

## Initial Development of a Situation-based Measure of Emerging Adults' Social Competence in their Same-gender Friendships

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This paper describes the development of a situation-based tool to assess emerging adults' social competence with same-gender friends, providing information about (1) challenges occurring in these relationships, (2) the behaviors used to manage these situations, and (3) the perceived effectiveness of these strategies. Undergraduates ( $N = 747$ ; 409 women;  $M_{\text{age}} = 20.16$ ,  $SD = 1.43$ ) participated in five studies. Transgressions, conflicts of interest, and support situations emerged as key challenges, and emerging adults reported using aggressive, assertive, avoidant, and apologizing behaviors to manage these situations. In general, apologizing and assertive behaviors were judged more effective than aggressive or avoidant behaviors. Results yielded the Inventory of Friendship Challenges for Emerging Adults (IFCEA), which showed expected associations with measures of interpersonal behavior.

Key words: emerging adulthood – friendship – social competence

### INTRODUCTION

Emerging adulthood (ages 18-25 years) is a unique developmental period marked by significant social change (e.g., Arnett, 2007). During this period, friends are a crucial source of social support (Carbery & Buhrmester, 1998). Given the documented links between high-quality friendships and greater well-being (e.g., Pittman & Richmond, 2008), it is essential to understand how emerging adults can successfully navigate friendship changes and challenges. To address this issue, we (1) identified key situations occurring in emerging adults' friendships, (2) documented how emerging adults report managing these scenarios, and (3) examined emerging adults' perceptions of the competence of these responses. Using this information, we developed a situation-based assessment of social competence with same-gender friends during emerging adulthood and obtained preliminary evidence for its validity by examining associations between this inventory and other established measures of interpersonal skills and behavior.

The importance of friendships for emerging adults' well-being is well-documented. Friendships are a primary source of social support at this age (e.g., Azmitia, Syed, & Radmacher, 2013; Derlega,

Anderson, Winstead, & Greene, 2011); correspondingly, having high-quality, stable friendships is associated with better social, emotional, and academic functioning (e.g., Pittman & Richmond, 2008). Relationships with same-gender friends may be especially important for emerging adults (see Barry, Madsen, & DeGrace, 2016). Not only are they more common than heterosocial friendships (see Mehta & Strough, 2009), many emerging adults indicate a preference for their same-gender friendships (e.g., Baumgarte & Nelson, 2009). Compared to heterosocial friendships, same-gender friendships are often characterized by less conflict and greater closeness (e.g., Sherman, Lansford, & Volling, 2006; see Barry et al., 2016). Moreover, emerging adults are more likely to disclose personal information to same-gender friends, compared to parents or romantic partners (Derlega et al., 2011). Given the provisions of same-gender friendships, it is not surprising that the quality of these relationships contributes to the happiness of emerging adults (e.g., Demir, Vento, Boyd, & Hanks, 2018).

### Measuring Emerging Adults' Social Competence in Same-Gender Friendships

The importance of same-gender friendships makes it critical that we have tools for measuring emerging adults' social competence, or interpersonal effectiveness (Dirks, Treat, & Weersing, 2007a; Dryburgh et al., 2020), in these relationships. Researchers have often measured social compe-

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This work was supported by a Standard Research Grant and an Insight Grant from the Social Sciences and Humanities Research Council of Canada (SSHRC) awarded to Melanie Dirks, as well as fellowships awarded to Miriam Kirmayer and Thomas Khullar by SSHRC and the Fonds de Recherche du Québec-Société et Culture

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tence by assessing the frequency with which someone engages in key behaviors (see Dirks et al., 2007a). Work with adolescents suggests that some behaviors—for example, prosocial actions such as helping—are associated with higher-quality friendships, whereas others, such as aggression, are associated with lower-quality friendships (e.g., Cillessen, Jiang, West, & Laszkowski, 2005). Alternatively, assessments may measure the use of a broader repertoire of skillful behaviors. For example, the widely used Interpersonal Competence Questionnaire (ICQ; Buhrmester, Furman, Wittenberg, & Reis, 1988) asks emerging adults to rate their ability to engage in skills including assertion (e.g., turning down a request) and providing support (e.g., listening when someone is feeling upset). Greater skill as indexed by the ICQ is associated with higher-quality friendships during emerging adulthood (e.g., Festa, Barry, Sherman, & Grover, 2012).

Although the types of behaviors in which people engage have been linked to the quality of their friendships, global judgments of people's ability to behave skillfully, or the frequency with which they do so, are limited as indices of social competence, for two reasons (see Dirks et al., 2007a; Dryburgh et al., 2020). First, it is well-documented that there are reliable intra-individual differences in behavior across situations, such that a person who engages in a behavior in one circumstance is not more likely than others to do so in another (Shoda, Mischel, & Wright, 1994). Correspondingly, knowing how someone behaves, in general, provides little insight into how they will actually behave in specific, meaningful situations. Second, situation not only impacts how people behave, it also shapes others' perceptions of those actions. Social competence is not an intrinsic property of behavior; rather, it is a judgment that someone behaved effectively (see Dirks et al., 2007a; McFall, 1982). These judgments depend, in part, on the situation in which the behavior occurs. Even behaviors typically viewed positively, such as sharing or helping, are not always seen as effective. For example, youth judge saying "no" to peers' unreasonable requests to give up a resource more positively than they do acquiescing to the demand (Shaw & Wainryb, 2006). Conversely, asserting one's self-interest may not be effective in conflicts in which two people have an equal claim (McDonald & Asher, 2013). Thus, interpersonal effectiveness is not just a matter of engaging in "good" behaviors; the right action in the wrong circumstances is not competent. Given that situation shapes both how people

behave and others' perceptions of those actions, the most meaningful information about interpersonal effectiveness will be gleaned by assessing how competently someone manages specific, critical interpersonal situations.

### **Friendship Experiences of Emerging Adults: Key Situations and Behaviors**

If social competence is measured with respect to interpersonal situations, it is vital to examine the right scenarios. Emerging adults will confront an infinite number of situations with their same-gender friends, but most will not yield insight into their social adjustment. Goldfried and D'Zurilla (1969) theorized that the most informative situations to assess are those that are commonly occurring, difficult to manage, and critical (i.e., performing inadequately will have negative consequences).

Although little work has examined the challenges occurring in the friendships of emerging adults, research with children and adolescents, as well as studies of adults' romantic relationships, suggest types of situations likely to be important. Conflicts, defined as interpersonal events in which two people are in overt behavioral opposition (Laursen & Adams, 2018), occur frequently in adolescents' friendships, with one study documenting that adolescents averaged more than one conflict per day in their close friendships (Laursen, 1995). Emerging adults also report that disagreements with friends are part of their daily lives (e.g., Schumann & Ross, 2010). Importantly, how individuals manage conflict with a friend or romantic partner is linked to relationship quality (e.g., Rose & Asher, 1999; Salvatore, Kuo, Steele, Simpson, & Collins, 2011).

Asher and colleagues (MacEvoy & Asher, 2012; Rose & Asher, 2017) highlight the importance of another type of situation, friendship transgressions, which occur when one friend has violated a core expectation of friendship (e.g., by behaving disloyally.) For children, these situations are distressing and may be associated with aggressive responses (MacEvoy & Asher, 2012). Given that expectations for the closeness of friendship increase across adolescence (see Bagwell & Schmidt, 2011), transgressions will likely continue to be an important challenge during emerging adulthood.

Research has also suggested the types of behaviors that emerging adults may use when responding to challenging situations in their friendships, as well as whether these behaviors

may be helpful or harmful. Interpersonal behaviors have often been divided into three broad categories (see Dirks, Treat, & Weersing, 2011): (1) assertive behaviors, which involve expressing one's thoughts or feelings without infringing on the rights of another (Alberti & Emmons, 1970; e.g., telling someone to stop a problematic behavior); (2) aggressive behaviors that harm or injure another (Dodge, Coie, & Lynam, 2006), including physical, verbal, and relational (i.e., damaging others' relationships or reputation) aggression, and (3) avoidant behaviors in which an individual does not confront a problem directly, for example, by ignoring hurtful behavior (Dirks et al., 2011). The use of assertive strategies may be particularly beneficial for relationships. There is evidence that emerging adults who report engaging in these behaviors demonstrate greater self- (Festa et al., 2012) and friend-reported relationship satisfaction (Buhrmester et al., 1988). In contrast, self-reported aggressive behavior with peers is associated with poorer relationship quality (e.g., Linder, Crick, & Collins, 2002). Moreover, emerging adults who are socially withdrawn or avoidant report lower-quality friendships (Nelson et al., 2008). Taken together, it appears that assertive behaviors may be competent responses to challenging situations with friends, whereas aggressive and avoidant behaviors may be less effective.

The broad behavioral categories of assertion, aggression, and avoidance capture typical responses when someone has been wronged or harmed (e.g., Dirks et al., 2011; MacEvoy & Asher, 2012). Less work has examined how people manage situations in which they have done harm or feel responsible for a conflict (Riek, Luna, & Schnabelrauch, 2014); however, such situations may be an important part of emerging adults' everyday lives. Notably, a study of daily interpersonal conflicts indicated that emerging adults reported being the transgressor more often than the victim (Schumann & Ross, 2010).

In these circumstances, it may be important to apologize. In its most basic form, the words "I'm sorry" or "I apologize" constitute an apology, but other elements may be included, such as acknowledging the harm done or offering to make reparations (Schumann, 2014). Research indicates that apologizing is associated with positive outcomes, such as greater forgiveness (Fehr, Gelfand, & Nag, 2010), suggesting that apologizing may be an effective strategy in some types of challenging situations with friends.

## Gender Differences in Friendship Experiences

Research with emerging adults highlights potential gender differences in the experience of friendship challenges, as well as the behaviors that men and women may use to manage these situations. Women perceive their same-gender friendships to be higher in intimacy and emotional support than do men (e.g., Baumgarte & Nelson, 2009; Fehr, 2004) suggesting that women may encounter fewer challenges in their friendships. However, compared to men, women also place greater value on and have higher expectations for their same-gender friends (Hall, 2011). These characteristics may contribute to women experiencing more challenges with their friends, as they may perceive friends' behavior as more problematic (Felmlee, Sweet, & Sinclair, 2012), and may be angrier when conflicts arise (Benenson et al., 2014). Moreover, women's higher expectations may mean that how a person responds to a challenging situation is more consequential in female friendships. For these reasons, women may perceive friendship challenges as more critical and difficult to manage than do men. Research has also documented gender differences in the frequency with which men and women engage in different behaviors with friends. For example, men engage in more physical and verbal aggression than do women (e.g., Bailey & Ostrov, 2008), whereas women apologize more often than do men (Schumann & Ross, 2010). Research examining gender differences in use of assertive behaviors has yielded mixed results (e.g., Costa, Terracciano, & McCrae, 2001; De Wied, Branje, & Meeus, 2007; Keener & Strough, 2017), as has work examining engagement in avoidant strategies (e.g., Black, 2000; De Wied et al., 2007). Given the importance of same-gender friendships during emerging adulthood (Barry et al., 2016), it is essential to continue to explore possible differences between men and women in the types of challenges that occur in these relationships, as well as the perceived competence of strategies used to manage these situations.

## The Current Study

The overarching aim of this study was to develop a situation-based assessment of emerging adults' social competence with same-gender friends. To date, research on friendship has largely focused on children and adolescents (see Bagwell & Schmidt, 2011). Developmental differences in the processes and provisions of friendship limit the generalizability of this body of work to young adults. For

example, social networks expand in emerging adulthood (Wrzus, Hänel, Wagner, & Neyer, 2013), which may give rise to challenges involving third parties, such as new friends or partners. This expanded social network may also shape how emerging adults respond to challenging situations with friends; for instance, it may be easier to ignore a problem with a given friend because more friends are available. In addition, behaviors that are effective during earlier developmental periods may not work as well for emerging adults. For example, early adolescents perceive some verbally aggressive behaviors to be more effective than assertive strategies when responding to transgressions by friends; in contrast, adults perceive verbal aggression to be markedly less effective than assertion (Dirks, Treat, & Weersing, 2010). For these reasons, while research with youth provides a helpful starting point for understanding the friendships of emerging adults, a measure of emerging adults' social competence based on the friendship experiences of children and adolescents will be limited.

As it was essential to assess directly the challenging situations occurring in the friendships of emerging adults, as well as what emerging adults perceive to be effective responses in these circumstances, we followed the steps of Goldfried and D'Zurilla's (1969) behavior-analytic model. Within this framework, situations and responses are garnered directly from the population of interest. In each of four studies conducted with independent samples of emerging adults, participants (1) generated challenging situations occurring in their friendships (*situation identification*); (2) rated how common, difficult to manage, and important (i.e., responding ineffectively would have significant consequences for the relationship or for their well-being) the situations were (*situation validation*); (3) stated what they would say or do if these situations really happened to them (*response enumeration*); and (4) rated the competence of the generated responses (*response evaluation*). Using these data, we constructed a multiple-choice inventory consisting of a set of vignettes describing challenging friendship situations, each paired with four responses reflecting differing degrees of competence. Finally, we (5) obtained preliminary evidence for the psychometric properties of this new inventory (*measure validation*). In this final study, we conducted a factor analysis to determine if participants' responses comprised underlying dimensions. We then examined convergent validity, hypothesizing participants' competence as indexed by the new inventory would be positively correlated with a

well-validated, widely used measure of interpersonal skill, and negatively correlated with reported aggression, a behavior associated with lower friendship quality (e.g., Cillessen et al., 2005).

These studies also provided an opportunity to (1) identify situations that are commonly occurring, difficult to manage, and important in the friendships of emerging adults, (2) describe responses that may be effective in these circumstances, and (3) examine whether these judgments of situations and responses vary as a function of gender. We tested several hypotheses. First, we expected that emerging adults would identify transgressions (i.e., situations in which one person has violated a core expectation of friendship) and conflicts (i.e., situations in which there are opposing or conflicting viewpoints or needs) as challenges occurring in their friendships. We also predicted that emerging adults would endorse assertive, aggressive, avoidant, and apologizing behaviors in response to these situations, and that behaviors involving assertion or apologizing would, in general, be evaluated as more competent than aggressive or avoidant responses. We expected that women would evaluate friendship challenges as more commonly occurring, difficult to manage, and important than would men. Limited work has examined whether men and women hold varying perceptions of the competence of important interpersonal behaviors. However, based on work detailing gender differences in behavior, we expected that men would evaluate physically and verbally aggressive strategies as more effective than would women, and that women would evaluate apologizing as more competent than would men.

## OVERVIEW OF STUDIES

We conducted five studies with independent samples of undergraduate students attending a large Canadian university. All procedures were approved by the relevant research ethics board and written informed consent was obtained from all participants. Target sample sizes for each study were determined based on review of similar work (e.g., Grover, Nangle, & Zeff, 2005; McFall, Eason, Edmondson, & Treat, 1999), as well as the goals of the study. In all studies, we administered a brief questionnaire to obtain information about demographic variables such as ethnicity, sexual orientation, relationship status, and living situation (e.g., in a dormitory, with family). Table 1 provides a detailed summary of sample sizes and characteristics for each of the five studies. In general,

participants were between the ages of 18 and 25 years and primarily non-Hispanic White (between 53.3% and 62.0%). Other ethnicities included Chinese (11.0% to 19.0%) and South Asian (5.5% to 9.0%). Most participants self-identified as heterosexual (78.1% to 91.5%). Given documented gender differences in friendship experiences, it was important to recruit approximately equal numbers of women and men; thus, in addition to recruiting from a participant pool run by the Department of Psychology, which largely comprises women, we also utilized a paid participant pool and posted advertisements on campus. Participants received course credit or \$10/hour as compensation for their time. No student participated in more than one study. All coding systems are available from the corresponding author.

### Study 1: Situation Identification

**Participants and procedure.** The aims of this study were to generate an exhaustive pool of challenging situations occurring in emerging adults' same-gender friendships and to categorize these situations descriptively. In addition to the participants described in Table 1, we recruited 7 dormitory supervisors (4 women) between the ages of 18-25 years ( $M_{age} = 20.29$ ,  $SD = .76$ ). Dormitory supervisors are trained senior students responsible for individuals living in dormitories and thus have insight into the challenges occurring in emerging adults' same-gender friendships and roommate relationships.

Data were collected through individual interviews conducted by a same-gender interviewer lasting 1 to 2 hours. Interviewers were trained by the primary investigator and received feedback throughout the study to ensure adherence to protocols. During the interview, participants described difficult situations they experienced in their same-gender friendships during their undergraduate studies. Dormitory supervisors were asked to identify challenging situations relayed to them by dormitory residents, as well as relevant challenges they experienced themselves. At the start of each interview, participants were told that a difficult situation is "one in which you are nervous or not sure how to act or what to do" (Grover & Nangle, 2003). Participants were encouraged to describe situations spanning a broad range in terms of difficulty. Questions were asked as needed to identify relevant details (e.g., *What happened next?*). Once participants were unable to generate any new situations, specific prompts related to context (e.g., *Can*

*you think of challenging situations related to your living situation?*) and emotions (e.g., *When was the last time one of your male/female friends made you angry?*) were given to identify as many situations as possible. At the end, participants described a positive friendship experience to ensure that they did not leave feeling upset. Interviews were audio-recorded and transcribed.

**Data-analytic plan.** To identify a pool of potential situations, a trained research assistant (RA) read through each transcription and identified segments of text representing distinct challenges. When multiple challenges were described within a given situation, each challenge was identified as a unique situation. Situations were reviewed by members of the research team to ensure that they occurred with a same-gender friend during university and were then sorted according to their underlying friendship challenge. Situations reflecting similar challenges (e.g., a friend does not reply to a text message versus a friend does not call you back) were combined. Disagreements were discussed and resolved between members of the research team. After identifying a set of situations, we categorized them descriptively using a reliable coding system.

### Results

**Identifying challenging friendship situations.** Initial review of the transcripts yielded 809 situations. Participants identified between 3 and 19 situations ( $M = 7.56$ ,  $SD = 2.98$ ). There was no difference in the number of situations generated by men ( $M = 7.87$ ,  $SD = 3.40$ ) and women ( $M = 7.30$ ,  $SD = 2.51$ ),  $t(105) = -1.06$ ,  $p = .30$ . Fifty-eight situations (7.2%) were excluded because they did not occur with a same-gender friend during university. After combining situations with similar underlying challenges, we were left with 254 unique situations.

**Categorizing challenging friendship situations.** Based on a review of the literature on children's, adolescents', and emerging adults' friendships (e.g., Azmitia, Ittel, & Radmacher, 2005; Rose & Asher, 1999) as well as the situations themselves, we identified three broad categories: (1) *Transgressions*, in which either the participant or a same-gender friend has violated a core expectation of friendship (e.g., by behaving unreliably or unfairly; MacEvoy & Asher, 2012), (2) *Conflicts of interest* (hereinafter referred to as *Conflicts*), in which there is a mismatch of needs (e.g., roommate disagreements about cleanliness or noise, differences in moral or political views; McDonald &

TABLE 1  
Sample Demographics for the Five Studies

|                                     | Study 1                                     | Study 2                         | Study 3                         | Study 4                        | Study 5            |
|-------------------------------------|---|---------------------------------|---------------------------------|--------------------------------|--------------------|
| Total N                             | 100 <sup>1</sup><br>(50 women) <sup>2</sup> | 200 <sup>4</sup><br>(100 women) | 179 <sup>5</sup><br>(100 women) | 105 <sup>6</sup><br>(55 women) | 163<br>(104 women) |
| <i>M</i> <sub>age</sub> , <i>SD</i> | 20.41, 1.44                                 | 20.24, 1.42                     | 20.42, 1.54                     | 20.00, 1.34                    | 19.72, 1.28        |
| Ethnicity                           |   |                                 |                                 |                                |                    |
| Non-Hispanic White                  | 59.0%                                       | 56.0%                           | 55.9%                           | 53.3%                          | 62.0%              |
| Chinese                             | 19.0%                                       | 11.0%                           | 11.7%                           | 19.0%                          | 15.3%              |
| South Asian                         | 9.0%  | 5.5%                            | 7.3%                            | 5.7%                           | 5.5%               |
| Arab/West Asian                     | 5.0%  | 3.5%                            | 3.9%                            | 5.7%                           | 6.1%               |
| Other <sup>3</sup>                  | 8.0%  | 24.0%                           | 21.4%                           | 16.4%                          | 10.9%              |
| Registered in Full-Time Studies     | 96.0%                                       | 97.0%                           | 95.0%                           | 95.2%                          | 97.5%              |
| First Year of University            | 20.0%                                       | 29.5%                           | 21.2%                           | 40.0%                          | 42.3%              |
| Sexual Orientation                  |   |                                 |                                 |                                |                    |
| Heterosexual                        | 87.0%                                       | 91.5%                           | 82.7%                           | 78.1%                          | 87.7%              |
| Homosexual                          | 9.0%  | 5.0%                            | 5.6%                            | 11.4%                          | 2.5%               |
| Bisexual                            | 3.0%  | 2.0%                            | 10.6%                           | 9.5%                           | 7.4%               |
| Relationship Status                 |   |                                 |                                 |                                |                    |
| Single                              | 73.0%                                       | 64.5%                           | 61.5%                           | 85.7%                          | 58.9%              |
| In a Relationship                   | 27.0%                                       | 34.5%                           | 38.0%                           | 14.3%                          | 40.5%              |
| Living Situation                    |   |                                 |                                 |                                |                    |
| Live Alone                          | 12.0%                                       | 10.5%                           | 12.8%                           | 5.7%                           | 8.0%               |
| Live in Dormitory                   | 7.0%  | 11.0%                           | 11.2%                           | 16.2%                          | 18.4%              |
| Live with Roommate(s)               | 42.0%                                       | 48.5%                           | 62.6%                           | 34.3%                          | 41.1%              |
| Live with Romantic Partner          | 5.0%  | 2.0%                            | 2.2%                            | 0.0%                           | 5.5%               |
| Live with Parent(s) or Family       | 34.0%                                       | 26.5%                           | 10.6%                           | 42.9%                          | 25.8%              |
| Family Living in Same City          | 45.0%                                       | 36.5%                           | 30.2%                           | 49.5%                          | 39.9%              |

Note. We did not report categories where fewer than 5% of participants endorsed a certain category across all 5 studies. As a result, not all totals add up to 100%.

<sup>1</sup> We interviewed 7 floor fellows who did not report on demographic variables beyond gender and age and are not included here.

<sup>2</sup> Demographic questionnaire invited participants to specify their gender as female, male or other; all identified as either female or male.

<sup>3</sup> Other ethnicities included African American, Hispanic, Japanese, Korean, and South East Asian.

<sup>4</sup> We excluded 25 additional participants from analyses (4 participated in Study 1, 1 completed the questionnaire twice, 20 provided consent and completed the demographic questionnaire but did not complete remaining questions).

<sup>5</sup> Two additional participants were excluded from analyses (1 participated in Study 2 and 1 whose recording was lost due to a technical error).

<sup>6</sup> Nine additional participants were excluded (1 provided consent but completed no questionnaires, 7 completed the demographic questionnaire but did not provide any competence ratings, and 1 participated in a previous step).

Asher, 2013; Rose & Asher, 1999), and (3) *Support*, which included difficulties related to the exchange of both solicited or unsolicited help or advice. *Support* situations were distinct from *Transgressions* as they were scenarios in which a friend was clearly trying to provide support and, as such, a core expectation of friendship was not violated; however, the provision of support was experienced as intrusive or unhelpful. For example, a friend may want to be supportive but not know what to say or do, or may offer unsolicited advice that is experienced as critical. Table 2 provides examples of situations coded in each category. Of the 254 situations, 248 were coded independently into one of three categories by two raters: *Transgressions*,  $\kappa = .91$ , 46.5% (situations = 118), *Conflicts*,  $\kappa = .93$ ,

39.8% (situations = 101), and *Support*,  $\kappa = .92$ , 11.4% (situations = 29).

## Study 2: Situation Validation

In the second study, we examined how commonly occurring, difficult, and important each of these situations were. Our primary objective was to identify situations to include in the inventory; however, these data also provided an opportunity to examine whether these ratings differ as a function of (1) gender, and (2) the type of situation (i.e., conflict, transgression, or support).

**Participants and procedure.** See Table 1 for a summary of participant characteristics. We wrote

TABLE 2  
Study 1: Examples of Friendship Challenges Identified by Emerging Adults

| Type of Situation | Examples   |
|-------------------|--|
| Transgressions    | One of your friends is nice to you one-on-one. However, he/she treats you differently and makes fun of you around your other friends.<br>One of your friends is upset when you are consistently late for your plans together.<br>One of your friends always talks about his/her own life or interests and does not want to talk about you or your interests.                                   |
| Conflicts         | One of your friends asks if you want to live together. However, you do not want to live with him/her.<br>Your friend is often rude to waiters and waitresses while you are out together.<br>Your roommate wants to keep the apartment cleaner than you do, and he/she repeatedly asks you to clean up after yourself more.   |
| Support           | You are worried about one of your friends who you feel is in an unhealthy romantic relationship.<br>One of your friends is worried about your mental health (e.g., depression and anxiety).<br>Whenever you try to speak to your friend about difficulties in your relationships (e.g., romantic relationship and other friendships), he/she tries to be supportive but gives you poor advice. |

brief descriptions for each of the 254 situations identified in Study 1 (e.g., “You accidentally tell other people one of your male/female friend’s secrets that he/she told you in confidence”). We created male and female versions of each sentence, differing only in the pronouns used to identify the friend’s gender. We then created two questionnaires, each comprised of half of the situations (randomly assigned). One hundred participants (50 women) were randomly assigned to complete each version. Participants rated each of the situations on a 5-point Likert scale (1 = *not at all*, 5 = *very much*) according to how *common* (i.e., How frequently does this situation happen to you or your male/female friends?), *difficult* (i.e., How hard is it to figure out what to do in this situation?), and *important* (i.e., How likely is it that there will be negative consequences if you do the wrong thing in this situation?) it is. Prior to rating the situations, participants completed a brief quiz in which they were required to provide the correct definitions for each of these terms. Situations were presented in random order; the order of presentation of the rating scales was also randomized.

*Data-analytic plan.* Missing data (.9%) were imputed using the mean rating for that situation. In our data set, each participant rated 127 situations and every situation was rated by 100 participants. Thus, to determine whether ratings of frequency, difficulty, and importance differed between (1) men and women, and (2) type of situation, we computed a series of linear-mixed models using the *lmer* function in the *lme4* package in R (Bates, Mächler, Bolker, & Walker, 2015). For each type of rating, we fit four models. In the first model, we estimated the fixed effect of gender

(males =  $-1$ ; females =  $1$ ), while allowing the intercept to vary randomly across both participant and situation and the effect of gender to vary across situation. The fixed intercept in these models reflects the average rating of frequency, difficulty, and importance. In the second to fourth models, we estimated fixed effects of type of situation (i.e., conflict, transgression, and support). All pairwise comparisons were of interest; as such, we ran three models, each including a dummy-coded variable contrasting two situation-types (i.e., Transgression (1) versus Conflict (0); Transgression (1) versus Support (0); Support (1) versus Conflict (0)). We estimated the random intercept across both participant and situation, as well as the random effect of situation-type across participant. In these models, we included a fixed effect of questionnaire version, to account for the fact that the specific situations, as well as the number of situations of each type, varied across versions.

To develop an inventory of friendship situations, we needed to identify scenarios that were both relevant and challenging. Thus, for each situation, we conducted three one-sample *t* tests, comparing the mean rating of each of frequency, difficulty, and importance to a critical value. For difficulty and importance, the critical value was set at 2.50. On average, ratings of frequency were lower, thus the critical value was set at 2.00 (i.e., participants, on average, endorsed that these situations occur at least occasionally). Alpha was set at .05.

## Results

*Differences in ratings of frequency, difficulty, and importance as a function of gender and*

*situation-type*. In our first set of linear-mixed models, the fixed intercepts for ratings of frequency, difficulty, and importance—each rated on a scale from 1 (*not at all*) to 5 (*very much*)—were 1.95, 2.97, and 2.90. The fixed effect of gender was significant for ratings of difficulty,  $B = .25$ ,  $t(202.9) = 3.15$ ,  $p = .002$ , and importance,  $B = .27$ ,  $t(204.4) = 3.73$ ,  $p < .001$ , such that women gave higher ratings than did men. Men and women did not differ in their ratings of frequency,  $B = .08$ ,  $t(207.2) = 1.11$ ,  $p = .27$ .

In our next models, we compared ratings between each situation-type. Participants rated conflicts as more common than transgressions,  $B = -.16$ ,  $t(233.5) = -2.79$ ,  $p = .006$ . Ratings of frequency did not differ between transgressions and support,  $B = -.17$ ,  $t(158.9) = -1.96$ ,  $p = .05$ , nor between conflicts and support,  $B = .01$ ,  $t(133.2) = 0.12$ ,  $p = .90$ . Conflicts were evaluated as less difficult than both transgressions,  $B = .23$ ,  $t(241.5) = 3.50$ ,  $p < .001$ , and support situations,  $B = .25$ ,  $t(133.4) = 2.42$ ,  $p = .02$ . Difficulty ratings did not differ between transgression and support situations,  $B = -.02$ ,  $t(133.4) = -.35$ ,  $p = .80$ . Judgments of importance also did not differ across transgressions and support,  $B = .17$ ,  $t(170.2) = 1.47$ ,  $p = .14$ ; whereas, conflicts were judged to be less critical than both transgressions,  $B = .41$ ,  $t(243.9) = 5.44$ ,  $p < .001$ , and support situations,  $B = .23$ ,  $t(135.9) = 2.08$ ,  $p = .04$ .

*Selecting situations for final inventory.* After conducting the one-sample  $t$  tests, the ratings of 50 unique situations significantly exceeded the identified cut-offs on all three dimensions and were included moving forward.

### Study 3: Response Enumeration

*Participants and procedure.* To identify the behavioral strategies that emerging adults endorse in response to same-gender friendship challenges, participants completed individual interviews conducted by a same-gender interviewer each lasting approximately 2 hr. See Table 1 for information about sample characteristics. The 50 situations chosen for the final inventory were expanded into more detailed written vignettes. Twelve additional situations were added to balance the number of situations across perspective (e.g., ensuring that there was an equal number of transgressions made by both the participant and friend). Participants were presented with the 62 friendship vignettes on a computer, in a randomized order, and were

instructed to imagine that situation was happening to them. Gender of characters was matched to gender of participant. Following each vignette, participants were asked to state everything they would say or do in that situation. Prompts were given when the nature of participants' responses was unclear (e.g., "What exactly would you say?") or if participants described a response occurring at a later time (e.g., "What would you say or do in this moment?"). Participants' responses were audio-recorded and transcribed. At the end of the interview, participants also completed questionnaires assessing additional constructs theoretically expected to be related to how they manage friendship challenges (e.g., depressive symptoms). These data are not reported here.

*Data-analytic plan.* The goals of this study were to (1) identify candidate responses for inclusion in the final inventory, and (2) categorize these responses descriptively. For the final inventory, we needed to pair each vignette with four responses spanning the range from highly incompetent to highly competent. The authors reviewed responses and for each situation, identified strategies that were endorsed frequently and were thought to reflect differing degrees of competence. After identifying a set of responses, we categorized them descriptively using a reliable coding system.

### Results

Nine of the 62 situations were not considered further because nearly every participant gave the same response (e.g., "I would apologize") or it was unclear to participants what the core challenge was. For the remaining 53 situations, we identified between 7 and 14 unique responses to be evaluated for competence in Study 4.

Next, we descriptively coded these responses. We developed codes based on a review of the relevant literature (e.g., Dirks, Treat, & Weersing, 2007b; McDonald & Asher, 2013; Schumann, 2014) and the responses themselves. All responses were coded independently by two RAs; coding used in analyses was completed by an RA unaware of hypotheses.

Responses were coded into 12 categories. As expected, we identified aggressive behaviors, specifically (1) *Verbal Aggression* ( $\kappa = .84$ ) and (2) *Damaging Relationships/ Reputation* ( $\kappa = .82$ ). Only one physically aggressive response was generated, thus this behavior was not considered further. We coded two types of assertive behaviors: (3) *Seeking an Explanation* ( $\kappa = .98$ ) and (4) *Limit Crossing*,



which involved telling the friend that their behavior crossed limits or boundaries ( $\kappa = .80$ ). We coded two discrete avoidant behaviors: (5) *Doing Nothing—No Attempt to Change* the situation (e.g., not saying or doing anything;  $\kappa = .87$ ), (6) *Doing Nothing—Attempt to Change* the situation (e.g., not saying or doing anything about the core challenge, but changing the topic of the conversation;  $\kappa = .79$ ). Participants also generated different friendship-dissolution behaviors: (7) *Ending* the friendship ( $\kappa = .95$ ), (8) *Distancing* from friend (e.g., not speaking to a friend as often;  $\kappa = .83$ ), and (9) *Compartmentalizing* the friendship (e.g., setting limits or boundaries on the topics discussed or the types of activities shared with a friend;  $\kappa = .85$ ). Participants also described (10) *Apologizing* ( $\kappa = .99$ ), (11) *Providing Support/Making Reparations* ( $\kappa = .80$ ), and (12) *Lie-telling* ( $\kappa = .89$ ). See Table 3 for sample responses.

Responses could be coded into more than one category, except *Doing Nothing—No Attempt Change* and *Doing Nothing—Attempt Change* (which were mutually exclusive). In addition, *Ending* the friendship could not be coded with *Distancing* or *Compartmentalizing*. Accordingly, 93.8% of responses were coded into at least one category. Common co-occurring categories included *Verbal Aggression* with either *Seeking an Explanation* or *Limit Crossing* and *Apologizing* with *Providing Support/Making Reparations*. Note that more than 11,000 responses were generated making it infeasible to code every strategy; thus, we coded only the subset of the responses chosen for inclusion in Study 4. For this reason, it is not meaningful to report overall frequency of behaviors, nor to examine gender differences in endorsement of behaviors or the percentage of responses coded into each category.

#### Study 4: Response Evaluation

In Study 4, we examined the effectiveness of the responses selected in Study 3. Our primary objective was to identify a set of four responses spanning the range of competence for each situation for inclusion in the final measure. As we coded responses into descriptive categories, these data also allowed for a preliminary examination of whether effectiveness ratings varied as a function of behavior, as well as gender.

**Participants and procedure.** To evaluate the perceived competence of the responses generated in Study 3, we asked participants (see Table 1) to rate their effectiveness (see Table 3 for sample responses).

Data were collected through a web-based survey lasting approximately one hour. After reading each of the 53 situations (presented in random order) participants rated the corresponding behavioral responses (presented in random order) on a 4-point Likert scale (1 = *least effective*, 4 = *most effective*; McFall et al., 1999). Participants were instructed that an effective response is one that “solves the present problem, makes future problems of the same type less likely, and does not introduce any new problems” (e.g., Grover et al., 2005).

**Data-analytic plan.** Our primary goal was to identify responses representing each of the four levels of competence for each situation. To do so, we calculated the mean and standard deviation of the effectiveness ratings for each response. Then, within each situation, responses were ranked according to their mean level of perceived competence and responses with mean ratings closest to a 1-, 2-, 3-, and 4-point answer (and a corresponding small standard deviation indicating greater consensus) were identified. We used these mean ratings to guide our final selection, also considering whether the four responses were sufficiently distinct.

We also examined whether ratings differed as a function of behavior. As our main objective was to choose responses for the inventory, we selected responses that were frequently endorsed and were expected to reflect differing degrees of competence. For this reason, different responses were paired with each situation. In addition, some responses involved more than one behavior. To provide preliminary insight into overall differences in how behaviors were evaluated, for each category identified in Study 3, we computed the average effectiveness rating across all situations for every response coded only in that category. For example, the mean rating for *Verbal Aggression* was the average effectiveness rating for all responses coded only as *Verbal Aggression*.

These mean effectiveness ratings served as the dependent variables in a repeated-measures ANOVA, conducted in SPSS 24.0. Independent variables were behavior (12 levels; within participant), gender (2 levels, between participants), and the interaction between behavior and gender. Based on previous work, we hypothesized that *Apologizing* and assertive behaviors—that is, *Seeking an Explanation* and *Limit Crossing*—would be evaluated as more competent than aggressive or avoidant behaviors; however, given the paucity of information about how emerging adults behave with friends, we explored all pairwise comparisons. We also expected that men would evaluate

TABLE 3  
Study 3: Sample Responses to Challenging Situations

| <i>Behavior</i>                   | <i>Example</i>  |
|-----------------------------------|---|
| Verbal Aggression                 | Start to make fun of my friend<br>Say: "Shut up."   |
| Damaging Relationships/Reputation | Gossip about my friend to other people at the party<br>Tell other people that he/she's a liar   |
| Ending Friendship                 | Stop being friends with him/her<br>Not talk to him/her again  |
| Distancing                        | Not spend as much time with him/her anymore<br>Not message my friend again until he/she reached out first   |
| Compartmentalizing                | Stop talking to him/her about my romantic relationships<br>Stop hanging out with him/her one-on-one   |
| Doing Nothing—Attempt Change      | Try to change the topic of the conversation<br>"Untag" myself in the picture so that it does not show up on my profile  |
| Doing Nothing—No Attempt Change   | Just act like it didn't happen<br>Just wouldn't respond   |
| Seeking Explanation               | Ask: "Why are you treating me like this in front of your friends?"<br>Ask my friend why he/she is so upset  |
| Crossing Limits                   | Say: "I am not comfortable with what you're saying and I don't find it funny."<br>Say: "I told you that in confidence, please don't share my personal stories"                    |
| Lie-Telling                       | Lie about why I did not tell him/her about the assignment<br>(e.g., say that it wasn't actually announced last class)<br>Tell them that it was not me who spilled his/her secret. |
| Apologizing                       | Apologize for what I did<br>Say: "I'm sorry"  |
| Providing Support/Reparations     | Offer to make it up to him/her next time<br>Offer to find a way to make it up to him/her (e.g., help my friend with the assignment)   |

verbal aggression as more competent than would women and that women would evaluate apologizing to be more effective than would men.

## Results

Results are presented in Figure 1. The Greenhouse–Geisser correction was applied due to a sphericity violation. There was a significant main effect of behavior  $F(4.97, 511.84) = 352.76, p < .001$  and a significant interaction between behavior and gender,  $F(4.97, 511.84) = 2.71, p = .02$ . The main effect of gender was not significant,  $F(1, 103) = 3.43, p = .067$ . To understand the interaction, we used the Bonferroni method to examine differences between men and women in their evaluation of each response type. We also used the Bonferroni method to compare the effectiveness ratings of each pair of responses.

Results of the pairwise comparisons are presented in Figure 1 and Table S1 in supplementary materials. Briefly, men rated the following behaviors as more effective than did women: *Verbal Aggression*,  $p = .001$ , *Compartmentalizing*,  $p = .008$ , and *Doing Nothing—No Attempt to Change*,  $p < .001$ . Pairwise comparisons between behaviors indicated that *Apologizing* and

*Providing Support/Making Reparations* were evaluated as more competent than all other behaviors, all  $ps < .001$ . The assertive strategies *Seeking an Explanation* and *Limit Crossing* were judged more competent than *Verbal Aggression*,  $ps < .001$ , and *Damaging Friend's Relationships/Reputation*,  $ps < .001$ . *Limit Crossing* was also judged more competent than both avoidant strategies, that is, *Doing Nothing—No Attempt to Change*, and *Doing Nothing—Attempt to Change*, in which the person does not say or do anything directly, but indirectly tries to change the circumstances,  $ps < .001$ . *Seeking an Explanation* was judged more competent than the former strategy,  $p < .001$ , but not the latter,  $p = .405$ . Behaviors coded as *Doing Nothing—Attempt to Change* were rated as more effective than *Doing Nothing—No Attempt to Change*,  $p < .001$ . Perceived effectiveness did not differ between *Ending the friendship* and *Verbal Aggression*,  $p = 1.00$ . *Ending the friendship* was evaluated as less competent than both *Compartmentalizing* and *Distancing*,  $ps < .001$ .

**Selection of behavioral responses.** Eleven situations were removed as we could not identify four responses spanning the range of competence; thus, 42 situations were included in the final inventory.

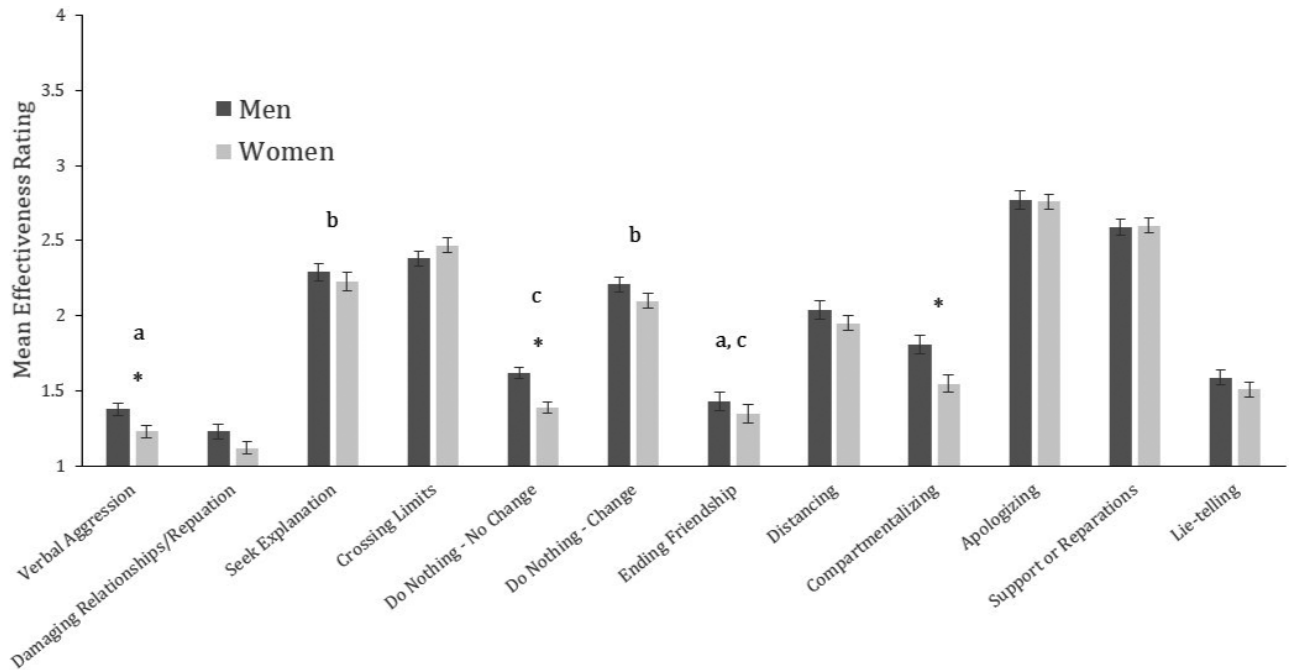


FIGURE 1 Mean effectiveness ratings of behavioral responses generated by emerging adults in response to challenging friendship situations. *Note.* We conducted post hoc pairwise comparison tests using the Bonferroni method to control for multiple comparisons. Asterisk (\*) denotes gender difference is significant,  $p < .05$ . Letters above a bar indicate that the mean rating of that behavior does not differ significantly from the mean rating of other behaviors bearing that letter,  $p > .05$ . See Supplementary Table S1 for a detailed report of pairwise comparisons.

Competence ratings of the chosen behaviors did not differ between men and women. Results were compiled into the final version of the Inventory of Friendship Challenges for Emerging Adults (IFCEA).

### Study 5: Preliminary Measure Validation

In Study 5, we obtained preliminary evidence for the psychometric properties of the Inventory of Friendship Challenges for Emerging Adults (IFCEA) by examining (1) whether responses were characterized by underlying dimensions, (2) the internal consistency of the instrument, and (3) convergent validity, indexed as the extent to which emerging adults' scores correlated with two other measures of interpersonal behavior.

**Participants and procedures.** See Table 1 for detailed information about participants. Measures were administered online and took approximately one hour to complete.

**Measures.** Participants completed three measures. The *Inventory of Friendship Challenges for*

*Emerging Adults (IFCEA)* asks participants to read each of 42 scenarios and indicate which of four responses they would be most likely to use if this situation happened to them. A separate version of this inventory was created for male and female participants, differing only in the pronouns used to describe participants and their friends. Situations and corresponding behaviors were presented in a randomized order. Scores for each item range from 1 (i.e., the least competent response) to 4 (i.e., the most competent response). Sample items are presented in Table 4. The *Interpersonal Competence Questionnaire (ICQ)*; Buhrmester et al., 1988) is a self-report 40-item questionnaire assessing participants' self-perceived skills across five domains of peer relations: initiating relationships ( $\alpha = .89$ ), disclosing personal information ( $\alpha = .83$ ), asserting displeasure with others ( $\alpha = .88$ ), providing emotional support and advice ( $\alpha = .90$ ), and managing interpersonal conflict ( $\alpha = .83$ ). We asked participants to answer these questions about their behavior with their same-gender friends. The *Reactive-Proactive Aggression Questionnaire (RPQ)*; Raine et al., 2006) is a 23-item self-report questionnaire adapted for late adolescents and adults (e.g., Tharp et al., 2011). For the total score,  $\alpha = .87$ . The ICQ and the

TABLE 4  
Sample Situations and Responses (Score) from the Inventory of Friendship Challenges for Emerging Adults

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While studying with a few male/female friends from your class, you begin talking about some of your mutual male/female friends. During this conversation, you tell them one of your mutual friend's secrets that he/she told you in confidence a few days earlier. Later that evening, your friend calls you and accuses you of spilling his/her secret.

---

I would apologize and ask how I could make it up to him/her. (4)  
 I would tell him/her that I didn't know it was a secret. (2)  
 I would apologize and say that I did not know it was a secret. (3)  
 I would tell him/her that it was not me who spilled his/her secret. (1)

---

While going through your Facebook page, you notice a very unflattering picture of you at a party posted by your friend. You call him/her immediately to ask him/her to remove it. He/She tells you that he/she will delete it as soon as he/she gets home. The next morning, you notice that the picture is still online, so you send him/her a text reminding him/her to remove it. That evening, you check your Facebook account and the picture is still there.

---

I would call or message my friend and ask him/her to remove the picture again. (3)  
 I would "untag" myself in the picture so that it does not show up on my profile. (2)  
 I would explain to my friend that the picture is making me very uncomfortable and that I am upset because he/she said he/she would remove it. (4)  
 I would tell my friend that if he/she doesn't take the picture down I am going to post an unflattering picture of him/her. (1)

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Note. Scores range from 1 (least competent) to 4 (most competent).

RPQ were chosen because each has been widely used to assess emerging adults' behaviors in the context of their peer relationships (e.g., Festa et al., 2012; Tharp et al., 2011).

**Data-analytic plan.** The series mean was imputed for missing data points on the ICQ (.2%) and the RPQ (.2%). We began by conducting an exploratory factor analysis to determine if responses on the IFCEA were characterized by underlying latent dimensions. We computed Cronbach's alphas to assess internal consistency and then examined convergent validity by calculating bivariate associations between scores on the IFCEA and the subscales of the ICQ and total aggressive behavior as measured by the RPQ. All analyses were conducted in SPSS 24.0.

## Results

Bartlett's test of sphericity was significant,  $\chi^2(861) = 1273.79$ ,  $p < .001$ , and the Keiser-Meyer-Olkin value was .60, suggesting that the 42 items on the IFCEA could be factor analyzed (Tabachnick & Fidell, 2013). Exploratory factor analysis (EFA) using principal components extraction resulted in 17-factors with eigenvalues  $> 1.00$ , which explained 65.45% of the variance but could not be meaningfully interpreted.

Cronbach's alpha for the total scale was .77. The mean score was 132.95 ( $SD = 11.10$ , range = 88–156). Although the EFA did not yield subscales, as

described in Study 1, situations were reliably grouped by type. Thus, we calculated scores for each type of situation separately. Reliabilities for these subscales were sub-optimal: transgressions by the friend (11 situations;  $\alpha = .59$ ), transgressions by the participant (11 situations;  $\alpha = .61$ ), conflicts (11 situations;  $\alpha = .46$ ), and support (9 situations;  $\alpha = .44$ ). As a result, these subscales were not examined further.

To assess convergent validity, we calculated correlations among the total score on the IFCEA, the five subscales of the ICQ, and total aggression indexed by the RPQ. We observed significant positive correlations between total score on the IFCEA and all subscales of the ICQ: Initiation,  $r = .17$ ,  $p = .032$ , Negative Assertion,  $r = .25$ ,  $p = .001$ , and Disclosure,  $r = .28$ ,  $p < .001$ , Emotional Support,  $r = .36$ ,  $p < .001$ , Conflict Management,  $r = .38$ ,  $p < .001$ . Total score on the IFCEA was negatively associated with total score on the RPQ;  $r = -.23$ ,  $p = .003$ .

## DISCUSSION

The primary aim of the current study was to develop a situation-based inventory of emerging adults' social competence in their same-gender friendships. We used the data we collected in Studies 1 to 4 to construct the Inventory of Friendship Challenges in Emerging Adulthood (IFCEA), by pairing situations rated as frequently occurring, critical, and difficult to manage with frequently reported responses ranging from incompetent to competent, as judged by emerging adults. Participants indicate how they

would respond to each circumstance, yielding an index of their effectiveness in challenging situations with same-gender friends.

In Study 5, we obtained preliminary psychometric evidence for this measure. Internal consistency for the total score was adequate, and competence as indexed by the IFCEA showed the expected correlations with measures of interpersonal competence and aggression. Although the situations generated by participants in Study 1 were reliably coded into three different categories—Conflicts of Interest, Transgressions, and Support—an exploratory factor analysis did not yield an interpretable structure. Moreover, internal consistency of responses within type of situation (e.g., conflicts) was sub-optimal, suggesting the total score be used. These results are consistent with previous work developing situation-based inventories of social competence, which also have not yielded interpretable factor-structures (e.g., Cavell & Kelly, 1992; Grover et al., 2005; McFall et al., 1999). This pattern may have occurred because even within a category, the types of situations varied markedly. For example, situations coded as transgressions all involved a friend violating a core expectation of friendship, but these ranged from more minor violations of reliability (e.g., your friend cancels plans) to more serious betrayals (e.g., your friend tells other people something private about you). As such, even situations that involve the same central challenge may place markedly different demands on the actor; it is perhaps not surprising then that competence would vary even within a type of situation, particularly when specific scenarios were chosen to maximize differences. Inventories of this type are designed to assess situation-specific responses to key interpersonal challenges (McFall et al., 1999), not an underlying cross-situational trait. As such, the IFCEA is a probabilistic assessment of risk for maladjustment: People who are ineffective in more situations are more likely to experience negative interpersonal consequences.

For this reason, a major strength of the IFCEA is its comprehensive coverage of the relevant challenges in emerging adults' friendships. Indeed, in Study 1 participants generated more than 250 unique friendship challenges, and situations for the final inventory were selected based on emerging adults' judgments of how frequently occurring, critical, and difficult these challenges were. Thus, it is likely that many of the influential situations occurring in the same-gender friendships of emerging adults are reflected here, and that the total score on the IFCEA provides a comprehensive summary of interpersonal effectiveness in this critical relationship.

The current work focused on the development of the inventory. The IFCEA can be used in its current form; however, it will be important to examine test-retest reliability, as well as concurrent, predictive, and incremental validity. Measurement invariance of the instrument across gender must also be tested. It will also be important to examine the relevance of the situations identified and the corresponding responses with more diverse samples, given that over half of the participants identified as non-Hispanic White. Moreover, because the IFCEA was developed with full-time university students, 13 of the 42 situations involved school. Most of these situations could be adapted for a work context, but it is possible that non-students would have identified other types of situations. Although it will be important to examine the generalizability of the measure to non-students, in the United States, 69.1% of recent high school graduates are enrolled in college or university (National Center of Education Statistics, 2019), making students an important population with whom to work.

Ultimately, the IFCEA could help advance both our understanding of friendship during emerging adulthood and efforts to improve the quality of these relationships. Limited work has focused on the friendships of emerging adults, and important questions remain. For example, research should examine trajectories of social competence across this development period, as well as the magnitude of the contribution of social competence with friends to the quality of these relationships over time, and the extent to which social competence mediates the association between more distal risk and protective factors and functioning in friendship. Given the important provisions of friendship during emerging adulthood, interventions designed to improve the quality of emerging adults' friendships should be tested, and competence in friendship interactions will be a key outcome variable in these studies. In such research, a situation-specific measure such as the IFCEA, which assesses competence in specific, meaningful situations, provides important advantages over global measures of behavior or social skill. Given the situation specificity of behavior, finding that emerging adults show greater behavioral skill, or engage in fewer problematic behaviors over time or following an intervention, may not provide an accurate accounting of changes in their competence. It is possible for overall levels of behavior to improve while individuals continue to struggle in important situations (Wright, Zakriski, Hartley, & Parad, 2011). Thus, tools like the IFCEA, which indexes interpersonal effectiveness across a comprehensive roster of

challenging situations with friends, will provide a more veridical representation of change in social competence than will more generalized measures of behavior or skills.

### **Mapping Challenging Situations and Key Interpersonal Behaviors in the Same-Gender Friendships of Emerging Adults**

In addition to providing the basis for the IFCEA, the data collected here provide insight into (1) the types of challenging interpersonal situations emerging adults experience in their friendships, (2) the behaviors emerging adults endorse in response to these challenges, and (3) which of these responses are deemed competent. Approximately 97% of the situations generated in Study 1 were coded into one of the three categories: transgressions, conflicts of interest, and support. Transgressions and conflicts have also been described as important situations in the friendships of children and adolescents (e.g., Azmitia et al., 2005; MacEvoy & Asher, 2012), suggesting that some of the core challenges of friendship may be similar from late childhood to emerging adulthood. The current research highlights that the contextual details of these situations will differ for emerging adults. For example, emerging adults reported managing conflicts arising from living with a friend, as well as transgressions and conflicts involving substance use, situations unlikely to befall children.

We also identified situations involving difficulties in provision of support, such as not being sure how to support friends struggling with their mental health or receiving unsolicited advice perceived as critical or condescending. These situations—which differed from transgressions in that neither friend had violated a core expectation of friendship—were judged to be as common as conflicts of interest, but more difficult and more important. These types of situations have not been highlighted in research on children's friendships, perhaps because they are more relevant in the friendships of adolescents and emerging adults. Throughout adolescence, the focus of friends' interactions shifts away from mutual activities and toward personal disclosure (see Bagwell & Schmidt, 2011), suggesting that being able to provide adequate emotional support will become increasingly important. In fact, emerging adults judged support situations to be as difficult and important as transgressions.

In contrast, transgressions were judged to be more difficult and more important than conflicts. Transgressions were rated as less frequently

occurring than conflicts, yet they accounted for nearly half of the unique situations generated, suggesting they are a salient challenge in the friendships of emerging adults. Previous work has focused on how youth (e.g., Dirks et al., 2007b; MacEvoy & Asher, 2012) and emerging adults (e.g., Tsang, McCullough, & Fincham, 2006) respond when a friend transgresses against them. Our participants identified situations in which friends transgressed; however, they also described scenarios in which they had transgressed themselves. Little work has investigated how emerging adults behave when they have harmed others (Riek et al., 2014). The current work highlights the potential importance of these situations in the friendships of emerging adults and suggests that being able to manage these situations effectively may be important for the maintenance of high-quality relationships.

Possibly reflecting the inclusion of such situations, in Study 3, emerging adults generated strategies involving apologizing or providing support or reparations to the friend. They also described using aggressive (i.e., verbal and relational), assertive (i.e., seeking an explanation, stating that a behavior crossed personal limits or boundaries), and avoidant behaviors to manage friendship challenges. In Study 4, emerging adults rated the competence of these strategies. In general, evaluations of competence were low; the mean rating for all behaviors was below 3 on a 4-point scale. This finding is consistent with previous work examining youth and teachers' evaluations of the competence of early adolescents' responses to transgressions by a friend (Dirks et al., 2010). It may be that no behavior is deemed highly competent in response to very challenging situations.

Among the behaviors evaluated, apologizing and providing support or making reparations received the highest effectiveness ratings, adding to the growing body of work indicating that being able to apologize is a critical tool for relationship success (see Schumann, 2018). The assertive strategies of seeking an explanation and stating that the behavior crossed limits were also judged more effective than aggressive behaviors. This finding, which is consistent with research documenting that engaging in assertion is linked to better social adjustment (e.g., Festa et al., 2012), highlights the key role of assertiveness in the friendships of emerging adults.

We also found that emerging adults generated different types of avoidant behavior. Sometimes, participants described doing nothing about an interpersonal dilemma without attempting to

change the situation (e.g., going along with friends who are making fun of you, even though you are upset about what they are saying). These strategies were evaluated as less effective than responses in which the participant did not directly address the core challenge, but tried indirectly to change the situation (e.g., attempting to redirect a conversation when friends are making fun of you, without asking them to stop). Moreover, trying to change the situation indirectly was deemed as competent as seeking an explanation. Although previous work suggests that avoidance is associated with negative interpersonal outcomes for emerging adults (e.g., Nelson et al., 2008), our results hint that some types of avoidant behavior may be competent.

In addition to identifying two types of avoidance, we also coded three discrete behaviors related to friendship dissolution. Emerging adults did sometimes report that they would end the friendship, but they also reported strategies involving either distancing themselves (e.g., not calling the friend as often) or compartmentalizing the friendship (e.g., avoiding specific activities). To our knowledge, this is the first study to highlight the different ways in which emerging adults modify the closeness of a friendship; however, the findings are consistent with previous research with adolescents (e.g., Bowker, 2011) demonstrating that friendship dissolutions may be complete or “downgraded,” in which individuals remain friends but are less close.

Ending a friendship was judged one of the least competent strategies. Of course, sometimes ending the relationship may be the best thing to do, and some adolescents report feeling happy after the dissolution of a friendship (Bowker, 2011). Our results suggest that emerging adults do not think it is competent to end the friendship in response to one challenging situation; however, after an accumulation of challenges or in the context of other negative features, ending a friendship may be an effective behavior. Given the importance of high-quality friendships for the well-being of emerging adults, future work should focus on understanding when, why, and how emerging adults end or downgrade their friendships.

The current work provides new leads about behaviors that may matter in the friendships of emerging adults. As the primary goal of the current study was to develop an assessment tool, we sought to identify the most common responses in each situation, which meant that in Study 4, the behaviors evaluated were specific to the situation in which they were endorsed. Although this approach yielded the data needed to develop the

inventory, it precluded an analysis of whether the effectiveness of a given behavior varied across situations, which is a critical avenue for future research. For example, although assertive strategies were generally evaluated as competent, they may be judged less effective in situations in which individuals have themselves committed a transgression or problematic behavior. Mapping the circumstances under which a given behavior may be more or less effective will inform the development of interventions targeting emerging adults' functioning in friendship.

### **Gender Differences in Evaluations of Situations and Responses**

We documented several gender differences across the five studies. As hypothesized, women rated situations as more difficult and more important than did men; however, they did not judge them to be more frequently occurring. These results suggest that women's greater expectations for friends, relative to those of men (Hall, 2011), may not translate into experiencing more challenges in those relationships. Rather, they may make the challenges that do occur seem more consequential and difficult to manage. We also found that men and women evaluated the competence of a handful of strategies differently. As hypothesized, men evaluated verbal aggression to be more effective than did women. Men also rated doing nothing without attempting to change the situation and compartmentalizing the friendship as more competent than did women. Results were not consistent with our hypothesis that women would evaluate apologizing as more competent than would men. Although previous research has shown that women judge situations to be more worthy of apologies than do men (Schumann & Ross, 2010), our data suggest that they may not think that apologizing is more likely to yield positive outcomes. More broadly, the small number of gender differences that emerged in evaluations of competence indicates that there is considerable consensus between men and women in their perceptions of the efficacy of interpersonal behaviors.

### **CONCLUSIONS**

The current study described the development of a situation-based inventory of emerging adults' social competence in their same-gender friendships. In doing so, we revealed that conflicts, transgression, and support situations constitute the major

challenges in this critical relationship and documented the variety of ways in which emerging adults manage these circumstances. Ultimately, the resulting measure may yield nuanced insights into when and how emerging adults struggle in their same-gender friendships, providing a foundation for more targeted interventions.

### CONFLICT OF INTEREST

Miriam Kirmayer has received consulting fees from Snap Inc. for work on an unrelated project. Snap Inc. had no involvement in the research reported in this article. Thomas Khullar and Melanie Dirks have no conflicts to declare.

### REFERENCES

- Alberti, R.E., & Emmons, M.L. (1970). *Your perfect right: A guide to assertive behavior*. San-Luis Obispo, CA: Impact.
- Arnett, J.J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, 1, 68–73. <https://doi.org/10.1111/j.1750-8606.2007.00016.x>
- Azmitia, M., Ittel, A., & Radmacher, K. (2005). Narratives of friendship and self in adolescence. *New Directions for Child and Adolescent Development*, 2005, 23–39. <https://doi.org/10.1002/cd.119>
- Azmitia, M., Syed, M., & Radmacher, K. (2013). Finding your niche: Identity and emotional support in emerging adults' adjustment to the transition to college. *Journal of Research on Adolescence*, 23, 744–761. <https://doi.org/10.1111/jora.12037>
- Bagwell, C.L., & Schmidt, M.E. (2011). *Friendships in childhood and adolescence*. New York: Guilford.
- Bailey, C.A., & Ostrov, J.M. (2008). Differentiating forms and functions of aggression in emerging adults: Associations with hostile attribution biases and normative beliefs. *Journal of Youth and Adolescence*, 37, 713–722. <https://doi.org/10.1007/s10964-007-9211-5>
- Barry, C.M., Madsen, S.D., & DeGrace, A. (2016). Growing up with a little help from their friends in emerging adulthood. In J.J. Arnett (Ed.), *The Oxford handbook of emerging adulthood* (pp. 215–229). Oxford: Oxford University. <https://doi.org/10.1093/oxfordhb/9780199795574.001.0001>
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67, 1–48. <https://doi.org/10.18637/jss.v067.i01>
- Baumgarte, R., & Nelson, D.W. (2009). Preference for same- versus cross-sex friendships. *Journal of Applied Social Psychology*, 39, 901–917. <https://doi.org/10.1111/j.1559-1816.2009.00465.x>
- Benenson, J.F., Kuhn, M.N., Ryan, P.J., Ferranti, A.J., Blondin, R., Shea, M., ... Wrangham, R.W. (2014). Human males appear more prepared than females to resolve conflicts with same-sex peers. *Human Nature*, 25, 251–268. <https://doi.org/10.1007/s12110-014-9198-z>
- Black, K.A. (2000). Gender differences in adolescents' behavior during conflict resolution tasks with best friends. *Adolescence*, 35, 499.
- Bowker, J.C. (2011). Examining two types of best friendship dissolution during early adolescence. *The Journal of Early Adolescence*, 31, 656–670. <https://doi.org/10.1177/0272431610373103>
- Buhrmester, D., Furman, W., Wittenberg, M.T., & Reis, H.T. (1988). Five domains of interpersonal competence in peer relationships. *Journal of Personality and Social Psychology*, 55, 991–1008. <https://doi.org/10.1037/0022-3514.55.6.991>
- Carbery, J., & Buhrmester, D. (1998). Friendship and need fulfillment during three phases of young adulthood. *Journal of Social and Personal Relationships*, 15, 393–409. <https://doi.org/10.1177/0265407598153005>
- Cavell, T.A., & Kelley, M.L. (1992). The measure of adolescent social performance: Development and initial validation. *Journal of Clinical Child Psychology*, 21, 107–114. [https://doi.org/10.1207/s15374424jccp2102\\_2](https://doi.org/10.1207/s15374424jccp2102_2)
- Cillessen, A.H.N., Jiang, X.L., West, T.V., & Laszkowski, D.K. (2005). Predictors of dyadic friendship quality in adolescence. *International Journal of Behavioral Development*, 29, 165–172. <https://doi.org/10.1080/01650250444000360>
- Costa, P.T., Jr, Terracciano, A., & McCrae, R.R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology*, 81, 322–331. <https://doi.org/10.1037/0022-3514.81.2.322>
- De Wied, M., Branje, S.J., & Meeus, W.H. (2007). Empathy and conflict resolution in friendship relations among adolescents. *Aggressive Behavior*, 33, 48–55. <https://doi.org/10.1002/ab.20166>
- Demir, M., Vento, I., Boyd, R., & Hanks, E. (2018). My Relationships Are My Estate: Relationships with kin and voluntary bonds as predictors of happiness among emerging adults. In M. Demir, & N. Sümer (Eds.), *Close relationships and happiness across cultures. Cross-cultural advancements in positive psychology* (p. 13). Cham: Springer. [https://doi.org/10.1007/978-3-319-89663-2\\_7](https://doi.org/10.1007/978-3-319-89663-2_7)
- Derlega, V.J., Anderson, S., Winstead, B.A., & Greene, K. (2011). Positive disclosure among college students: What do they talk about, to whom, and why? *The Journal of Positive Psychology*, 6, 119–130. <https://doi.org/10.1080/17439760.2010.545430>
- Dirks, M.A., Treat, T.A., & Weersing, V.R. (2007a). Integrating theoretical, measurement, and intervention models of youth social competence. *Clinical Psychology Review*, 27, 327–347. <https://doi.org/10.1016/j.cpr.2006.11.002>
- Dirks, M.A., Treat, T.A., & Weersing, V.R. (2007b). The situation specificity of youth responses to peer provocation. *Journal of Clinical Child & Adolescent Psychology*, 36, 621–628. <https://doi.org/10.1080/15374410701662758>
- Dirks, M.A., Treat, T.A., & Weersing, V.R. (2010). The judge-specificity of evaluations of youth social



- behavior: The case of peer provocation. *Social Development*, 19, 736–757. <https://doi.org/10.1111/j.1467-9507.2009.00559.x>
- Dirks, M.A., Treat, T.A., & Weersing, V.R. (2011). The latent structure of youth responses to peer provocation. *Journal of Psychopathology and Behavioral Assessment*, 33, 58–68. <https://doi.org/10.1007/s10862-010-9206-5>
- Dodge, K.A., Coie, J.D., & Lynam, D. (2006). Aggression and antisocial behavior in youth. In N. Eisenberg, W. Damon, & R.M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 719–788). Hoboken, NJ: Wiley. <https://doi.org/10.1002/9780470147658.chpsy0312>
- Dryburgh, N.S.J., Khullar, T., Sandre, A., Persram, R., Bukowski, W.M., & Dirks, M.A. (2020). Evidence-base update for measures of social skills and social competence in clinical samples of youth. *Journal of Clinical Child and Adolescent Psychology*, 49, 573–594. <https://doi.org/10.1080/15374416.2020.1790381>
- Fehr, B. (2004). Intimacy expectations in same-sex friendships: A prototype interaction-pattern model. *Journal of Personality and Social Psychology*, 86, 265–284. <https://doi.org/10.1037/0022-3514.86.2.265>
- Fehr, R., Gelfand, M.J., & Nag, M. (2010). The road to forgiveness: A meta-analytic synthesis of its situational and dispositional correlates. *Psychological Bulletin*, 136, 894–914. <https://doi.org/10.1037/a0019993>
- Felmlee, D., Sweet, E., & Sinclair, H.C. (2012). Gender rules: Same-and cross-gender friendships norms. *Sex Roles*, 66, 518–529. <https://doi.org/10.1007/s11199-011-0109-z>
- Festa, C.C., Barry, C.M., Sherman, M.F., & Grover, R.L. (2012). Quality of college students' same-sex friendships as a function of personality and interpersonal competence. *Psychological Reports*, 110, 283–296. <https://doi.org/10.2466/04.09.10.21.PR0.110.1.283-296>
- Goldfried, M.R., & D'Zurilla, T.J. (1969). A behavioral-analytic model for assessing competence. In C.D. Spielberger (Ed.), *Current topics in clinical and community psychology* (Vol. 1, pp. 151–196). New York: Academic Press.
- Grover, R.L., & Nangle, D.W. (2003). Adolescent perceptions of problematic heterosocial situations: A focus group study. *Journal of Youth and Adolescence*, 32, 129–139. <https://doi.org/10.1023/a:1021809918392>
- Grover, R.L., Nangle, D.W., & Zeff, K.R. (2005). The measure of adolescent heterosocial competence: Development and initial validation. *Journal of Clinical Child and Adolescent Psychology*, 34, 282–291. [https://doi.org/10.1207/s15374424jccp3402\\_7](https://doi.org/10.1207/s15374424jccp3402_7)
- Hall, J.A. (2011). Sex differences in friendship expectations: A meta-analysis. *Journal of Social and Personal Relationships*, 28, 723–747. <https://doi.org/10.1177/0265407510386192>
- Keener, E., & Strough, J. (2017). Having and doing gender: Young adults' expression of gender when resolving conflicts with friends and romantic partners. *Sex Roles*, 76, 615–626. <https://doi.org/10.1007/s11199-016-0644-8>
- Laursen, B. (1995). Conflict and social interaction in adolescent relationships. *Journal of Research on Adolescence*, 5, 55–70. [https://doi.org/10.1207/s15327795jra0501\\_3](https://doi.org/10.1207/s15327795jra0501_3)
- Laursen, B., & Adams, R.E. (2018). Conflict between peers. In W.M. Bukowski, B. Laursen, & K.H. Rubin (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 265–283). New York: Guilford.
- Linder, J.R., Crick, N.R., & Collins, W.A. (2002). Relational aggression and victimization in young adults' romantic relationships: Associations with perceptions of parent, peer, and romantic relationship quality. *Social Development*, 11, 69–86. <https://doi.org/10.1111/1467-9507.00187>
- MacEvoy, J.P., & Asher, S.R. (2012). When friends disappoint: Boys' and girls' responses to transgressions of friendship expectations. *Child Development*, 83, 104–119. <https://doi.org/10.1111/j.1467-8624.2011.01685.x>
- McDonald, K.L., & Asher, S.R. (2013). College students' revenge goals across friend, romantic partner, and roommate contexts: The role of interpretations and emotions. *Social Development*, 22, 499–521. <https://doi.org/10.1111/j.1467-9507.2011.00650.x>
- McFall, R.M. (1982). A review and reformulation of the concept of social skills. *Behavioral Assessment*, 4, 1–33. <https://doi.org/10.1007/BF01321377>
- McFall, R.M., Eason, B.J., Edmondson, C.B., & Treat, T.A. (1999). Social competence and eating disorders: Development and validation of the anorexia and bulimia problem inventory. *Journal of Psychopathology and Behavioral Assessment*, 21, 365–394. <https://doi.org/10.1023/a:1022176917166>
- Mehta, C.M., & Strough, J.N. (2009). Sex segregation in friendships and normative contexts across the lifespan. *Developmental Review*, 29, 201–220. <https://doi.org/10.1016/j.dr.2009.06.001>
- National Center of Education Statistics (2019). *Digest of education statistics*. [https://nces.ed.gov/programs/digest/d19/tables/dt19\\_302.10.asp?current=yes](https://nces.ed.gov/programs/digest/d19/tables/dt19_302.10.asp?current=yes). Accessed May 12, 2020.
- Nelson, L.J., Padilla-Walker, L.M., Badger, S., Barry, C.M., Carroll, J.S., & Madsen, S.D. (2008). Associations between shyness and internalizing behaviors, externalizing behaviors, and relationships during emerging adulthood. *Journal of Youth and Adolescence*, 37, 605–615. <https://doi.org/10.1007/s10964-007-9203-5>
- Pittman, L.D., & Richmond, A. (2008). University belonging, friendship quality, and psychological adjustment during the transition to college. *The Journal of Experimental Education*, 76, 343–362. <https://doi.org/10.3200/JEXE.76.4.343-362>
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., ... Liu, J. (2006). The reactive-proactive aggression questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior*, 32, 159–171. <https://doi.org/10.1002/ab.20115>

- Riek, B.M., Luna, L.M.R., & Schnabelrauch, C.A. (2014). Transgressors' guilt and shame: A longitudinal examination of forgiveness seeking. *Journal of Social and Personal Relationships, 31*, 751–772. <https://doi.org/10.1177/0265407513503595>
- Rose, A.J., & Asher, S.R. (1999). Children's goals and strategies in response to conflicts within a friendship. *Developmental Psychology, 35*, 69–79. <https://doi.org/10.1037/0012-1649.35.1.69>
- Rose, A.J., & Asher, S.R. (2017). The social tasks of friendship: Do boys and girls excel in different tasks? *Child Development Perspectives, 11*, 3–8. <https://doi.org/10.1111/cdep.12214>
- Salvatore, J.E., Kuo, S.I.C., Steele, R.D., Simpson, J.A., & Collins, W.A. (2011). Recovering from conflict in romantic relationships: A developmental perspective. *Psychological Science, 22*, 376–383. <https://doi.org/10.1177/0956797610397055>
- Schumann, K. (2014). An affirmed self and a better apology: The effect of self-affirmation on transgressors' responses to victims. *Journal of Experimental Social Psychology, 54*, 89–96. <https://doi.org/10.1016/j.jesp.2014.04.013>
- Schumann, K. (2018). The psychology of offering an apology: Understanding the barriers to apologizing and how to overcome them. *Current Directions in Psychological Science, 27*, 74–78. <https://doi.org/10.1177/0963721417741709>
- Schumann, K., & Ross, M. (2010). Why women apologize more than men: Gender differences in thresholds for perceiving offensive behavior. *Psychological Science, 21*, 1649–1655. <https://doi.org/10.1177/0956797610384150>
- Shaw, L.A., & Wainryb, C. (2006). When victims don't cry: Children's understandings of victimization, compliance, and subversion. *Child Development, 77*, 1050–1062. <https://doi.org/10.1111/j.1467-8624.2006.00918.x>
- Sherman, A., Lansford, J., & Volling, B. (2006). Sibling relationships and best friendships in young adulthood: Warmth, conflict, and well-being. *Personal Relationships, 13*, 151–165. <https://doi.org/10.1111/j.1475-6811.2006.00110.x>
- Shoda, Y., Mischel, W., & Wright, J.C. (1994). Intraindividual stability in the organization and patterning of behavior: Incorporating psychological situations into the idiographic analysis of personality. *Journal of Personality and Social Psychology, 67*, 674. <https://doi.org/10.1037/0022-3514.67.4.674>
- Tabachnick, B.G., & Fidell, L.S. (2013). *Using multivariate statistics*. Boston: Pearson Education.
- Tharp, A.L.T., Sharp, C., Stanford, M.S., Lake, S.L., Raine, A., & Kent, T.A. (2011). Correspondence of aggressive behavior classifications among young adults using the Impulsive Premeditated Aggression Scale and the Reactive Proactive Questionnaire. *Personality and Individual Differences, 50*, 279–285. <https://doi.org/10.1016/j.paid.2010.10.003>
- Tsang, J., McCullough, M.E., & Fincham, F.D. (2006). The longitudinal association between forgiveness and relationship closeness and commitment. *Journal of Social and Clinical Psychology, 25*, 448–472. <https://doi.org/10.1521/jscp.2006.25.4.448>
- Wright, J.C., Zakriski, A.L., Hartley, A.G., & Parad, H. (2011). Reassessing the assessment of change in at-risk youth: Conflict and coherence in overall versus contextual assessments of behavior. *Journal of Psychopathology and Behavioral Assessment, 33*, 215–227. <https://doi.org/10.1007/s10862-011-9233-x>
- Wrzus, C., Hänel, M., Wagner, J., & Neyer, F.J. (2013). Social network changes and life events across the life span: A meta-analysis. *Psychological Bulletin, 139*, 53–80. <https://doi.org/10.1037/a0028601>

### Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**Table S1** Study 4: Mean effectiveness ratings and pairwise comparisons for behavior and gender