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between the need for closure, intentions to ghost,
and reactions to being ghosted**

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From Close to Ghost: Examining the Relationship Between the Need for Closure, Intentions to Ghost, and Reactions to Being Ghosted

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Abstract

Ghosting—the act of ending a relationship by ceasing communication without explanation—is a type of ostracism that threatens a person’s basic psychological needs for belonging, self-esteem, meaningful existence, and control. The experience of ghosting creates uncertainty within the relationship and may vary based on individual differences in the need for closure, which is the desire to avoid ambiguity. Across three preregistered studies with emerging adults, we predicted that a greater need for closure would be associated with lower intentions to use ghosting (Studies 1 and 2) and lower needs satisfaction after being ghosted (Study 3). Results from Study 1 ($N = 553$) and Study 2 ($N = 411$) were inconsistent, but together indicate that a higher need for closure is *not* negatively associated—and may be positively associated—with ghosting intentions. In Study 3 ($N = 545$), participants who recalled a time when they were ghosted reported lower needs satisfaction than included and directly rejected participants. Further, a higher need for closure was associated with lower needs satisfaction after being ghosted and after being directly rejected, but with *greater* needs satisfaction after being included. Overall, these findings suggest that the need for closure is less influential when deciding how to end a relationship, but it appears to play an important role in amplifying both positive and negative experiences within a relationship.

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“I had texted her, but didn’t hear anything back. At first I thought maybe she didn’t have her phone on her. As time went on, I grew more anxious waiting for her text back. Another unanswered text, and I started to realize I was being ghosted.”

“I even reached out to him again years later and asked for an explanation for some closure and he still wouldn’t tell me why he did it. It made it so much harder to move on because I didn’t know the reason. Even today it still bugs me that I don’t know why he ghosted me.”

– Participants describing a time when they were ghosted

Introduction

Social technologies have changed the way people initiate, maintain, and even end their relationships (Weisskirch & Delevi, 2013). One such change is the proliferation of *ghosting*, which is “when one person suddenly ignores or stops communicating with another person, without telling them why” (p. 408; Kay & Courtice, 2022). As indicated by the participant quotations above, when a person is ghosted (i.e., the target), they may experience feelings of uncertainty and confusion as they try to decipher the *why* behind the silence. Similarly, when a person uses ghosting (i.e., the initiator), they may feel that the end of the relationship is unclear as the target still attempts to communicate with them. The extent to which this period of uncertainty has adverse effects for both partners may depend on their individual differences in the tolerance of ambiguity—in other words, their need for closure. The present research aims to examine the role of the need for closure in ghosting experiences by examining if it is related to a person’s intentions to use ghosting to end a relationship (Studies 1 and 2), and if it influences a person’s reaction to being ghosted (Study 3).

The need for closure

In general, people find uncertainty aversive (Hogg, 2007), though there are individual differences in people’s tolerance for ambiguity (Webster & Kruglanski, 1994). The need for closure is a person’s desire to avoid ambiguity and to have a firm answer—regardless of accuracy (Kruglanski & Webster, 1996). This desire varies along a continuum, ranging from a strong need to achieve closure to a strong need to avoid closure. Due to the motivational aspects of this need, people behave in ways that fulfill their goals, and experience discomfort when the need is not met. In response to uncertainty, people with a strong need to *achieve* closure are more likely to engage in activities to attain closure; they tend to quickly make a decision and stick with it, even in light of disconfirming information; and experience negative affect when closure is

not achieved (Kruglanski & Webster, 1996; Webster & Kruglanski, 1994). Epistemically, someone with a high need for closure desires immediate closure (the *urgency tendency* to seize) and then desires to remain in a state of closure (the *permanence tendency* to freeze; Kruglanski & Freund, 1983; Kruglanski & Webster, 1996), and they feel distressed when not in a state of closure (Roets & Van Hiel, 2008). A strong need to *avoid* closure is characterized by desiring uncertainty and an unwillingness to commit to a specific belief. Situationally, the need for closure is influenced by the perceived benefits and costs of closure versus openness (Kruglanski & Webster, 1991).

The need for closure has been linked to many interpersonal phenomena, including persuasion (Kruglanski et al., 1993), creative output in groups (Chirumbolo et al., 2004), and prejudice (Van Hiel et al., 2004). A high need for closure (vs. a low need for closure) is associated with lower trust in strangers (Acar-Burkay et al., 2014) and lower empathy with dissimilar others (Nelson et al., 2003).

However, less is known about the role of the need for closure on outcomes in close relationships. Past research suggests that high decisiveness (a subscale of the need for closure) is associated with high relationship satisfaction (Rempala, 2009). Many factors within a relationship, including uncertainty, can lead to relationship termination (Quirk et al., 2016). The current project examines if differences in the need for closure are associated with the type of strategy a person uses to end a relationship, and how a person responds to different breakup strategies, especially ghosting. Because breakups can have distressing implications for the initiator and target (Sprecher et al., 1998), examining how individual motivations can influence this process will shed light on a frequent experience (Rhoades et al., 2011).

Ghosting

Ghosting is a strategy for ending a romantic or platonic relationship, either suddenly or gradually, by cutting off all online and in-person communication (Koessler et al., 2019a; LeFebvre et al., 2019; Thomas & Dubar, 2021). This may involve not initiating or responding to phone calls and text messages; blocking a phone number; un-tagging photos, changing a relationship status, or blocking on social media; and cutting ties with mutual acquaintances (Collins & Gillath, 2012; Freedman et al., 2019; Koessler et al., 2019a; Sas & Whittaker, 2013; Smith & Duggan, 2013). Early data on the frequency of ghosting suggests that up to 65% of emerging adults have ghosted a former partner, and up to 72% have been ghosted (Koessler et al., 2019a).

Ghosting is distinct from other relationship dissolution strategies because it does not clearly indicate to the target that the relationship has ended. Rather, the absence of communication leaves the target feeling “puzzled” (LeFebvre et al., 2020), speculating why the initiator has ceased contact (LeFebvre & Fan, 2020; Manning et al., 2019). Thus, ghosting can be considered a type of ostracism—a form of social exclusion by which a person is ignored or left out—that is used to end a relationship (Freedman et al., 2019).

Ostracism, which can occur within an existing relationship, is a painful experience that threatens a person’s basic psychological needs for belonging, self-esteem, meaningful

existence, and control (Williams, 2009). Although most research has examined how ostracism threatens the psychological needs of the target, the Responsive Theory of Social Exclusion postulates that the needs of the initiator should also be threatened (Freedman et al., 2016; see also Zadro & Gonsalkorale, 2014). Because ghosting is a distinct relationship dissolution strategy, the motivations for using ghosting and the response to being ghosted may be unique compared to that of direct rejection. Thus, it is beneficial to examine the occurrence of ghosting from the perspective of both the initiator and the target.

The motivations of the initiator

Many factors influence the decision to end a close relationship (Joel et al., 2018) and which method to use once this decision is made. For instance, recent research suggests that the decision to use ghosting may be influenced by qualities of the relationship (e.g., the casualness of the relationship; Manning et al., 2019), characteristics of the target (e.g., personality, undesirability; Timmermans et al., 2021), threats to personal safety (Freedman, Hales et al., 2022), or self-blame (e.g., previously the target of ghosting; Navarro et al., 2020). Being the initiator of ghosting (compared to the target) can elicit mixed emotions, such as guilt and relief (Freedman, Powell et al., 2022). Further, the extent to which ghosting is seen as an acceptable way of ending a relationship also varies, with some people indicating that ghosting (vs. direct rejection) is the more acceptable breakup strategy (Halversen et al., 2022), whereas others see it as inappropriate (LeFebvre et al., 2019).

People who engage in the silent treatment—a dyadic form of ostracism related to ghosting—feel their belonging, self-esteem, and meaningful existence needs are threatened (Williams et al., 1998), suggesting that the experience of ghosting is distressing for the initiators. However, ghosting is a less distressing breakup strategy for the initiator than direct rejection (Koessler et al., 2019a), and people may use it for convenience—especially for online relationships (Timmermans et al., 2021)—or to help their interaction partner retain respect and avoid the humiliation that may follow a direct rejection (Brown & Levinson, 1987). Previous research suggests that there are individual differences that predict the preference for using ghosting. For example, people with strong, versus weak, destiny beliefs—a fixed belief that people are either meant to be together or not—are more likely to have used ghosting in the past and express stronger intentions to ghost in the future (Freedman et al., 2019). Furthermore, anxious attachment—having negative self-views in relationships—is lower in people who have used ghosting than those who have been ghosted (Powell et al., 2021). However, other research has failed to find significant correlations between individual differences and ghosting intentions (e.g., self-esteem, assertiveness, sense of power, and empathetic concern; Navarro et al., 2021).

Although the decision by the initiator to use ghosting to end a relationship might be clear and apparent to them (Baxter, 1984), commentators have speculated that ghosting can still create an ambiguous situation for both the initiator and target (LeFebvre et al., 2019). For instance, previous research found that even when a break-up initiator made the unilateral decision to end the relationship, those who used an indirect strategy had a

significantly lower likelihood of initial acceptance by the target compared to those who used a direct strategy (Baxter, 1984). In the case of ghosting, up to 40% of targets try to maintain contact with their partner (Koessler et al., 2019b), perhaps because they are unaware that the relationship is ending. This situation prolongs the breakup and makes the relationship between the partners unclear, even for the initiator. If an initiator anticipates that using ghosting will create an ambiguous situation, then individual differences in the tolerance for ambiguity may influence their desire to use ghosting over other relationship dissolution strategies. The motivational aspect of the need for closure suggests that people should select a breakup strategy that satisfies their comfort level for ambiguity. Thus, we predict that people with a high need for closure would be *less* open to ghosting others—a situation that would create ambiguity in the relationship and may lead to distress.

The experience for the target

Although the experience of ghosting can have negative consequences for the initiator of ghosting, these consequences are even more evident for the target. In a sample of adults who used a mobile dating app, 37% of those who had been ghosted blamed themselves for the situation, and 44% reported that it had long-term effects on their mental health (Timmermans et al., 2021). Compared to *ghosting initiators*, targets of ghosting reported higher attachment anxiety (Powell et al., 2021), greater distress (Koessler et al., 2019b), and more negative emotional experiences (i.e., lonelier, sadder, less happy, and less proud; Freedman, Powell et al., 2022).

Recent research also suggests that being ghosted leads to worse well-being outcomes *than being directly rejected*. For instance, when participants were asked to recall a regrettable dating experience, more people recalled a missed opportunity than a rejection, and regret was more anticipated in response to a missed opportunity (Joel et al., 2019). Further, qualitative evidence suggests that targets of ghosting (vs. direct rejection) experienced greater surprise, confusion, guilt, and sadness (Pancani et al., 2021). Quantitative evidence suggests that ghosting targets felt more excluded, and they perceived the breakup as less expected and fair (Pancani et al., 2022).

As mentioned previously, ghosting is a type of ostracism that leaves the target with a sense of uncertainty and lack of closure (LeFebvre et al., 2020; LeFebvre & Fan, 2020; Manning et al., 2019). Because ghosting is closely related to ostracism, it stands to reason that being ghosted also threatens a person's basic psychological needs. For instance, being ghosted signals that the relationship is ending, which should thwart the target's sense of belonging (Williams et al., 2000a). Being ghosted should also threaten a person's needs for self-esteem and meaningful existence by signaling that the target is not valued (Leary, 1990) or worthy of acknowledgment (Williams et al., 2000b). And because targets of ghosting are unable to communicate with the recipient, or at least their attempts to communicate go unanswered, their need for control should also be thwarted (Wessermann et al., 2010).

Previous research provides initial evidence that being ghosted does threaten psychological needs satisfaction. In one study, participants who were ostracized by a new acquaintance over text message—a similar experience to being ghosted—reported worse

mood and lower needs satisfaction than participants who were included (Smith & Williams, 2004). Compared to *ghosting initiators*, targets of ghosting reported lower belongingness, self-esteem, meaningful existence, and control (Freedman, Powell, et al., 2022). Additionally, when compared to *targets of direct rejection*, targets of ghosting reported lower satisfaction of their belonging and control needs, although there was no difference in self-esteem and meaningful existence (Pancani et al., 2022). Thus, we predict that targets of ghosting would experience lower psychological needs satisfaction than targets of direct rejection.

In addition to the four basic psychological needs, ostracism has been shown to threaten a person's self-certainty (e.g., Hales & Williams, 2018). This suggests that differences in the tolerance for uncertainty should be associated with varying responses to ostracism, as well as ghosting. As stated earlier, people with a high need for closure are more likely to respond to uncertainty by engaging in activities that attain closure, jumping to conclusions, and experiencing negative affect when attempts to achieve closure are frustrated (Kruglanski & Webster, 1996; Webster & Kruglanski, 1994). When ghosted, this may translate to attempting to communicate with the initiator, coming to quick (and possibly inaccurate) assumptions for why the initiator ceased communication, and experiencing intense negative affect during this period of uncertainty. Although being ghosted should be a distressing experience for everyone, those who have a high need for closure should be especially susceptible to negative feelings and cognitions because they may fixate on understanding why the initiator has gone quiet. Thus, we predict that for targets of ghosting, those with a higher need for closure would experience lower psychological needs satisfaction.

The present research

Ghosting continues to be a commonly used break-up strategy, even though it often results in negative well-being outcomes for the target (LeFebvre et al., 2019; Manning et al., 2019). Thus, it is valuable to understand the individual differences that influence both the motivations of the ghosting initiator, as well as the experience for the ghosting target. Although the decision by the initiator to use ghosting may be distinct, this breakup strategy still creates an ambiguous situation for both partners, implying that one's tolerance for uncertainty would be related to both ghosting motivations and experiences. Thus, Studies 1 and 2 explore how the need for closure is associated with a person's intentions to use ghosting, and Study 3 examines how the need for closure moderates a person's response to being ghosted.

Ghosting thrives due to the proliferation of online dating, which is most commonly used by emerging adults (Smith & Duggan, 2013), who have the largest portion (41%) of single people and the highest proportion (21%) of relationships to have met online (Brown, 2020). Emerging adulthood is the transitional life period between adolescence and adulthood (18–29 years; Arnett, 2000). This unique developmental period usually involves romantic and sexual exploration, with relationships that are often unstable and fleeting compared to those of older adults (van Dulmen et al., 2014). Online dating facilitates these relational goals and suggests that emerging adults are more likely to use

technology-mediated communication to initiate, maintain, and end their relationships. In turn, emerging adults are uniquely positioned to have many ghosting experiences and research supports this notion (LeFebvre et al., 2019). Thus, the present studies specifically focus on the experience of ghosting within samples of emerging adults.

Study I

The first study explored the association between the dispositional need for closure and ghosting intentions in a sample of U.S. emerging adults. We hypothesized that a greater dispositional need for closure would be associated with lower ghosting intentions. Our hypothesis, stopping rule, and analyses were preregistered prior to data collection (<https://aspredicted.org/35z7h.pdf>).

Method

Participants. Five hundred and seventy-three U.S. emerging adults were recruited from Prolific Academic. Following our preregistered exclusion criteria, 19 participants were excluded for failing a single-item attention check and one participant was excluded for reporting they were over 29-years-old. The final sample included 553 participants (49.00% women; 47.60% men; 3.44% other/non-binary; $M_{age} = 23.95$, $SD_{age} = 3.17$). The sample was predominantly White (60.2%), followed by 15.7% Asian, 9.0% Black, 8.1% Latinx, 5.8% multiracial, 0.4% Native American, and 0.7% of another race. Most of the sample was heterosexual (67.80%), followed by 20.40% bisexual, 8.32% lesbian or gay, and 3.44% were another sexual orientation. About half of the sample (47.22%) had a bachelor's degree or higher. A sensitivity power analysis indicates that with an $\alpha = .05$ and 95% power, our final sample size can detect an effect of $r = .15$ (G*Power; Faul et al., 2007).

In line with previous research examining the prevalence of ghosting in emerging adults (Koessler et al., 2019a), our findings suggest that most have ghosted a former partner (62.90%) and have been ghosted by a former partner (66.00%). We also asked participants to report the percentage of people their age that they believe use ghosting. Interestingly, the average response was 57.97%, which is below the proportion of people in this sample who have ghosted a former partner.

Procedure and materials. The need for closure and ghosting intentions measures were presented in random order.

Dispositional need for closure. Participants completed the brief version of the Need for Closure Scale (Roets & Van Hiel, 2011) as a measure of the dispositional need for closure. Participants rated 15 items on a seven-point Likert scale (1 = *Completely disagree*, 7 = *Completely agree*). Example items include, "I don't like situations that are uncertain" and "I enjoy having a clear and structured mode of life." Greater scores averaged across the 15 items indicate a greater need for closure ($\alpha = 0.87$).

Ghosting intentions. To measure ghosting intentions, we first provided participants with a definition of ghosting: “Ghosting is when someone ends a friendship, romantic relationship, or casual dating situation by cutting off all communication without explanation (e.g., not responding to calls or text messages, blocking on social media or dating apps).” Participants then rated how likely they were to use ghosting in 19 situations on a seven-point Likert scale (1 = *Very unlikely*, 7 = *Very likely*). These situations were modified from previous research (Freedman et al., 2019) and include short- and long-term relationships with friends and romantic partners. Example items include, “How likely are you to use ghosting to end a relationship after 1 date or less” and “How likely are you to use ghosting to end a friendship with someone who you have many mutual friends/acquaintances?” Greater scores averaged across the 19 items indicate greater intention to use ghosting ($\alpha = 0.95$).

Results and discussion

Data for all three studies were analyzed in R (R Core Team, 2020). We conducted a bivariate correlation to examine the association between dispositional need for closure ($M = 4.55$, $SD = 0.90$) and ghosting intentions ($M = 2.81$, $SD = 1.25$). There was a significant *positive* association between the need for closure and ghosting intentions, $t(551) = 3.43$, $p < .001$, $r = 0.14$, 95% CI [0.06, 0.23], such that participants with a greater need for closure were more likely to use ghosting as a relationship dissolution strategy.

Using a Williams’ test from the psych package (version 2.2.5; Revelle, 2022) to assess the difference between two dependent correlations, we investigated whether the correlation between the need for closure and ghosting intentions is different for romantic relationships, $t(551) = 2.86$, $p = .004$, $r = 0.12$, 95% CI [0.04, 0.20], and friendships, $t(551) = 3.81$, $p < .001$, $r = 0.16$, 95% CI [0.08, 0.24]. Although participants reported slightly more willingness to use ghosting to end a friendship ($M = 2.89$, $SD = 1.42$) compared to a romantic relationship ($M = 2.77$, $SD = 1.31$), the correlation with need for closure did not differ between the relationship types, $t(550) = -1.19$, $p = .240$.

As exploratory analyses, we examined if previously ghosting a former partner or having been ghosted by a former partner moderated the association between the need for closure and ghosting intentions. To do so, we ran separate linear regressions on ghosting intentions with previous ghosting behavior or experience included in the models, along with the need for closure and the appropriate interaction term (see [supplemental materials](#) for a detailed description of the exploratory results of all studies). Neither past ghosting behavior, $b = -0.19$, $SE = 0.11$, $p = .084$, nor experience, $b = -0.17$, $SE = 0.12$, $p = .151$, moderated the association between the need for closure and ghosting intentions. These results suggest that the influence of the need for closure on intentions to use ghosting as a relationship dissolution strategy does not depend on if someone has ghosted a partner or been ghosted by a partner in the past.

Results from this first study suggest that a greater need for closure is associated with *greater* intentions to use ghosting to end both friendships and romantic relationships. These results contradict our original hypothesis of a negative association. One possible explanation for these findings is that people with a higher need for closure are more likely

to end a relationship than people with a lower need for closure, regardless of the breakup method. Thus, we conducted a follow-up study to investigate this possibility.

Study 2

The second study examined the association between the dispositional need for closure and breakup intentions (i.e., ghosting and direct rejection) in a sample of U.S. emerging adults. We hypothesized that, in accordance with the results of Study 1, a greater dispositional need for closure would be associated with *greater* ghosting intentions. We also investigated if the need for closure association differed by breakup type, though we did not have a hypothesis for this research question. Our hypothesis, stopping rule, and analyses were preregistered prior to data collection (<https://aspredicted.org/se3dm.pdf>). Given the clear (albeit unexpected) positive association between the need for closure and ghosting intentions observed in Study 1, we preregistered a one-tailed test to maximize power.

Method

Participants. Four hundred and thirty-four U.S. emerging adults were recruited from Prolific Academic. Following our preregistered exclusion criteria, 21 participants were excluded for failing a single-item attention check and two participants were excluded for reporting they were over 29-years-old. The final sample included 411 participants (48.90% women; 47.90% men; 3.16% other/non-binary; $M_{age} = 24.23$, $SD_{age} = 3.11$). The sample was predominantly White (54.5%), followed by 19.2% Asian, 13.9% Latinx, 5.8% Black, 5.8% multiracial, 0.5% Native American, and 0.2% of another race. Most of the sample was heterosexual (71.50%), followed by 18.70% bisexual, 5.84% lesbian or gay, and 3.89% were another sexual orientation. About half of the sample (46.26%) had a bachelor's degree or higher. A sensitivity power analysis indicates that with an $\alpha = 0.05$ and 95% power, our final sample size can detect an effect of $r = 0.16$ for a one-tailed test and $r = 0.18$ for a two-tailed test.

The reported prevalence of ghosting in this sample is consistent with the first study, such that most participants have ghosted a former partner (66.20%) and have been ghosted by a former partner (70.60%). Additionally, participants believe 60.21% of people their age use ghosting on average, which is again below the proportion of people in this sample who have ghosted a former partner.

Procedure and materials. The need for closure and breakup intentions measures were presented in random order. Within the breakup intentions block, ghosting intentions and direct rejection intentions were presented in random order.

Dispositional need for closure. Participants completed the same measure of dispositional need for closure as in Study 1 ($\alpha = 0.86$).

Ghosting intentions. Ghosting intentions were measured using the same measure as in Study 1 ($\alpha = 0.95$).

Direct rejection intentions. To measure direct rejection intentions, we first provided participants with a definition of direct rejection: “Direct rejection is when someone ends a friendship, romantic relationship, or casual dating situation by directly communicating that they want to end the relationship.” Participants then used a seven-point Likert scale (1 = *Very unlikely*, 7 = *Very likely*) to indicate how likely they were to use direct rejection in the same 19 situations from the ghosting intentions measure. Greater scores averaged across the 19 items indicate greater intention to use direct rejection ($\alpha = 0.93$).

Results and discussion

To examine the association between dispositional need for closure ($M = 4.67$, $SD = 0.87$) and ghosting intentions ($M = 2.86$, $SD = 1.22$), we conducted a preregistered one-tailed bivariate correlation. There was not a significant association between need for closure and ghosting intentions, $t(409) = 1.22$, $p = .113$, $r = 0.06$, 95% CI $[-0.02, 1.00]$. We conducted a two-tailed bivariate correlation to examine the association between the dispositional need for closure and direct rejection intentions ($M = 4.57$, $SD = 1.25$). There was not a significant association between need for closure and direct rejection intentions, $t(409) = -0.33$, $p = .743$, $r = -0.02$, 95% CI $[-.11, 0.08]$.

Using a Williams’ test, we investigated whether the correlation between the need for closure and breakup intentions is different for ghosting and direct rejection. The correlation with the need for closure did not differ between the breakup methods, $t(408) = -0.55$, $p = .580$. However, an exploratory, non-preregistered, paired-samples t -test suggested that participants reported more willingness to use direct rejection than ghosting to end a relationship, $t(410) = -17.30$, $p < .001$, $d = -1.53$.

Similar to Study 1, we conducted exploratory analyses to examine if previously ghosting a former partner or having been ghosted by a former partner moderated the association between the need for closure and ghosting intentions. Neither past ghosting behavior, $b = -0.07$, $SE = 0.13$, $p = .619$, nor experience, $b = -0.04$, $SE = 0.15$, $p = .768$, moderated the association between the need for closure and ghosting intentions.

Even though the prevalence of ghosting is high, results from this study suggest that emerging adults are more likely to end a relationship by direct rejection, and the role of the need for closure in making this decision is still unclear. Results from this study did not replicate the significant positive association between the need for closure and ghosting intentions found in Study 1. However, a combined analysis pooling both datasets estimates a composite r of 0.11, 95% CI $[0.05, 0.17]$, suggesting that if there is an association, it is small and in the opposite direction than first predicted. Overall, results from Studies 1 and 2 did not provide evidence that people with a higher need for closure are more likely to end relationships, by either ghosting or direct rejection. This may be because the initiator of ghosting may not experience uncertainty and ambiguity when they ghost someone. Instead, the ambiguity may lie solely with the target of ghosting, which is the focus of the final study.

Study 3

The third study examined the effect of being ghosted on psychological needs satisfaction in a sample of U.S. emerging adults. We hypothesized that being ghosted (vs. included or directly rejected) would cause lower psychological needs satisfaction. We also hypothesized that the need for closure would moderate the effect of being ghosted on needs satisfaction, such that for ghosted participants, having a higher need for closure would be associated with lower needs satisfaction. Our hypotheses, stopping rule, and analyses were preregistered prior to data collection (<https://aspredicted.org/jk5nw.pdf>).

Method

Participants. Six hundred and seventy U.S. emerging adults were recruited from Prolific Academic. Following the preregistered exclusion criteria, 59 participants were excluded for opting out of the writing prompt because they did not have a relevant situation to recall, five participants were excluded for failing two attention checks, 56 participants were excluded for failing the manipulation check, and five participants were excluded for reporting they were over 29-years-old. Exclusions did not differ based on condition, $\chi^2(2) = 3.40$, $p = .183$, $V = 0.07$. The final sample included 545 participants (51.38% women, 45.50% men, 3.12% other/non-binary; $M_{age} = 24.68$, $SD_{age} = 3.23$). The sample was predominantly White (63.49%), followed by 14.50% Asian, 12.11% Black, 4.77% Latinx, 4.22% multiracial, 0.37% Native American, and 0.55% of another race. Most of the sample was heterosexual (69.91%), followed by 19.82% bisexual, 5.69% lesbian or gay, and 4.59% were another sexual orientation. About half of the sample (55.42%) had a bachelor's degree or higher.

Given the final sample size and three-condition design, a sensitivity power analysis indicates that with an $\alpha = 0.05$ and 95% power, we can detect a group difference in needs satisfaction of $d = 0.37$ and a simple effect of the need for closure within each experimental condition of $r = 0.25$. The reported prevalence of ghosting in this sample is consistent with the previous two studies, such that most participants have ghosted a former partner (65.69%) and have been ghosted by a former partner (74.86%).

Procedure and materials

Dispositional need for closure. Participants first completed the same measure of dispositional need for closure as in Studies 1 and 2 ($\alpha = 0.89$).

Experimental manipulation. Next, participants completed an autobiographical reliving paradigm from the ostracism literature (e.g., Hales et al., 2018; Pickett et al., 2004) in which they reflected on a situation from their own lives and wrote about it for 4 minutes. Participants were randomly assigned to receive one of three prompts. Participants in the included (control) condition ($n = 190$) were asked to write about a time when someone "expressed that they wanted to continue and/or maintain a friendship, romantic relationship, or casual dating situation." Participants in the ghosted condition ($n = 183$) wrote about a time when someone ended a relationship by "suddenly cutting off all communication

without explanation.” Participants in the directly rejected condition ($n = 172$) wrote about a time when someone “directly communicate[d] that they wanted to end the relationship.” Nearly half (49%) of participants wrote about a friendship, followed by a romantic relationship (29%), and then a casual dating situation (22%).

Basic psychological needs satisfaction. Immediately after writing, participants completed the eight-item Brief Need Threat Scale (Hales et al., 2015) as a measure of satisfaction for four basic psychological needs: belonging, self-esteem, meaningful existence, and control. Using a seven-point Likert scale (1 = *Not at all*, 7 = *Extremely*), participants responded to eight items by indicating “how [they] felt during the situation [they] just described.” Example items include, “I felt liked” and “I felt powerful.” Greater scores averaged across the eight items indicate greater psychological needs satisfaction ($\alpha = 0.94$).

Results and Discussion

To test the main effect of condition on psychological needs satisfaction ($M = 3.76$, $SD = 1.85$), we conducted a multiple linear regression with the condition variable dummy-coded so that the ghosted condition was the reference group. The model was significant, accounting for 72.27% of the variance (R^2) in needs satisfaction, $F(2, 542) = 710.00$, $p < .001$. As predicted, participants who recalled a time when they were ghosted ($M = 2.45$, $SD = 1.08$) reported significantly lower needs satisfaction than participants who recalled a time when they were included ($M = 5.90$, $SD = 0.78$), $b = 3.46$, $t(542) = 34.35$, $p < .001$, 95% CI [3.27, 3.66], $d = 1.47$, or directly rejected ($M = 2.81$, $SD = 1.04$), $b = 0.37$, $t(542) = 3.59$, $p < .001$, 95% CI [0.17, 0.57], $d = 0.15$. This study provides further evidence that being ghosted by someone may lead to worse well-being outcomes than being directly rejected.

To test the moderation effect, we added the need for closure ($M = 4.75$, $SD = 0.96$) and the corresponding interaction terms to the regression model. The interaction was significant, accounting for an additional 1.32% of the variance (R^2) in needs satisfaction, $F(5, 539) = 300.37$, $p < .001$ (see Figure 1). The interaction between need for closure and the ghosted vs. included comparison was significant, $b = 0.42$, $t(539) = 4.05$, $p < .001$, 95% CI [0.21, 0.62], suggesting that the association between need for closure and needs satisfaction was different for ghosted and included participants. However, the interaction between need for closure and the ghosted vs. directly rejected comparison was not significant, $b = 0.01$, $t(539) = 0.12$, $p = .907$, 95% CI [-0.20, 0.22], suggesting that the association between need for closure and needs satisfaction was similar for ghosted and directly rejected participants.

To probe the interaction, we examined the simple effect of the need for closure on needs satisfaction for each condition. As predicted, for participants in the ghosted condition, having a higher need for closure was associated with lower needs satisfaction, $b = -0.23$, $t(539) = -3.29$, $p = .001$, $r = -0.22$, 95% CI [-0.35, -0.07]. Unexpectedly, having a higher need for closure was also associated with lower needs satisfaction for directly rejected participants, $b = -0.22$, $t(539) = -2.82$, $p = .005$, $r = -0.20$, 95% CI [-0.34, -0.05], and with *greater* needs

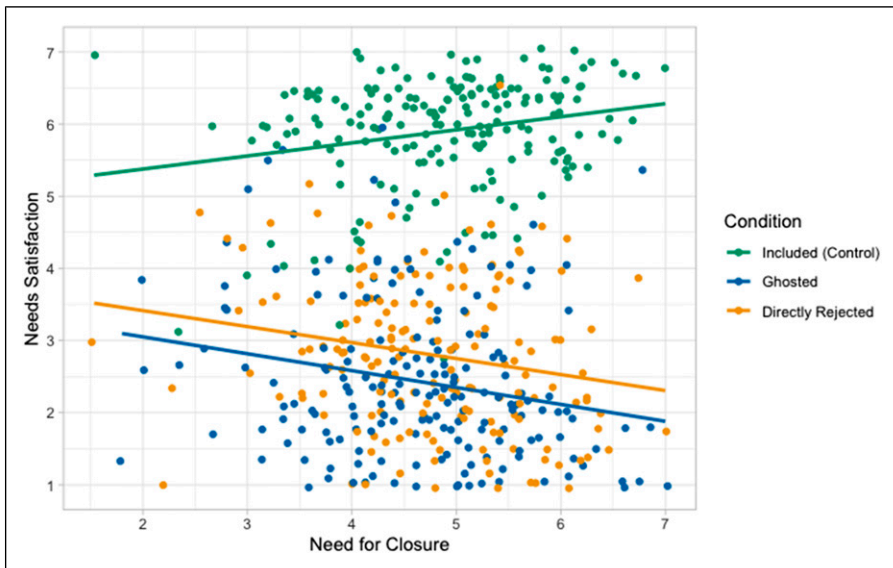


Figure 1. Association Between the Need for Closure and Needs Satisfaction by Condition for Study 3. Note. Each dot represents an individual participant. Data were jittered to ease interpretation.

satisfaction for included participants, $b = 0.18$, $t(539) = 2.45$, $p = .015$, $r = 0.22$, 95% CI [0.08, 0.35]. These results support our hypothesis that having a higher need for closure is related to more negative outcomes after being ghosted, however, it also appears to amplify the negative outcomes of being directly rejected *and* the positive outcomes of being included.

Finally, we conducted exploratory analyses to examine if the interaction between the need for closure and condition on needs satisfaction depended on the type of relationship participants wrote about or whether they had ghosted someone in the past. An analysis of covariance (ANCOVA) on needs satisfaction revealed that the three-way interaction between the need for closure, condition, and relationship type was not significant, $F(4, 527) = 0.79$, $p = .530$, $\eta_p^2 = 0.006$, suggesting that the interaction between the need for closure and condition did *not* depend on whether participants wrote about a friendship, romantic relationship, or casual dating situation. A separate ANCOVA on needs satisfaction revealed that the three-way interaction between the need for closure, condition, and previous ghosting behavior was also not significant, $F(2, 533) = 0.77$, $p = .463$, $\eta_p^2 = 0.003$, suggesting that the interaction between the need for closure and condition did *not* depend on whether participants had ghosted someone else in the past. Although we examined past ghosting experience as an additional moderator in Studies 1 and 2, we were not able to do this for Study 3 because participants in the ghosting condition were required to have been previously ghosted, thereby violating the assumption of equal variances across groups that is needed for ANCOVA.

General discussion

Advancements in social technologies have proliferated the use of ghosting to end relationships, especially among emerging adults. Indeed, results from our studies suggest that there is a high prevalence (63%–75%) of ghosting among emerging adults, which is in line with previous findings (e.g., Koessler et al., 2019a). However, despite its popularity, results from Study 2 suggest that people are more willing to directly reject someone than to ghost them, all else being equal.

The aim of the current project was to explore the relationship between the need for closure and the experience of ghosting for both the initiator and target. Previous research has found that individual differences are related to a person's willingness to use ghosting to end a relationship (e.g., Freedman et al., 2019; Powell et al., 2021), but the role of the need for closure is still unclear. We had hypothesized that having a greater need for closure would be associated with lower ghosting intentions (i.e., a negative association), but our studies had mixed results. For Study 1, there was a significant positive association between the need for closure and ghosting intentions, and there was no significant association for Study 2. The combined data from both studies showed that there is a small, positive association between the need for closure and ghosting intentions, which does not support our initial prediction.

Overall, these results suggest that using ghosting to end the relationship may not create an ambiguous experience for the initiator, perhaps because they are making the unilateral decision to end the relationship using their preferred method. The initiator may know—with certainty—that they will no longer be communicating with the target, even if the target still attempts to communicate with them. This decision may allow them to achieve closure, thereby preventing ambiguity. This would also explain why we did not find a difference in the need for closure association between ghosting intentions and direct rejection intentions. It seems that for the initiator, ghosting provides just as much closure as direct rejection. Lefebvre and colleagues (2019) suggest that ghosting is a sudden experience for the initiator, and this suddenness may indicate the achievement of closure.

Breakups are distressing, so it is important to understand how their negative outcomes can be mitigated (e.g., Sprecher et al., 1998). Ghosting can be particularly distressing because, like ostracism more broadly, it leaves the target in a period of uncertainty. As we predicted, results from Study 3 show that being ghosted threatens basic psychological needs more than being included and directly rejected. These results are in line with previous research suggesting that the experience of being ghosted is harmful to well-being, even more so than direct rejection (Pancani et al., 2021, 2022; Timmermans et al., 2021).

Additionally, results from Study 3 supported our prediction that having a higher need for closure is associated with lower needs satisfaction after being ghosted. However, we unexpectedly found a similar pattern of results for direct rejection. One possible explanation for this finding is that we measured participants' reflexive needs satisfaction (i.e., how people felt *during* the experience) rather than the satisfaction of their reflective needs (i.e., how people feel *after* the experience). If the study procedure had instead measured participants' needs satisfaction a few days after the recalled experience, it is

possible that those who were directly rejected may have recovered more quickly because they were able to achieve closure, whereas those who were ghosted may have been worse off because they were still ruminating on the ambiguous situation.

Another explanation for this finding could be that the *actual* ambiguity of a ghosting experience may be less important than the *perceived* ambiguity by the target. People with a higher need for closure are prone to “seize and freeze” when closure is obtained (Kruglanski & Webster, 1996). This could mean that no matter how a relationship is ending—whether by ghosting or direct rejection—if a person with a high need for closure *perceives* that the relationship is ending, they will react accordingly. In contrast, people with a lower need for closure tend to suspend judgment in ambiguous situations. In the case of breakups, this could mean that a person with a need to *avoid* closure may deny or second guess that that relationship is ending, regardless of whether they are being ghosted or directly rejected. Indeed, restarting a relationship after a breakup (i.e., on-off relationships) are quite common among young adults (Dailey et al., 2009).

We also found that for participants who recalled a time when they were included, having a higher need for closure was associated with *greater* needs satisfaction. Together, these findings suggest that the need for closure may play an important role in how people respond in their close relationships, by amplifying the effects of both positive (being included) and negative (being ghosted and directly rejected) experiences.

Strengths, limitations, and future directions

The present research adds to the close relationships, social exclusion, and social cognition literatures by addressing a timely and prevalent experience among emerging adults. To our knowledge, the need for closure has yet to be examined within the context of social exclusion—an overarching term used to incorporate ostracism (a construct similar to ghosting) and rejection (which we refer to as direct rejection in our studies to clearly differentiate it from ghosting). The results from Studies 1 and 2, while inconsistent, suggest that individual differences in the need for closure may not influence the role of the initiator of exclusion (i.e., ostracizer and rejecter). However, results from Study 3 suggest that the target of exclusion is impacted by their need for closure. Although the current research is limited to close relationships, future research could examine if the role of the need for closure for both the initiator and target generalizes to social exclusion in other research contexts (e.g., the ostracism paradigm Cyberball), and in daily life more generally.

Another strength of the present research is that we used a general trait measure of the need for closure, which provided a conservative test for whether this trait plays a motivational role in the context of close relationships. This is consistent with theoretical conceptions of the need for closure as a domain-general stable trait (Webster & Kruglanski, 1994). Although we did find significant results using this general trait scale, the use of a relationships-specific measure of the need for closure may have produced effects of greater magnitude. A relationships-specific measure also would allow for a more nuanced understanding of our findings. Future research could adapt the need for closure measure to focus on the desire to avoid ambiguity within the context of close

relationships, which could be used to examine motivational phenomena and relationship outcomes at all stages of the relationship process, including ghosting motivations and experiences.

Ghosting involves the (lack of) communication between two people, so another strength of the present research is that it examines the influence of the need for closure on the experience of ghosting from both the initiator's and target's perspectives. Past research and theory suggest that individual differences in the need for closure should impact the experience of ghosting, such that those with a high need for closure would be less likely to use ghosting as a relationship dissolution strategy and have a more negative response to being ghosted. However, by examining the impact of the need for closure from both perspectives, we can conclude that the need for closure is more strongly related to the target's experience of ghosting, rather than the initiator's experience. Future research can experimentally manipulate a person's role in the experience of ghosting (i.e., initiator or target), which would expand upon the current findings by examining if the impact of the need for closure depends on the relationship role, directly bridging the current Studies 1 and 2 with Study 3. This future direction would also advance research on the experience of being the initiator of ghosting (on well-being or psychological needs satisfaction), which we did not investigate in the current project.

Because we measured—rather than manipulated—the dispositional need for closure across our studies, we could not make causal claims about the role of the need for closure in ghosting experiences. Future research could experimentally manipulate the situational need for closure by using time pressure (Kruglanski & Webster, 1991) or ambient noise (Kruglanski et al., 1993) paradigms. In addition to the benefits of being able to examine causal effects, conceptually replicating these results with both dispositional and situational needs for closure would provide useful information about their robustness. Indeed, past studies that have measured the dispositional need for closure and experimentally manipulated the situational need for closure have found similar results (Webster & Kruglanski, 1994). Thus, it is reasonable to expect that our findings would replicate with experimental operationalizations.

To examine the experience of being the target of ghosting, Study 3 implemented an open-ended recall paradigm. There are limitations to this method, such as participants' difficulty in remembering their emotions exactly as they were experienced (Robinson & Clore, 2002). However, we believe this is currently the strongest and most ecologically valid method at our disposal for manipulating the experience of being ghosted. Autobiographical reliving paradigms are often used in ostracism research (e.g., Hales et al., 2018; Pickett et al., 2004) because they have the ability to place participants in the same state of mind as when an event occurred, thereby influencing their current mood (Baker & Guttfreund, 1993). Additionally, because ghosting is an understudied phenomenon, it is important that researchers examine and understand peoples' lived experiences of being ghosted before attempting to simulate these experiences. Therefore, these results can be used to inform a traditional laboratory experiment designed to manipulate the experience of being ghosted and to measure its immediate effects.

A limitation of this research is that our samples are comprised of people residing in the United States. Thus, we are unable to comment on how the need for closure plays a role in

the experience of ghosting for people living in other countries. However, a strength of this research is that the gender and racial breakdown of our samples are similar to the general United States population (U.S. Census Bureau, 2021). In terms of age, we intentionally limited our sample to emerging adults so that we could target an age group that is likely to experience ghosting (see the Present Research section for a more thorough explanation). However, emerging adults only make up about 20% of the total United States population (U.S. Census Bureau, n.d.), and with our current research, we are unable to generalize our findings to people younger than 18 or older than 29 years. Future research could examine the generalizability of these findings with more age-diverse samples and samples of non-U.S. residents.

Conclusion

Research on ghosting is in its infancy, and the present work enhances our understanding by exploring a motivation—the need for closure—that has yet to be examined within the context of close relationships. We found that the need for closure is related to the different experiences of initiators and targets. For break-up initiators, those with a higher need for closure had greater intentions to use ghosting to end a relationship. This suggests that the decision to use ghosting is just as definite as the decision to use direct rejection, thereby leaving little ambiguity about the relationship status in the eyes of the initiator. For break-up targets, being ghosted led to lower well-being than being directly rejected, and those with a higher need for closure felt even worse after being ghosted or directly rejected. This research contributes to the psychological, sociological, and communication fields by revealing how ghosting fares as a method of (not) communicating a breakup, as well as how the trait motivation of the need for closure influences one's choice to use ghosting and response to being ghosted. These findings could be further explored and developed to help practitioners and developers generate tools for emerging adults to navigate dating in this ever-changing online context.

The current research sheds light on a modern relationship dissolution strategy that has become prevalent among emerging adults, which in turn impacts their well-being. Rejection—in any form—is a painful experience, and research that explores the ending of close relationships further adds to our understanding of the causes and consequences of social (dis)connection.

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Open research statement

As part of IARR's encouragement of open research practices, the authors have provided the following information: This research was pre-registered. The aspects of the research that were pre-registered were the hypotheses, stopping rules, and analyses. The registration was submitted to AsPredicted.org: Study 1: <https://aspredicted.org/35z7h.pdf>, Study 2: <https://aspredicted.org/se3dm.pdf>, Study 3: <https://aspredicted.org/jk5nw.pdf>. The data and materials used in the research are publicly posted. The registrations, data, and materials can be obtained at <https://researchbox.org/777> or by emailing cmleckfor@uga.edu

Supplemental Material

Supplemental material for this article is available online.

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