

# A Reconceptualization and Expansion of Flirting Behavior and Its Impact on Life Satisfaction and Friendship Quality

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The practice of flirting has long been viewed as sexual or romantic. However, this study proposes that flirting is associated with a much broader array of social interactions and that its primary function is relationship enhancement rather than acquisition of some desired outcome. A total of 945 people participated in this study, organized into 315 triads: the primary participant (who answered questions about himself or herself) and 2 friends of each participant (who rated the main participant on the same questions). The questions encompassed frequency of flirting in 8 different contexts (romantic, sexual, party, restaurant, school, work, home, with a stranger), skill at flirting (in the same 8 contexts), 10 predictors of flirting (e.g., social skills, humor, resilience), and 2 outcome variables (life satisfaction and quality of friendships). Through bivariate correlations, regression analyses, and structural equation modeling, results supported the reconceptualization of flirting, the expansion of flirting into other contexts, and the positive outcomes of increased flirting skill. Structural equation modeling revealed that flirting frequency was the greatest predictor of flirting skill, followed by social skills, nonverbal behavior, humor, situational awareness, and confidence. Flirting skill had a significant impact on life satisfaction but not on friendship quality. Results are discussed and potential avenues for future studies explored.

KEYWORDS: flirting, friendship, life satisfaction, triad

In both popular psychology and academic research, flirting has long been associated primarily with romantic and sexual motivations (Allemand et al., 2022; Apostolou & Christoforou, 2020; Downey & Vitulli, 1987; J. A. Hall & Xing, 2015; Kennair et al., 2022; Weber et al., 2010). Furthermore, research often addresses flirting as an evolutionary mechanism to establish long-term intimate relationships with the goal of reproduction (Apostolou, Papadopoulou, et al., 2019; Crawford, 1998; Kennair et al., 2022). Although these perspectives have merit, a limited selection of research has attempted to expand the application of flirting into other areas, such as to uni-

versities (Rowland et al., 1982), workplace environments (Sheppard et al., 2020; Williams et al., 1999; Yelvington, 1996), and the customer service industry (E. J. Hall, 1993; Loe, 1996; Seger-Guttmann & Medler-Liraz, 2018). The present study intends to further expand and explore the different contexts in which flirting is observed.

Other limitations of past research lie in the frequent absence of clear operational definitions and challenges with measuring the construct. Many studies rely on participants' subjective idea of what flirting is rather than providing a specific definition and context. Then remains the challenge of measuring flirt-

ing. Flirting has been measured in a number of ways, including open-ended questions about past flirting interactions (Apostolou & Christoforou, 2020; Wade, 2015; White et al., 2018), behavioral observations and direct assessment by researchers (Allemand et al., 2022; J. A. Hall & Xing, 2015), personal interviews (Frisby, 2009), and simple self-report questionnaires (Downey & Vitulli, 1987; Egland et al., 1996; Henningsen, 2004; Kennair et al., 2022; Rowland et al., 1982; Seger-Guttmann & Medler-Liraz, 2018; Weber et al., 2010). The challenge of the self-report method is that flirting, like so many other personal qualities, is subject to social desirability bias.

The present study addresses all three of these issues. We provided all participants with a clear operational definition of flirting, we identified eight different settings in which flirting occurs, and we used a triad-based informant method of data collection to improve validity and objectivity of key variables. The next paragraphs expand on each of the three issues, beginning with the triad-based informant method.

#### *Triad-Based Informant Method*

To control for social desirability bias and create more objective responses, the main participant answered all questions about himself or herself, and two friends of the main participant (“informants”) were recruited to answer the same questions about the main participant. Then, the mean of the three responses created the values used in the study. See Cruitt and Oltmanns (2018) for a discussion of the benefits of informant scores for increasing objectivity.

#### *Operationalizing Flirting*

Operationalizing flirting involves a process of both expansion and limitation. First, it is important to expand the idea of flirting to account for the many contexts in which flirting occurs. Then, it is important to limit the definition. One limitation used in the present study is the exclusion of instrumental or manipulative flirting, that is, using flirting skills to achieve a personal objective (Henningsen, 2004), such as flirting with professors to increase a grade (Rowland et al., 1982), in a restaurant to increase customer tips (Loe, 1996), as a salesman selling an automobile, or as a lothario angling for sexual favors. Although flirting to acquire something (instrumental flirting) may involve identical skills, our operational definition focuses on

relationship enhancement rather than accomplishing a personal objective.

We define flirting as the *motivated, conscious, social act (verbal or nonverbal), intended to be mutually beneficial, that creates, maintains, or improves a relationship with an individual through playful, entertaining, humorous, or clever behaviors*. “Motivated and conscious” specifies intentionality while acknowledging that most flirting interactions are motivated (see Henningsen, 2004). “Social act (verbal or nonverbal)” posits flirting as interactive behavior and embodies both verbal (e.g., teasing) and nonverbal behaviors (e.g., winking) (J. A. Hall & Xing, 2015). “Intended to be mutually beneficial” excludes instrumental flirting (Henningsen, 2004). “Creates, maintains, or improves a relationship” focuses flirting toward a wide variety of relationships (e.g., platonic, romantic, professional) and includes initiation, nurturance, and growth in those relationships (Frisby, 2009). “Through playful, entertaining, humorous, or clever behaviors” encompasses four behaviors found in existing research that embody the foundational qualities of successful flirting (Apostolou & Christoforou, 2020; J. A. Hall & Xing, 2015; Wade, 2015; Weber et al., 2010; White et al., 2018).

#### *Flirting Contexts*

Limited research has examined the specific settings in which flirting occurs. To address this gap, we reviewed existing literature and identified the following eight settings and contexts in which flirting has been studied: romantic contexts (Frisby, 2009; Givens, 1978; Horgan et al., 2022), sexual contexts (Henningsen, 2004; Kennair et al., 2022; Perper & Weis, 1987), at businesses or work (Henningsen et al., 2008; Sheppard et al., 2020; Williams et al., 1999; Yelvington, 1996), in restaurants or bars (E. J. Hall, 1993; Loe, 1996; Seger-Guttmann & Medler-Liraz, 2018), at school (i.e., college classrooms or academic environments; Henningsen et al., 2008; Rowland et al., 1982), at home (Egland et al., 1996), at parties or social settings (Egland et al., 1996), and when interacting with strangers (Fox, 2004; J. A. Hall & Xing, 2015; Henningsen, 2004). Notice that many of these references date back 30 or 40 years, suggesting that expansion of flirting to different settings has not been a recent trend.

### *Predictor and Outcome Variables Used in the Study*

#### *PREDICTORS OF FLIRTING.*

To examine individual difference factors related to flirting, we measured 10 personal qualities and skills derived from literature that predict flirting skill or frequency: humor (Apostolou & Christoforou, 2020; Loe, 1996; Sheppard et al., 2020; Weber et al., 2010), articulateness (Apostolou & Christoforou, 2020; J. A. Hall & Xing, 2015), social skills (Allemand et al., 2022), confidence (Apostolou & Christoforou, 2020; Apostolou, Papadopoulou, et al., 2019), effective nonverbal communication (Apostolou & Christoforou, 2020; J. A. Hall & Xing, 2015; Rowland et al., 1982; Whitty, 2004), quick responses to social cues (Loe, 1996; Seger-Guttmann & Medler-Liraz, 2018), social venturesomeness (Apostolou & Christoforou, 2020), situational awareness (Allemand et al., 2022; J. A. Hall & Xing, 2015; Sheppard et al., 2020; Yelvington, 1996), and resilience or adaptability (Apostolou & Christoforou, 2020).

#### *FLIRTING AND FRIENDSHIP QUALITY.*

The present study proposes that those who are more skilled at flirting are likely to have higher-quality friendships. However, no research to our knowledge has examined the direct effect of flirting on the friendship quality. Certain studies imply that this connection is likely. For example, qualities and behaviors associated with flirting are conceptually associated with successful relationships in general. Predictors of successful relationships, such as playfulness, shared interests, perceived interest in the other, and enjoyable communication (Anderson & Emmer-Sommer, 2006; Bukowski et al., 1994; Hassebrauck & Fehr, 2002) are also relevant ingredients of successful flirting behavior (Fox, 2004; J. A. Hall & Xing, 2015; Henningsen, 2004; Wade, 2015).

#### *FLIRTING AND LIFE SATISFACTION.*

Personal qualities that predict flirting (e.g., humor, social skills, confidence, resilience, intelligence) are also frequently associated with general life satisfaction (Clair et al., 2021; Cohn et al., 2009; Ozben, 2013). Thus, some of the qualities measured in the present study may have a direct link with life satisfaction or an indirect link mediated through skill or frequency of flirting. For example, people who completed “flirt training” reported higher levels of relaxation in social

situations (Allemand et al., 2022). On the flipside, poor flirting skills, along with shyness, are associated with poor performance in initiating and keeping intimate relationships and increased social rejection (Apostolou, Paphiti, et al., 2019). Furthermore, flirting at work, within reason, has been found to improve self-esteem and relieve stress among both employees and coworkers (Loe, 1996; Sheppard et al., 2020). Although life satisfaction is not measured directly in these studies (or in any of the studies reviewed by the authors), the areas explored are axiomatic to any life satisfaction scale (social life, intimate relationships, professional success).

## **STUDY**

Despite some academic interest in the study of flirting, most existing research has emphasized its sexual or romantic dimensions, overlooking the broader interpersonal and intrapersonal functions it may serve. Henningsen’s (2004) conceptual framework identifies six core motivations underlying flirting: relational, exploratory, fun, esteem-seeking, instrumental, and sexual. Several of these, particularly fun and esteem-seeking, highlight the potential for flirting to serve social and emotional purposes beyond courtship or sexual initiation. These findings support the present study’s approach to redefine flirting as a multifaceted behavior with implications that extend into everyday social life.

Building on Henningsen’s framework, the present study extends prior work by examining flirting beyond exclusively romantic or sexual contexts and moving beyond reliance on single-source self-report data. Furthermore, the current study investigates how both individual differences (i.e., personal qualities) and behavioral aspects of flirting (i.e., frequency and skill) relate to two novel outcomes: friendship quality and life satisfaction. These outcomes, though central to interpersonal and psychological well-being, have not yet been empirically linked to flirting behaviors. By addressing this gap, the study aims to expand the scope of flirting research beyond romantic and sexual contexts and better understand the interpersonal and intrapersonal functions flirting may serve.

We made six primary predictions about the interactive impact of personal qualities, flirting skill,

flirting frequency, life satisfaction, and friendship quality:

H1: Personal qualities measured will be positively associated with flirting frequency.

H2: Personal qualities measured will be positively associated with flirting skill.

H3: Flirting frequency will be positively associated with life satisfaction.

H4: Flirting frequency will be positively associated with friendship quality.

H5: Flirting skill will be positively associated with life satisfaction.

H6: Flirting skill will be positively associated with friendship quality.

## METHODS

### *Participants and Power*

A total of 945 participants returned valid surveys that were used in analyses. They were divided into triads: the main participants ( $n = 315$ ) paired with two friends (referred to as “informants” throughout the article) of the participants ( $n = 630$ ). As in most online surveys, many forms were unusable for a variety of reasons. Of the 2,036 surveys initiated (by a person opening the survey link), 374 were unpaired and deleted; an additional 717 were deleted because of no responses, incomplete forms, duplicate forms, or a variety of other challenges. This yielded the final total of 945 (60% female, 39% male, 1% nonbinary), with 315 main participants (62% female, 37% male, 1.0% nonbinary; 89.5% White; mean age = 29.4 years,  $SD = 14.8$ ; age range = 18–78 years; mean education = 2.5 years of college; 22% married or cohabiting, 30% dating, 48% single). A power analysis with power set at .95 and  $\alpha$  set at .05 suggested we would need 85 participants to detect an  $R$  value of 0.4, including eight predictors and two tests through a regression analysis.

### *Materials and Procedures*

All materials and procedures were reviewed and approved by the University of Alabama institutional review board. Materials included one questionnaire for the main participant and a different questionnaire for friends of the participant. Questionnaires were administered to all participants through an internet link to a Qualtrics survey.

Participants were recruited by undergraduate students in a large public university research meth-

ods class. The students completed Collaborative Institutional Training Initiative ethics training and were certified to collect data in exchange for partial class credit. Initial contacts with potential participants were made in person, by telephone, email, or social media. Questionnaires were administered to all participants through an internet link to a Qualtrics survey. Participants did not receive any compensation other than expression of appreciation for their contribution. Students who recruited participants were able to complete the study themselves and could recruit their own friends as informants but were also encouraged to recruit additional main participants and informants. If students chose not to recruit participants, they were given an alternative assignment.

The questionnaires were structured in the following way: The initial screen included instructions that identified the sponsoring organization, brief description of the study, assurance of anonymity, informed consent, debriefing, and further instructions about how to complete the questionnaire. Participants were first introduced to the expanded concept of flirting and the operational definition. Examples of flirting in the eight different settings immediately followed (e.g., for flirting at a party or social gathering: “A group of friends are at karaoke night. Jackson is singing ‘Uptown Funk.’ Lucy: ‘Bruno Mars better watch out, there’s some competition in town!’”). Table 1 includes the examples provided in all eight settings. This was followed by 7 demographic items, then 8 questions that measure frequency of flirting, and 8 questions that measure skill at flirting; 9 items measured personal qualities, followed by 10 life satisfaction questions and 8 quality-of-friendship questions.

The friends of the participant (informants) filled out a similar questionnaire. This questionnaire contained all questions answered by the main participant except the life satisfaction questions. Furthermore, all questions were designed to describe the main participant’s behavior, not their own. For example, for the question “How frequently do you flirt with strangers?” the main participant would answer the question about himself or herself, and the informant would answer the same question about the main participant.

### *Variables*

#### *FLIRTING FREQUENCY.*

Flirting frequency was assessed in eight contexts: romantic, sexual, business or work, restaurant or bar, party or social gathering, school, home, and random contact with strangers. Participants reported how of-

**TABLE 1.** Flirting Examples by Setting

Setting	Example
Romantic	Greg and Joy are on a date. Greg: "Oh, shoot! Haven't even checked the menu yet. I was so caught up in how beautiful your eyes are."
Sexual	"Those clothes look mighty tight, [with a wink] want me to help resolve that problem?"
Business or work	"You staple papers together better than any human alive! Care to help me out?"
Restaurant or bar	[Waitress hands the check to a baby at the table.] Waitress: "He's taking care of it tonight, right?"
Party or social gathering	A group of friends are at karaoke night. Jackson is singing "Uptown Funk." Lucy: "Bruno Mars better watch out, there's some competition in town!"
School	Dawson opens his locker, and his book falls on Seymour's head. Dawson: "Dang, my bad, dude." Seymour: "Nah, you're good. Probably a sign I should start reading."
Home	(1) Bill asks his dad to rewind an interview with a 100-year-old man. Bill: "Oh, never mind. Thought that was you for a second." (2) Mom to daughter headed off to school: "You look beautiful, sweetie; don't break too many hearts today!"
Random stranger	[Woman is blocking supermarket aisle.] She: "Oh, sorry; I was just checking my list." He: [with a twinkle] "Are you checking it twice?"

ten they (or the main participant) flirted in each of the settings on a 7-point Likert scale (1 = *never*, 2 = *rarely*, 3 = *1-3 times per month*, 4 = *once a week*, 5 = *2-6 times per week*, 6 = *daily*, 7 = *multiple times a day*). Scores were averaged across the main participant and the two informants to create a composite flirting frequency variable.<sup>1</sup>

#### FLIRTING SKILL.

Skill at flirting was assessed in the same eight contexts: romantic, sexual, business or work, restaurant or bar, party or social gathering, school, home, and random contact with strangers. Participants reported how well they (or their friend) flirted in each of the settings on a 7-point Likert scale: (1 = *does not apply*, 2 = *very poor*, 3 = *poor*, 4 = *average*, 5 = *good*, 6 = *very good*, 7 = *excellent*). Scores were averaged across the main participant and the two reporting informants to create a composite flirting skill variable.

#### PREDICTORS OF FLIRTING.

For the personal predictors of flirting, participants reported how skilled they (or their friend) were (was) at nine behaviors on a 7-point Likert scale (1 = *not*

*skilled at all*, 7 = *very skilled*). A few synonyms were provided for each predictor, and the phrases were presented as follows (the key terms are italicized): *humor*, telling jokes, wittiness; *articulate*, verbally fluent, clear, lucid; *emotionally intelligent*, socially skilled; *confident*, socially fearless; effective *nonverbal communicator*; *quick to respond* in conversation, social situations; *social risk taker*, venturesome; *situationally aware*, keen, perceptive; and *resilient*, adaptable. Scores were averaged across the main participant and the two informants to create a composite score for each quality.

#### LIFE SATISFACTION.

Only the main participant completed a measure of life satisfaction: a modified version of the Extended Satisfaction With Life Scale (Alfonso et al., 1996) that included nine specific areas in which most people are highly defined along with a single global question. Participants rated how satisfied or dissatisfied they were (1 = *very dissatisfied*, 7 = *very satisfied*) within nine areas of their life: financial; social network of friends; family interactions; intimate relationships;

spiritual or existential; professional, career, or academic; interests and passions; health and vitality; and goal achievement success. These were followed by a global question, "Overall how satisfied are you with your life?" rated on the same scale. The mean of all items served as the overall measure of life satisfaction.

**FRIENDSHIP QUALITY.**

Participants completed the friendships quality scale (adapted from George et al., 2023), which included eight specific positive qualities of friendships. Main participants answered the questions by imagining what their friends would say about them, and informants completed this section of their survey by reporting how they, or other friends of the participant, would rate the main participant's friendships. Participants responded on 7-point Likert scales to the following statements about the friendships: feel secure (1 = *insecure*, 7 = *secure*), feel loved (1 = *unloved*, 7 = *loved*), feel appreciated (1 = *unappreciated*, 7 = *appreciated*), feel trusted (1 = *mistrusted*, 7 = *trusted*), feel respected (1 = *disrespected*, 7 = *respected*), time together is enjoyable (1 = *[we] endure time together*, 7 = *[we] enjoy time together*), their friend is loyal (1 = *disloyal*, 7 = *loyal*), and they feel encouraged and supported (1 = *not encouraged/supported*, 7 = *encour-*

*aged and supported*). Each item was averaged across the main participant and two informants to create a composite score for each quality. The mean of all eight items served as the overall measure of friendship quality.

**Analytic Technique**

All analyses except structural equation modeling were done in SPSS (v. 29). Structural equation modeling was conducted in the Muthen & Muthen Mplus software (v. 8). First, we conducted bivariate correlations between all relevant variables. Next, the six hypotheses were tested via separate linear regressions with flirting frequency, flirting skill, friendship quality, and life satisfaction used as criterion variables. Finally, structural equation modeling was used to determine the interactive effect of variables on each other.

**RESULTS**

Of the 33 variables used in analyses, all but two (age and quick to respond) had excellent psychometrics, with skewness and kurtosis values between ±1 (see George & Mallory, 2024). The other two variables were barely outside the ideal range. Table 2 includes

**TABLE 2.** Psychometrics of Key Variables

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>	<b>α</b>
Life satisfaction	315	4.9371	0.97875	-0.157	-0.312	.85
Friendship quality	315	5.9975	0.70315	-1.099	1.913	.96
Flirting skill	315	4.3828	0.91990	-0.122	0.125	.90
Flirting frequency	315	3.6178	0.92135	0.146	-0.345	.89
Humor	315	5.3217	0.97503	-0.695	0.557	—
Articulate	315	5.3312	0.96360	-0.435	0.088	—
Social skills	315	5.3799	1.02514	-0.756	0.427	—
Confident	315	5.0042	1.08779	-0.605	0.500	—
Nonverbal skill	315	4.8730	1.03415	-0.332	0.117	—
Quick response	315	5.2317	0.98300	-0.782	1.138	—
Risk taker	315	4.5947	1.14506	-0.294	-0.104	—
Situational awareness	315	5.2868	0.92612	-0.504	-0.162	—
Resilience	315	5.3101	0.93951	-0.227	-0.227	—

means, standard deviations, skewness, and kurtosis values of all variables, and alphas when applicable.

The following results are derived from values averaged across the main participant and two informants. To be comprehensive, Supplemental Table 1 includes separate means for the main participant and the average mean of the two informants. Although some of these differences were significant, most were small or slightly above the threshold (i.e., .20). Furthermore, we tested a structural equation model that included only the main participant report and one that included only the informant report. Neither model improved model fit, so analyses were conducted using values collapsed across the main participant and informant.

#### Descriptives of Flirting Frequency and Skill Across Settings

Flirting frequency ranged (on a 7-point scale) from 3.15 (stranger) to 4.16 (romantic) with a mean of 3.56. These two values (stranger and romantic flirting frequency) were significantly different,  $t(314) = -12.17$ ,  $p < .001$ , and this difference was moderate ( $d = -.69$ ). Flirting skill ranged (on a 7-point scale) from 3.06 (work) to 4.84 (party) with a mean of 4.38. These two values (work and party) were significantly different,

$t(314) = -11.81$ ,  $p < .001$ , and this difference was also moderate ( $d = .67$ ).

#### Effect of Demographics

Certain demographics were significantly associated with life satisfaction in regression analyses,  $R(1, 311) = .494$ ,  $R^2 = .244$ ,  $p < .001$ . Greater life satisfaction was associated with more education ( $b = .12$ ), greater income ( $b = .17$ ), and age (being older,  $b = .13$ ). However, no demographics were associated with friendship quality, and none were significant predictors in the structural model. Furthermore, to be comprehensive, we explored the potential confounding effect of relationship status on flirting frequency and skill and found that relationship status had a null effect on both flirting skill,  $F(3, 311) = .71$ ,  $p = .49$ , and flirting frequency,  $F(3, 311) = .68$ ,  $p = .51$ .

#### Bivariate Correlations

Bivariate correlations (see Table 3 for correlations between study variables) provide a useful initial perspective before other forms of analysis. Correlations involving friendship quality, life satisfaction, personal qualities, flirting frequency, and flirting skills revealed instructive patterns.

**TABLE 3.** Correlations Between Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Flirting skill	—											
2. Flirting frequency	.77	—										
3. Life satisfaction	.24	.16	—									
4. Friendship quality	.33	.12	.31	—								
5. Humor	.44	.25	.22	.42	—							
6. Articulate	.43	.24	.29	.51	.58	—						
7. Social skills	.43	.18	.32	.67	.54	.69	—					
8. Confidence	.47	.31	.33	.40	.50	.50	.52	—				
9. Nonverbal skill	.55	.36	.31	.54	.49	.62	.58	.51	—			
10. Quick response	.47	.29	.30	.50	.56	.63	.60	.60	.63	—		
11. Risk taker	.50	.38	.24	.28	.47	.34	.38	.71	.46	.55	—	
12. Situational awareness	.41	.20	.24	.46	.43	.59	.57	.35	.49	.52	.33	—
13. Resilience	.46	.27	.38	.54	.46	.56	.58	.49	.63	.56	.44	.68

Note. All values significant at  $p < .05$ .

#### PERSONAL QUALITIES.

Each of the nine personal qualities was significantly correlated with both friendship quality ( $r$ s range from .27 to .67) and life satisfaction ( $r$ s range from .22 to .38). All significance values were  $<.001$ .

#### FLIRTING SKILL.

Flirting skill in each of the eight settings was significantly correlated with friendship quality ( $r$ s range from .17 to .39) and life satisfaction ( $r$ s range from .16 to .30). All significance values were  $\leq .001$  except for flirting skill in a work setting ( $p = .003$ ).

#### FLIRTING FREQUENCY.

Of the correlations between the eight flirting frequency settings and friendship quality, four of the flirting frequency settings did not achieve significance (work, sex, party, restaurant), two were barely significant ( $p$ s = .03; school and stranger), and two were fairly robust: home flirting ( $r = .15, p = .004$ ) and romantic flirting ( $r = .19, p < .001$ ). With life satisfaction as the criterion variable, two of the flirting frequency settings did not achieve significance (restaurant and party), three barely made the cut ( $p$ s  $< .05$ ; sex, work, and school) and three were fairly robust: flirting with strangers ( $r = .17, p = .001$ ), at home ( $r = .20, p < .001$ ), and in a romantic setting ( $r = .24, p < .001$ ).

#### Support of Hypotheses

To determine support for the six hypotheses, separate regressions were conducted successively, with flirting skills, flirting frequency, life satisfaction, and friendship quality as criterion variables. Criteria for inclusion of predictors in the regression equations were bivariate correlations between predictor and criterion variables with a significance value  $<.001$ . Along with overall regression results, significant predictors are also identified and the beta weights listed. See Table S2 in Supplemental Material for regression assumption checks.

#### EFFECTS OF PERSONAL QUALITIES.

H1 was supported: Analysis revealed a significant association between personal qualities and flirting frequency,  $R(6, 308) = .446, R^2 = .20, p < .001$ . Two personal qualities entered the equation as predictors: risk taking ( $b = .28$ ) and nonverbal behaviors ( $b = .24$ ).

H2 was also supported: Analysis revealed a significant association between personal qualities and

flirting skill,  $R(9, 305) = .639, R^2 = .41, p < .001$ . Two personal qualities entered the equation as predictors: nonverbal behaviors ( $b = .27$ ) and risk taking ( $b = .25$ ).

#### EFFECTS OF FLIRTING FREQUENCY.

H3 was supported: Analysis revealed a significant association between flirting frequency and life satisfaction,  $R(4, 310) = .262, R^2 = .07, p < .001$ . One variable entered the equation as a predictor: higher frequency of romantic flirting ( $b = .17$ ).

H4 was also supported: Analysis revealed a significant association between flirting frequency and friendship quality,  $R(5, 309) = .246, R^2 = .06, p = .002$ . Two flirting settings entered the equation as predictors: more frequent romantic flirting ( $b = .34$ ) and less frequent sexual flirting ( $b = -.24$ ).

#### EFFECTS OF FLIRTING SKILL.

H5 was supported: Analysis revealed a significant association between flirting skill and life satisfaction,  $R(5, 309) = .343, R^2 = .12, p < .001$ . Two flirting settings entered the equation as predictors: higher skill in romantic flirting ( $b = .33$ ), and higher skill in home flirting ( $b = .16$ ).

H6 was also supported: Analysis revealed a significant association between flirting skill and friendship quality,  $R(8, 306) = .416, R^2 = .17, p < .001$ . Two flirting settings entered the equation as predictors: higher skill in romantic flirting ( $b = .34$ ) and higher skill in party flirting ( $b = .17$ ).

Additional analyses, particularly structural equation modeling, created a more nuanced look at the interactive nature of variables and their influence on friendship quality and life satisfaction. However, this initial analysis revealed that the relationship between personal qualities and flirting skill and flirting frequency ( $R^2$ s = .20, .41) was greater than the relationship between flirting skill and life satisfaction and friendship quality ( $R^2$ s = .12, .17), which in turn was greater than the modest relationship between flirting frequency and life satisfaction and friendship quality ( $R^2$ s = .07, .06).

#### Structural Equation Modeling

Structural equation modeling allows a greater understanding of the interactive impact of all related variables used in analyses. As for power, the present sample size (315) and number of free parameters (17)

results in a 19:1 ratio. This ratio meets the original ratio (5:1) presented by Bentler and Chow (1987), and it is also well within the range of modern minimum recommendations of 10:1 to 20:1 (Jackson, 2003; Kline, 2016; Kyriazos, 2018; Schumacker & Lomax, 2015).

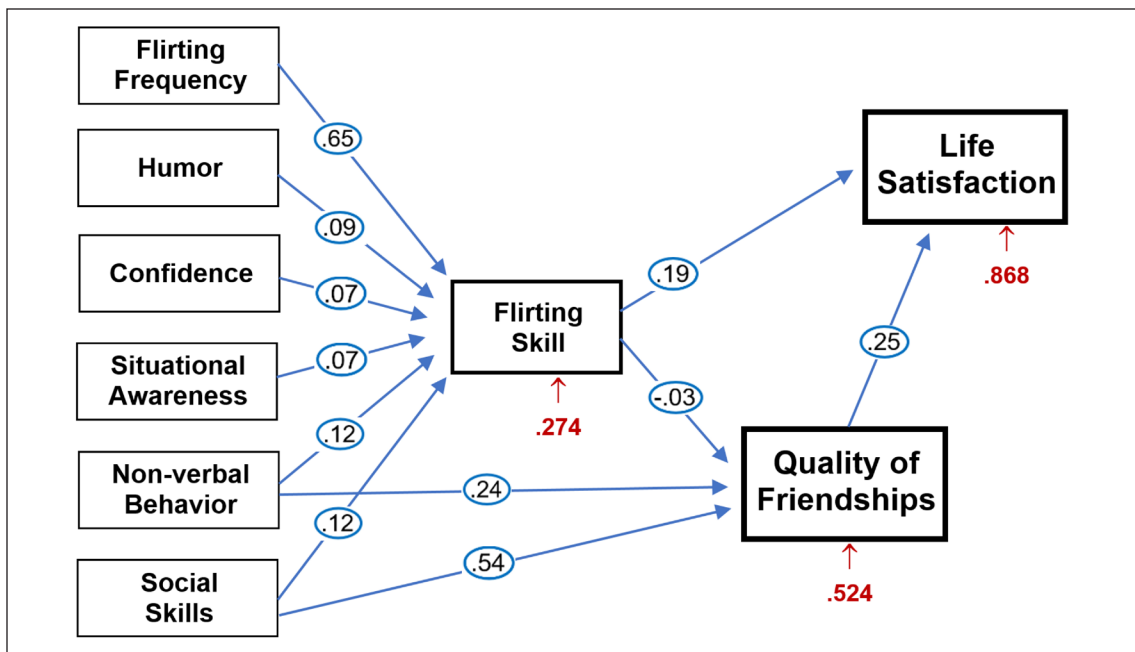
As is common with structural equation modeling, an initial model is created based on correlation and regression results and the theoretical underpinnings of the study. From this initial model, two fundamental changes were required to create a final model that was instructive (revealing key relationships between variables) and provided a good fit of the data; the first was to shift flirting frequency to become a predictor of flirting skill, and the second was to allow the nine individual qualities to be used as predictors rather than using the composite variable personal qualities. The initial change (frequency predicts skill) has strong theoretical and research support (e.g. George et al., 2023): Those who train a lot perform better athletically, and those who practice a lot perform better musically. In this case, those who flirt a lot have better flirting skill.

The final model (Figure 1) was an excellent fit of the data:  $\chi^2(10, n = 315) = 15.039, p = .131$ , the root

mean square error of approximation was .04, 90% CI ranged from 0 to .08, the comparative fit index was .99, and the Tucker–Lewis index was .98.

There were six predictors of flirting skill: flirting frequency ( $b = .65, p < .001$ ), nonverbal behavior ( $b = .12, p = .002$ ), social skills ( $b = .12, p = .001$ ), humor ( $b = .09, p = .012$ ), situational awareness ( $b = .07, p = .039$ ), and confidence ( $b = .07, p = .041$ ). Friendship quality was significantly associated with social skills ( $b = .54, p < .001$ ), nonverbal behavior ( $b = .24, p < .001$ ), and flirting skill ( $b = -.03, p = .258$ ). Life satisfaction was significantly associated with friendship quality ( $b = .25, p < .001$ ) and flirting skill ( $b = .19, p < .001$ ).

All aspects of this model conform to predictions based on prior studies plus correlational and regression analyses, except for one. In contrast to regression results reported earlier for H6, flirting skill was not significantly associated with friendship quality. We explore this unexpected finding in the *Discussion*. Another anomaly is that, in bivariate correlations, the composite variable flirting skill had the strongest relationship with friendship quality, but in the structural model, flirting skill had a much stronger relationship with life satisfaction.



**FIGURE 1.** Structural model of all significant flirting-related variables

## DISCUSSION

The primary goal of the present study was to reconceptualize the act of flirting to extend beyond the romantic and sexual contexts. The authors think this goal was largely fulfilled. At least six factors support this conclusion. (1) The expansion to eight contexts allowed direct comparisons between frequency and skill of flirting in multiple settings. (2) For flirting frequency, the most frequent settings (romantic flirting,  $M = 4.16$ ; 4 = *once a week*) was not that much different from the least frequent (stranger flirting,  $M = 3.15$ ; 3 = *1–3 times per month*). (3) For flirting skill, the gap was even smaller between the setting associated with greatest skill (party flirting,  $M = 4.84$ ) and the lowest skill (stranger flirting,  $M = 4.09$ ). (4) Flirting skill was higher than the midpoint (4.0) for all eight settings. (5) Internal consistency across the eight flirting settings was uniformly high for both frequency ( $\alpha = .89$ ) and skill ( $\alpha = .90$ ). (6) The dataset was the largest in the literature ( $N = 945$ ) and included a representative sample from 29 states, a broad age range (18–78 years), and a mean age much higher than the typical student survey (29.4 years).

The fact that both flirting frequency and skill were fairly consistent across situations implies that flirting is not purely a situational behavior but a product of practice or dispositional qualities. This consistency of flirting frequency and skill suggests that participants were able to suspend their beliefs regarding conventional conceptualizations of flirting and understand the additional contexts in which flirting occurs. Such findings are in line with our second objective.

The second objective of the present study was to create a clear operational definition of flirting. Previous research has often failed to clearly operationalize this construct, relying on nonacademic definitions or using narrow conceptualizations. In our definition, both the opening line (“the motivated, conscious, social act (verbal or nonverbal)”) and the conclusion (“through playful, entertaining, humorous, or clever behaviors”) encompass the multiple motivational, environmental, and behavioral aspects of flirting across several contexts and situations. However, the middle phrase (“intended to be mutually beneficial, that creates, maintains, or improves a relationship with an individual”) is not mainstream. The objective of this phrase was to focus the act of flirting as designed pri-

marily for relationship enhancement. This perspective contrasts sharply with the competing notion of flirting as a means of achieving a personal objective, such as seeking sexual favors or marketing a product or service. We were unable to distinguish between relationship enhancement flirting and instrumental flirting in this study; however, research techniques that may distinguish between the two are discussed later.

### *Flirting Skill and Flirting Frequency*

As the data suggested, flirting skill had a greater impact on the overall model than flirting frequency. Whereas flirting skill across the eight setting was positively and robustly associated with both life satisfaction and friendship quality, flirting frequency had a weaker association with either. Furthermore, flirting frequently in a sexual context correlates negatively with friendship quality in regression analyses ( $b = -.24$ ). This suggests that there are settings in which increased frequency does not necessarily guarantee increased skill. For example, people who flirt frequently in sexual ways may come across as predatory or inappropriate. Eventually, we chose to use flirting frequency as a predictor of flirting skill. The excellent fit of the final structural model verified that this choice was consistent with the data. The  $\beta$  weight of .65 (between frequency and skill) indicates that people who spend more time practicing flirting are likely to exhibit greater flirting skill. Flirting frequency still had an association with life satisfaction but was mediated through flirting skill.

### *Life Satisfaction*

The predictors of life satisfaction included flirting skill and friendship quality, which accounted for 13.2% of the total variance in life satisfaction. All predictors of friendship quality (nonverbal behavior and social skills) and all predictors of flirting skill (flirting frequency, humor, confidence, situational awareness, nonverbal behavior, and social skills) have no direct link with life satisfaction in the structural model. However, these six variables have a mediated association with life satisfaction through flirting skill and friendship quality. In fact, the mediated relationship of those six predictors yields a substantial  $\beta$  value of .25 (see Fairchild & MacKinnon, 2009, for the mathematics of computing the mediated effect of variables).

### Friendship Quality

The predictors of friendship quality followed quite a different pattern. There were two primary direct predictors—nonverbal behavior and social skills—explaining almost 50% of the variance in friendship quality. Surprisingly, in the structural model, flirting frequency did not have a direct link with friendship quality. One possible explanation is suggested by the fact that, in regression analysis, only 6% of the total variance in friendship quality was predicted by the eight flirting frequency settings. This same regression found that frequency of romantic flirting ( $b = .39$ ) was highly associated with higher friendship quality, but sexual flirting ( $b = -.24$ ) was associated with poorer friendship quality. The nonsignificant relationship between flirting skill and friendship quality ( $b = -.03$ ) remains a puzzle. In bivariate correlations, flirting skill in the eight contexts (and the composite flirting skill variable) was the greatest predictor of friendship quality, with  $r$  values ranging from .17 to .39. In future studies, as we begin to untangle the impact of instrumental flirting versus relationship enhancement flirting and the influence of certain covariates, clarity may emerge.

### Predictors of Flirting Skill

To our knowledge, this study is the one of few, if any, to use a measure of flirting frequency as a predictor of flirting skill. In the structural model, flirting frequency ( $b = .65$ ) had the strongest relationship with flirting skill. Additional personal qualities (humor, confidence, situational awareness, nonverbal behavior, and social skills) were also significantly associated with flirting skill. Flirting frequency and the five other personal qualities explains a substantial 72.6% of the variance in flirting skill. The individual predictor (other than frequency) with the strongest association was nonverbal behavior, a quality that ranked high in both bivariate correlations and regression analyses. Other studies support the prominence of nonverbal behavior in effective flirting (Archer & Akert, 1977; J. A. Hall & Xing, 2015; McCormick & Jones, 1989; Wade, 2015).

### Limitations and Avenues for Future Research

Like all studies, ours is not without limitations. First, the present data are based in a retrospective self-report method. Informants and main partici-

pants may not be completely accurate in recalling past flirting behavior. Future research could use more accurate methods, such as experience sampling or naturalistic observation. Second, the present data cannot rule out reasonable confounds. For instance, several other factors might explain the link between flirting skill and life satisfaction, such as extroversion, social connectedness, or positive romantic relationship outcomes. Future research could examine these potential confounds. Another possibility is the inclusion of additional covariates. For instance, the concept of the dark triad (narcissism, Machiavellianism, and psychopathy; see Furnham et al., 2013) might be predictive of manipulative forms of flirting (because dark traits have been shown to influence flirting behavior; Apostolou, Paphiti, et al., 2019), whereas the light triad (faith in humanity, humanism, and Kantianism; Kaufman et al., 2019) may be more predictive of relationship enhancement flirting. Third, the present research was unable to distinguish between relationship enhancement flirting and instrumental flirting. This question might be addressed in future studies. These studies could include a motivation for flirting variable in each of the eight contexts. With the triad-based method of measuring variables, we could explore the topic of motivation with reasonable objectivity. Finally, the present conclusions were drawn largely from a structural equation modeling model with exploratory elements. Therefore, this model is not designed to be a final say regarding this specific theory but to provide an acceptable model of the data that builds a foundation for future, confirmatory research.

### NOTES

Data, survey materials, and supplementary materials can be found at [https://osf.io/pgv2a/?view\\_only=0c5b3dad47674f349a68467db505ef30](https://osf.io/pgv2a/?view_only=0c5b3dad47674f349a68467db505ef30).

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1. Given that the dataset included both students and nonstudents, the nonstudent responses to this variable were mixed; some indicated “never” (for frequency) or “does not apply” (for skill), and others, probably thinking back to their school days, provided actual values. To resolve this, we created a regression equation based on student responses that used school flirting as the dependent variable and the other

seven types of flirting is predictors. Then, we used the same formula for the nonstudents. We replaced the “never” and “does not apply” responses with the predicted values and left the retrospective responses intact. The outcome was a variable with excellent psychometrics (skewness  $-.33$ ,  $.21$ ; kurtosis  $.03$ ,  $-.44$ ) that correlated highly with the other frequency and skill variables.

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