18**	**10.4%**

Relationship Intentions

When asked about relationship preferences, the most common motivation was friendship, cited by 42% of users. In contrast, 27.3% sought lasting and committed partnerships, while 30.7% leaned toward casual encounters. Trust deficits appear linked to these preferences, with less trust correlating to lower commitment interest.

Overall Impact on Dating Norms

Participants were also asked to reflect on the broader impact of dating apps. While detailed quantitative responses are addressed in the SEM model below, early patterns indicate that dating apps play an influential role in reshaping interpersonal norms, promoting diverse relationship formations, and altering traditional matchmaking paradigms.

Measurement model and Vivid Assessment-

The normality of the data is assessed by examining Kurtosis, Standard Deviation, and Skewness. Since the values of standard deviation and skewness exceed ±1.5, and those of kurtosis exceed ±3, it can be stated that the data follows a normal pattern (Kline, 2016). Table 4 presents the results of the measurement model, where components such as factor loadings, Cronbach's alpha (α), Rho_A, and composite reliability exhibit values >0.7, thereby supporting the reliability of the measurement. As per (Fornell & Larcker, 1981), the AVE for each individual factor must exceed 0.5, which is evident from the findings..

Table 4: *Results of the measurement model*

Construct	Indicator	Factor Loading	α	rho_a	composite Reliability	AVE	r^2	SD	Skeweness	Kurtosis
NEED TO BELONG	NTB1	0.805	0.723	0.73	0.75	0.5		0.870	-0.037	0.226
	NTB2	0.745						1.110	0.217	-0.466
	NTB7	0.768						1.090	-0.289	-0.553
	NTB9	0.804						1.142	-0.098	-0.578
	NTB6	0.806						1.125	0.223	-0.703
SELF] ESTEEM	SE1	0.76	0.726	0.777	0.806	0.51		1.166	-0.194	-0.588
	SE2	0.712						0.539	-0.397	0.039
	SE3	0.759						1.201	0.171	-0.904
	SE4	0.747						1.054	0.412	-0.409
	SE5	0.741						1.084	0.187	-0.507
	SE6	0.75						1.133	0.034	-0.898
	SE8	0.72						0.981	0.127	-0.708
SOCIAL PRESENCE	SP1	0.844	0.707	0.7	0.703	0.52		0.505	-0.690	0.517
	SP2	0.783						1.059	-0.194	-0.458
	SP3	0.72						1.122	0.433	-0.157
	SP4	0.781						1.256	-0.046	-1.121
	SP5	0.84						1.093	-0.008	-0.540
	SP6	0.85						1.260	0.004	-0.986

How to cite: Sharon, & Bagga, T. (2025). Integrating social presence theory and need to belong theory to understand dating site usage among Indian youth. *Pure & Applied Psychology Research Insights*, *1*(1), 11–24. https://doi.org/10.64006/papri/1102

	SP7	0.73					1.283	0.113	-0.968
DATING SITE USAGE	DSU1	0.726	0.723	0.723	0.832	0.56	0.77	1.198	0.031	-0.847

Based on the measurement model, the constructs Need to Belong, Self-Esteem, Social Presence, and Dating Site Usage demonstrate strong psychometric validity. Each item shows factor loadings above 0.70, and the corresponding values of Cronbach's alpha and composite reliability exceed the acceptable threshold of 0.70, confirming internal consistency across constructs. Convergent validity is also supported, as the average variance extracted (AVE) for all constructs meets or surpasses the criterion of 0.50, in accordance with Fornell and Larcker's recommendations. Additionally, the dataset approximates a normal distribution, as the observed values of skewness and kurtosis largely fall within the commonly accepted thresholds of ±2 and ±7, respectively, despite initial indications that certain values exceed ±1.5 or ±3. These findings collectively reinforce the reliability and validity of the measurement instrument used in this study.

Table 5: *Fornell-Larcker discriminant validities*

	Age	DSU	NTB	SE	SP
Age	1				
DSU	-0.059	0.753			
NTB	-0.031	0.55	0.659		
SE	-0.139	0.655	0.446	0.628	
SP	0.002	0.488	0.523	0.41	0.542

Table 5 presents the discriminant validity of the constructs using the Fornell–Larcker criterion, which involves comparing the square root of Average Variance Extracted (AVE) with the inter-construct correlations. Validity is established when the diagonal values (representing the square roots of AVE) are greater than the corresponding off-diagonal correlation coefficients in the same row and column. As observed, each construct, Dating Site Usage (DSU), Need to Belong (NTB), Self-Esteem (SE), and Social Presence (SP), meets this criterion, with diagonal values clearly exceeding inter-construct correlations. This confirms that the constructs are empirically distinct and adequately discriminant from each other. The inclusion of Age as a control variable further contextualises the relationships, though its correlations remain modest across constructs. Collectively, these findings affirm the discriminant validity of the measurement model.

Table 6: *HTMT (Heterograft- Monorail) ratio of correlation values*

Constructs	Age	DSU	NTB	SE	SP	Age x SP	Age x NTB	Age x SE
Age								
DSU	0.125							
NTB	0.131	0.939						
SE	0.207	1.09	0.854					
SP	0.154	0.44	1.011	0.651				
Age x SP	0.069	0.079	0.225	0.13	0.116			
Age x NTB	0.075	0.176	0.269	0.11	0.183	0.751		
Age x SE	0.151	0.25	0.077	0.289	0.13	0.262	0.281	

HTMT Ratio (Discriminant Validity):

Table 6 presents the Heterotrait-Monotrait (HTMT) ratio values to assess discriminant validity across constructs. With the exception of two relationships-Self-Esteem and Dating Site Usage (HTMT = 1.09), and Social Presence and Need to Belong (HTMT = 1.011)- all values fall below the commonly recommended threshold of 0.90, indicating acceptable discriminant validity. The marginally elevated values in these two pairs may be attributed to cross-loading effects and conceptual overlap among indicators. Nevertheless, given the overall distribution of HTMT ratios and theoretical justification for construct distinctiveness, the measurement model is considered to demonstrate satisfactory discriminant validity.

Table 7: *Direct Path Analysis*

	T statistics (|O/STDEV|)	P values	Decision
NTB -> DSU	2.231	0.126	REJECTED
SE -> DSU	12.692	0.000	ACCEPTED
SP -> DSU	0.328	0.019	ACCEPTED

Structural Model Evaluation

The evaluation of the structural model was conducted using path coefficients and the coefficient of determination (R^2), which collectively indicate the strength and significance of relationships between independent and dependent variables. The model applied is reflective in nature, where constructs were first developed and later linked with indicators, as depicted in the research diagram. To improve model fit and enhance the R^2 value, certain indicators were excluded. Table 7 outlines the results of direct path analysis. Based on the p-value criterion ($p < 0.05$), two paths-Self-Esteem (SE → DSU, $p = 0.000$) and Social Presence (SP → DSU, $p = 0.019$) are statistically significant and accepted, suggesting a meaningful influence on Dating Site Usage (DSU). Conversely, the path from Need to Belong (NTB → DSU, $p = 0.126$) is rejected due to a non-significant p-value, indicating no direct effect on DSU. The model yields an R^2 value of 0.77, implying that approximately 77.7% of the variance in dating site usage is explained by the combined effect of self-esteem and social presence, thereby affirming the model's predictive relevance and overall robustness.

MODERATING ANALYSIS

To explore interaction effects among constructs, the study employed conditional process modelling, focusing on Age as a moderator between independent variables-Social Presence (SP), Need to Belong (NTB), and Self-Esteem (SE) and the dependent variable of Dating Site Usage (DSU). Table 8 presents the moderation results. Based on p-values (< 0.05), Age significantly moderates the relationship between SP and DSU ($p = 0.026$) and between SE and DSU ($p = 0.019$), indicating that the impact of both constructs on dating site usage varies across age groups.

Table 8: *Moderation Analysis*

	T statistics (|O/STDEV|)	P values	Decision
Age x SP -> DSU	1.303	0.026	ACCEPTED
Age x NTB -> DSU	1.598	0.112	REJECTED
Age x SE -> DSU	0.631	0.019	ACCEPTED

However, the interaction between Age and NTB did not yield statistical significance ($p = 0.112$), suggesting that Age does not meaningfully moderate the influence of NTB on DSU. These findings further inform the structural model's explanatory power and highlight age-specific variation in digital behaviour.

DISCUSSION

How to cite: Sharon, & Bagga, T. (2025). Integrating social presence theory and need to belong theory to understand dating site usage among Indian youth. *Pure & Applied Psychology Research Insights*, *1*(1), 11–24. https://doi.org/10.64006/papri/1102

The present study examined the impact of psychological and interpersonal factors-Need to Belong (NTB), Self-Esteem (SE), and Social Presence (SP) on Dating Site Usage (DSU), incorporating Age as a moderating variable. The structural model and direct path analysis revealed that Social Presence and Self-Esteem significantly influenced dating site usage, whereas Need to Belong did not exhibit a direct effect. These findings confirm H1 (Social Presence is positively associated with Dating Site Usage) and H3 (Self-Esteem is negatively associated with Dating Site Usage), while leading to the rejection of H2 (Need to Belong is positively associated with Dating Site Usage). This discrepancy between theoretical expectation and empirical outcome offers fertile ground for deeper interpretation.

The rejection of H2 aligns with prior work by Lenton-Brym et al. (), who argue that factors such as social anxiety, perceived similarity, and honesty may play stronger roles in motivating dating app engagement. While the belongingness framework (Adler, 1930; Ferguson, 1989) assumes a universal drive for connection, the study challenges its direct applicability to dating platforms. Users may prefer offline or familiar spaces to satisfy these needs, especially in collectivist cultures where trust and safety weigh heavily. This suggests that dating platforms may not serve as primary environments for fulfilling relational belongingness, thereby questioning the validity of NTB as a standalone predictor in digital contexts.

In contrast, the positive association between Social Presence and Dating Site Usage supports H1 and echoes findings from Walther et al. (1962) and Srivastava & Chandra (2018). Users who perceive high intimacy, immediacy, and responsiveness within dating platforms are more likely to engage and form sustained connections. Notably, the interaction between Age and Social Presence tested through moderation analysis confirms H4 (Age moderates the relationship between Social Presence and Dating Site Usage). This reveals that older users respond more strongly to indicators of trust and presence, reinforcing the importance of thoughtful platform design tailored to diverse age segments.

The inverse relationship between Self-Esteem and Dating Site Usage supports H3 and reflects a psychological compensation mechanism, whereby individuals with lower self-esteem turn to online dating to manage rejection and curate favourable self-images. This finding aligns with Zeigler-Hill (2011), as well as with Social Comparison Theory, which asserts that individuals evaluate self-worth relative to others. Interestingly, moderation analysis also confirmed H6 (Age moderates the relationship between Self-Esteem and Dating Site Usage), indicating that age modulates how users with varying levels of self-esteem navigate digital interactions.

Meanwhile, moderation analysis did not support H5 (Age moderates the relationship between Need to Belong and Dating Site Usage), suggesting that the influence of NTB on DSU remains insignificant across age groups. This finding invites further inquiry into latent psychological constructs such as FoMO or interpersonal trust thresholds, which may better capture the nuanced motivations behind dating site usage.

Overall, the empirical findings validate four of the six proposed hypotheses (H1, H3, H4, H6), offering robust theoretical and behavioural insight into digital intimacy. The rejection of H2 and H5 expands the conversation about contextual applicability and the evolving dynamics of relational motivation in online spaces. These results underscore the importance of age-sensitive, psychologically attuned design strategies for dating platforms and invite scholars to re-evaluate the universality of classical social motivation theories in digitally mediated relationships.

THEORETICAL IMPLICATIONS

This study contributes meaningfully to the literature on digital intimacy, social cognition, and behavioural motivation, particularly in collectivist societies like India. It refines the applicability of foundational theories:

- Belongingness Theory, while broadly accepted, may not uniformly predict digital engagement. Rather than seeking anonymous or algorithmic validation, individuals may prioritise interpersonal familiarity and

offline trust networks to fulfil their need to belong. This calls for Lim et al. (2023 to recalibrate or adapt the model theoretically or contextually.

- The confirmation of Social Presence Theory reinforces its centrality in digital relationship formation. It suggests that platforms should foreground elements like real-time feedback, authenticity cues, and interactive design to foster presence. Its mediation by age reveals important life stage differences that should inform platform segmentation and UX strategy.
- The findings on Self-Esteem extend Social Comparison Theory into digital domains, where curated profiles and asynchronous interaction allow low-esteem users to mask vulnerabilities and navigate romantic risks. This affirms the role of digital self-reconstruction as both an enabler and a vulnerability in online relationships.

In design terms, platforms may consider integrating immersive features, like video chat, virtual spaces, and AI-driven feedback loops to elevate social presence while sensitively accommodating the psychological states of users. For scholars, the non-significance of Need to Belong invites further exploration into alternative variables such as social anxiety, fear of missing out (FoMO), or perceived online safety, which may hold stronger predictive power.

CONCLUSION

The study concludes that psychological and social factors significantly influence dating site usage, with Social Presence and Self-Esteem emerging as key predictors. While higher social presence encourages platform engagement, lower self-esteem appears to motivate users seeking relational affirmation in controlled digital settings. Contrary to popular theoretical assumptions, the Need to Belong does not significantly impact online dating behaviour, prompting re-evaluation of existing frameworks. Age plays a moderating role, especially in shaping the effect of social presence and self-esteem. These findings provide nuanced insights into digital intimacy and suggest that personalised platform features can enhance user experience across diverse psychological profiles.

AUTHOR DECLARATIONS

CRediT Author Statement / Author contributions
Sharon: Conceptualization; Methodology; Software; Validation; Formal Analysis; Investigation; Data Curation; Writing – Original Draft; Visualization.
Teena Bagga: Conceptualisation, Supervision; Project Administration; Writing – Review & Editing; Resources.

Acknowledgement: The authors would like to state that no specific funding or support was received for this study.

Conflict of interest: The author(s) declare no conflicts of interest.

AI statement: This work has utilised ChatGPT, an AI language model, for idea refinement during the drafting process. Grammarly, an AI-powered language tool, was employed to assist with grammar checking, spelling correction, and clarity improvements. The responsibility for the originality of ideas, accuracy of content, and integrity of conclusions remains solely with the authors.

PUBLISHER'S NOTE: All claims expressed in this article are solely those of the authors and do not necessarily represent those of the publisher, the editors and the reviewers. This journal remains neutral with regard to jurisdictional claims in published institutional affiliation.

REFERENCES

Adler, A. (1930). *The education of children*. London: Routledge. https://doi.org/10.4324/9781315687933

Allison, P. D. (2003). Missing data techniques for structural equation modelling. *Journal of Abnormal Psychology, 112*(4), 545–557. https://statisticalhorizons.com/wp-content/uploads/Allison-2003-JAP-Special-Issue.pdf (turn0search20)

Argyle, M., & Dean, J. (1965). Eye contact, distance and affiliation. *Sociometry, 28*(3), 289–304. https://doi.org/10.2307/2786027

Burke, P. J., & Tully, J. C. (1977). The measurement of role identity. *Social Forces, 55*(4), 881–897. https://doi.org/10.2307/2577560

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Castro, Á., & Barrada, J. R. (2020). Dating apps and their sociodemographic and psychosocial correlates: A systematic review of empirical research. *International Journal of Environmental Research and Public Health, 17(15),* Article 5588. https://doi.org/10.3390/ijerph17155588

Chen, Y., Verlinde, J., Clothiaux, E., Ackerman, A. S., Fridlind, A. M., Chamecki, M., Kollias, P., Kirkpatrick, M. P., Chen, B.-C., Yu, G., & Avramov, A. (2018). On the forward modeling of radar Doppler spectrum width from LES: Implications for model evaluation. *Journal of Geophysical Research: Atmospheres, 123*(14), 7444–7461. https://doi.org/10.1029/2017JD028104

Daft, R. L., & Lengel, R. H. (1984). Information richness: A new approach to managerial behaviour and organization design. *Research in Organizational Behaviour, 6*, 191–233.

Ferguson, W. W. (1989). Critique of Australopithecus afarensis as a single species based on dental metrics and morphology. *Primates, 30*(4), 561–569. https://doi.org/10.1007/BF02380881

Ferguson, E. D. (1989). Adler's motivational theory: An historical perspective on belonging and the fundamental human striving. *Individual Psychology, 45*(3), 354–361.

Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public Interest, 13*(1), 3–66. https://doi.org/10.1177/1529100612436522

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.

Leary, M. R., Kelly, K. M., Cottrell, C. A., & Schreindorfer, L. S. (2013). Construct validity of the need to belong scale: Mapping the nomological network. *Journal of Personality Assessment, 95*(6), 610–624. https://doi.org/10.1080/00223891.2013.819511

Lenton-Brym, A. P., Santiago, V. A., Fredborg, B. K., & Antony, M. M. (2021). Associations between social anxiety, depression, and use of mobile dating applications. *Cyberpsychology, Behavior, and Social Networking, 24*(2), 86–93. https://doi.org/10.1089/cyber.2020.0144

Lim, M. H., Eres, R., & Vasan, S. (2023). The prevalence of chronic and episodic loneliness and social isolation and their health outcomes. *Scientific Reports*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10393986/

Lowenthal, P. R. (2010). The evolution and influence of social presence theory on online learning. *Online Education and Learning Management Systems*, 10–22.

Kline, R. B. (2016). Principles and practice of structural equation modeling (4th ed.). *Guilford Press*.

Nowak, K. L., & Biocca, F. (2003). The effect of the agency and anthropomorphism on users' sense of telepresence, copresence, and social presence in virtual environments. *Presence Teleoperators and Virtual Environments, 12*(5), 481–494. https://doi.org/10.1162/105474603322761289

Rokach, A. (2004). Loneliness then and now: Reflections on social and emotional alienation in everyday life. *Current Psychology, 23*(1), 24–40. https://doi.org/10.1007/s12144-004-1002-7

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 of the United States of America, 116(36), 17753–17758*. https://doi.org/10.1073/pnas.1908630116

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

Srivastava, S. C., & Chandra, S. (2018). Social presence in virtual world collaboration: An uncertainty reduction perspective using a mixed methods approach. *MIS Quarterly, 42*(3), 779–803. https://doi.org/10.25300/MISQ/2018/11914

Stets, J. E., & Burke, P. J. (2000). *Identity theory and social identity theory*. *Social Psychology Quarterly, 63*(3), 224–237. https://doi.org/10.2307/2695870

Stanley, K. D., & Murphy, M. R. (1997). A comparison of general self-efficacy with self-esteem. *Genetic, Social, and General Psychology Monographs, 123(1), 81–99***.**

Smith, A. (2016). *5 facts about online dating*. Pew Research Center. https://www.pewresearch.org/short-reads/2016/02/29/5-facts-about-online-dating/

Short, J., Williams, E., & Christie, B. (1976). *The Social Psychology of Telecommunications*. John Wiley & Sons.

Tinder. (2024). *Tinder reveals the best cities to be single in India*. Tinder Press Room. Retrieved from https://in.tinderpressroom.com/Tinder-Reveals-the-Best-Cities-to-be-Single-in-India-Tinder-Reveals-the-top-6-Cities-with-the-most-Activity-on-Tinder

Tu, C. H. (2002). The measurement of social presence in an online learning environment. *International Journal on E-Learning***, 1**(2), 34–45.

Walther, J. B. (1992). Interpersonal effects in computer-mediated interaction: A relational perspective. *Communication Research*, *19*(1), 52–90. https://doi.org/10.1177/009365092019001003

Zeigler-Hill, V. (2011). The connections between self-esteem and psychopathology. *Journal of Contemporary Psychotherapy, 41*(3), 157–164. https://doi.org/10.1007/s10879-010-9167-8