Article

A lasting sting: Examining the short-term and long-term effects of real-life group rejection

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Julie L. Martin,[1] Laura Smart Richman,[1] and Mark R. Leary[1]

Abstract

Although many studies have examined the short-term effects of rejection in laboratory settings, few have investigated the impact of rejection over time or in real-world contexts. The university sorority recruitment process offers a unique opportunity to address these shortcomings. Women participating in sorority recruitment were surveyed directly before recruitment, directly after recruitment, and 3 months later. Rejected women experienced decreases in all indicators of well-being directly after recruitment and did not return to baseline on depressive symptoms, positive mental health, satisfaction with life, perceived belonging, or perceived social status 3 months later. Accepted women showed no long-term changes in well-being, with the exception that happiness and perceived social status increased from baseline. A comparison group of women who did not participate in sorority recruitment showed no significant long-term changes in well-being. Perceived belonging, but not social status, significantly mediated the long-term emotional effects of rejection. These results document that rejection experiences can have long-lasting effects.

The short-term effects of rejection on state self-esteem, negative affect, and hurt feelings have been examined in many laboratory experiments. These studies generally find that rejection causes an immediate decrease in feelings of personal adequacy and self-esteem (Leary, Tambor, Terdal, & Downs, 1995; Zadro, Williams, & Richardson, 2004), increases negative affect (Buckley, Winkel, & Leary, 2004; van Beest & Williams, 2006), diminishes people's sense of control and meaning (Williams, Cheung, & Choi, 2000; Zadro

et al., 2004), and activates some of the same regions of the brain as physical pain, possibly explaining why people feel hurt by rejection (Eisenberger & Lieberman, 2004; MacDonald &

[1]Duke University, NC, USA

Corresponding author:
Julie Martin, Department of Psychology and Neuroscience, Duke University, 417 Chapel Dr., Box 90086, Durham, NC 27708, USA.
Email: julie.martin@duke.edu

Leary, 2005). Although these laboratory studies have produced important findings, little research has examined rejection in real-life contexts and even less work has examined the long-term effects of rejection.

Examining the long-term effects of real-life rejection is both logistically and methodologically difficult. Yet, retrospective studies from the life events literature suggest that people who experience substantial interpersonal rejections and losses are significantly more likely to become depressed than people without such experiences (Kendler et al., 1995; Monroe, Rohde, Seeley, & Lewinsohn, 1999). People who experience a significant other-initiated break-up or divorce are 21.6% more likely to develop depression than people who have not experienced such an event (Kendler, Hettema, Butera, Gardner, & Prescott, 2003). Furthermore, active, intentional rejection by others predicts immediate onset of major depression more strongly than traumatic life events not related to rejection (Slavich, Thornton, Torres, Monroe, & Gotlib, 2009). Rejection elicits a distinct set of cognitive, emotional, and biological changes that increase the likelihood of depression (Slavich, O'Donovan, Epel, & Kemeny, 2010).

Of course, people often adapt to challenging life events, including rejection. In one study, college freshman involved in a romantic break-up 2 months or less prior to the study were no less happy than participants who had not experienced a break-up, and professors who were surveyed within 5 years of not receiving tenure were no less happy than professors who did receive tenure within the last 5 years (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). On average, people tend to recover from negative life events such as rejection, returning to their baseline levels of happiness.

In contrast to these findings, research on peer rejection in childhood and adolescence suggests that rejection can have long-lasting effects. Chronic peer rejection has been associated with several indicators of distress, including unhappiness, anxiety, anger, depressive symptoms, and low self-esteem (Bierman, 2004; DeRosier,

Kupersmidt, & Patterson, 1994; Sandstrom & Zakriski, 2004). Even just 1 year of being rejected by school peers increases children's subsequent shyness and anxiety, as reported by teachers (DeRosier et al., 1994). Furthermore, chronic peer rejection has an additive effect on children's well-being, with each additional year of peer rejection increasing students' later internalizing and externalizing problems (Ladd, 2006).

A key difference between the research showing that the effects of rejection are short-lived versus long-term is that romantic break-ups and being turned down for a job are episodic whereas peer rejection is chronic. People feel emotional distress when they experience a one-time rejection, but once belonging is restored, the distress subsides. However, in the case of peer rejection, students who are held in low regard by their classmates must continue to see and interact with their classmates everyday. Belonging remains low, which makes emotional recovery difficult. Along these lines, Williams's (2001) temporal need threat model of ostracism similarly posits that people who are chronically ostracized experience long-term deficits in their basic psychological needs. Correlational research supports this notion, showing that prolonged social exclusion is associated with elevated levels of negative emotion and depression (Riva, Montali, Wirth, Curioni, & Williams, 2016).

Like belonging, subjective social status can also influence emotional well-being. Lower subjective social status predicts poorer mental and physical health outcomes (Anderson, Kraus, Galinsky, & Keltner, 2012; Ellis, 1994) above and beyond the effects of objective indicators of social status (Anderson, Hildreth, & Howland, 2015). The status motive exists among most social-living species (Ellis, 1995; Sapolsky, 2004), and status hierarchies are a ubiquitous feature of social life (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Berger, Cohen, & Zelditch, 1972; Blau, 1964; Gruenfeld & Tiedens, 2010; von Rueden, 2014). In light of these findings, multiple theorists have suggested that the drive for status, like the drive for belonging, is a universal and fundamental human motive (Anderson et al., 2015;

Barkow, 1975; Frank, 1985; Hogan & Hogan, 1991; Maslow, 1943).

However, few studies of the effects of subjective social status have controlled for belonging, raising the possibility that the reported effects of perceived social status may actually reflect effects of perceived belonging or acceptance (Leary, Jongman-Sereno, & Diebels, 2014). Consistent with this possibility, one study found that the effect of status on subjective well-being became nonsignificant when acceptance was also included in the model (Anderson et al., 2012, Study 2). Thus, the unique contributions of perceived belonging and perceived social status to psychological well-being remain unclear. Because of the social hierarchical nature of the sorority system (Krendl, Magoon, Hull, & Heatherton, 2011), rejection during sorority recruitment likely affects both belonging and social status on campus, making sorority recruitment an ideal setting in which to study the relative importance of status versus belonging on psychological well-being.

Panhellenic sororities are social organizations on many college campuses in the United States. Sororities provide social events and other activities for their members, and on many campuses, sorority members live together. Each year, Panhellenic sororities recruit new members through a formal recruitment process that spans multiple days in which women typically visit all of the individual sorority chapters on their campus to meet current members who interview them for membership. Sororities are a significant social institution on many college campuses, making acceptance into sorority life a significant concern for many first-year women (Atlas & Morier, 1994; Mathalon, 1992), especially on campuses where a high percentage of women join sororities. Sorority recruitment also involves significant time and money, which further increases women's investment in the outcome. Sorority recruitment thus offers a prime opportunity to study the long-term effects of rejection due to the structured timeline of the recruitment process, the unambiguous nature of the outcome, and the degree to which first-year students are concerned with fitting in and being accepted (Christie & Dinham, 1991).

The few studies that have examined the emotional impact of successful and unsuccessful outcomes during sorority recruitment show that rejected women have greater depressive symptoms than accepted women 5 months after recruitment (Atlas & Morier, 1994) and have lower self-esteem directly after recruitment than they did beforehand (Chapman, Hirt, & Spruill, 2008; Keller & Hart, 1982). The present study contributes to these findings by considering multiple indicators of emotional well-being, examining both the short- and long-term effects of the rejection within a single study, and considering potential mediators of rejection's effects. Furthermore, with the previous studies taking place in past decades, the current study provides a much needed more recent look at the effects of sorority recruitment.

The primary outcome of interest in this study was emotional well-being. To provide a comprehensive test of the effects of rejection on emotional well-being, we included four measures of specific aspects of this broad construct: depressive symptoms, happiness, positive mental health, and satisfaction with life. Depressive symptoms are commonly measured in rejection studies (Kross & Ayduk, 2008; Slavich et al., 2010) and represent a clear measure of emotional distress. At the same time, negative affect is not always inversely related to positive affect (Lukat, Margraf, Lutz, van der Veld, & Becker, 2016), so we examined the effects of rejection on positive mental health and positive emotion as well. We also measured satisfaction with life to examine whether rejection or acceptance experiences alter global assessments of life satisfaction. Unlike measures of depressive symptoms and positive mental health, which reflect how one is feeling in a given week, satisfaction with life represents a cognitive assessment of how well one's life as a whole compares to one's standards or expectations. Of course, measures of depression, positive emotion, and life satisfaction are correlated, but they reflect distinct aspects of well-being.

In brief, the primary goal of the current study was to examine the emotional effects of rejection

in a real and meaningful context, specifically sorority recruitment. As a second goal, we were interested in examining whether emotional reactions following rejection are mediated by decreased belonging, decreased social status, or both. Consistent with lab-based findings (Gerber & Wheeler, 2009; Leary et al., 1995; Williams, 2001), we predicted that failure to join a sorority would be associated with short-term decreases in emotional well-being, but that acceptance into a sorority would not significantly affect emotional health in the short term. Because sororities constitute a significant facet of social life at the university that doesn't disappear after women are rejected, we hypothesized that the negative effects of an unsuccessful recruitment outcome would persist 3 months after recruitment ended. We did not expect any long-term changes as a result of being accepted into a sorority or as a result of not participating in recruitment. Based on previous theorizing about the need to belong and about status as a potential derivative of belonging (Baumeister & Leary, 1995; Leary et al., 2014), we also hypothesized that the effects of rejection on well-being would be mediated by feelings of belonging but not by perceived social status.

Although the initial rejection in this study occurred at a single point in time, we hypothesized that this event during sorority recruitment serves as an ongoing source of long-term emotional distress. We hypothesized that rejected women's lowered sense of belonging on campus persists long after the initial rejection, which undermines their emotional well-being over a prolonged period of time. Thus, unlike in most peer rejection research in which children are exposed to ongoing rejection or marginalization (Bierman, 2004), this study examined the emotional consequences of remaining in a setting in which one feels inadequately accepted due to a specific rejection event with long-term implications for belonging. Through mediation analyses, we examined whether decreased belonging following recruitment mediates the relationship between initial rejection and long-term emotional well-being.

Method

Participants

The email addresses of 700 randomly selected first-year women at a university in the southeast United States were provided by the university's Office of Institutional Research. These women were invited by email to take part in the study if they were participating in Panhellenic sorority recruitment. In addition, we recruited women who were not participating in sorority recruitment through the psychology subject pool to participate at Time 1 and Time 3. These participants received partial credit toward a course research participation requirement.

Measures

Center for Epidemiologic Studies Depression Scale-Brief. The frequency of depressive symptoms over the past week was assessed with a 10-item version of the CES-D scale (Kohout, Berkman, Evans, & Cornoni-Huntley, 1993; Radloff, 1977), which consists of a four-response category format (1 = *rarely or none of the time* to 4 = *most or all of the time*). Sample items include "I felt depressed" and "I felt everything I did was an effort."

Warwick–Edinburgh Mental Well-Being Scale. The 14-item Warwick–Edinburgh Mental Well-Being Scale (Tennant et al., 2007) assesses positive mental health. Specifically, the scale assesses the frequency of positive thoughts and feelings over the past week with five response categories (1 = *none of the time*, 2 = *rarely*, 3 = *some of the time*, 4 = *often*, 5 = *all of the time*). Sample items include "I've been feeling optimistic about the future" and "I've been feeling confident."

Happiness. Happiness was assessed with a single item measure: "In general these days, how happy are you?" This measure has been shown to have adequate concurrent, convergent, and divergent validity (Abdel-Khalek, 2006).

Satisfaction With Life Scale. This five-item scale was developed to assess global cognitive

judgments of satisfaction with one's life (Diener, Emmons, Larsen, & Griffin, 1985). Because satisfaction with life is conceptualized as a global assessment of satisfaction with one's entire life, we did not expect it to change on a week-to-week basis, and thus we measured it only at Time 1 and Time 3. Sample items include "In most ways my life is close to ideal" and "So far I have gotten the important things I want in life."

Belongingness Measure for College Students. This six-item scale assesses the degree to which respondents feel that they belong at their university on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*; Weeks, Asher, & McDonald, 2012). Sample items include "I feel I belong at this school," "I feel connected to this school," and "It's hard for me to fit in here" (reverse-coded).

Perceived social status. Participants were given a picture of a ladder with 10 rungs (adapted from Adler, Epel, Castellazzo, & Ickovics, 2000) with the following instructions: "Thinking about social life at Duke as a hierarchical system, where would you rank yourself relative to others? Click on the place on the ladder corresponding to your perceived social status.").

Perceived rejection. To assess whether accepted and rejected women differed in feelings of rejection, women rated how rejected they felt during the recruitment process at Time 2 on a 5-point scale (1 = *not at all rejected*, 5 = *extremely rejected*). For a more objective measure of rejection, women were also asked how many sororities they had been asked back to after each round of recruitment.

Procedure

Participants completed online questionnaires assessing their emotional well-being at three time points: immediately before Panhellenic sorority recruitment (Time 1), immediately after recruitment (after bid day;[1] Time 2), and 3 months later (Time 3). At the current university, women register for recruitment at the end of their first semester. Formal sorority recruitment takes place at the beginning of the second semester, when women engage in multiple rounds of visiting various sororities over 2 weeks. In the first round, the women visit all of the sorority chapters. After that, each sorority ranks the women it wants (most desired to least desired), and the women rank the sororities in order of their preference as well. These rankings determine which sororities invite women back for the second round. There are four rounds of sorority visits, and the maximum number of sororities that women can be asked back to decreases for each subsequent round. The last day of recruitment is bid day, when women find out which sorority, if any, offered them a bid. Women can receive a bid to only one sorority.

One hundred and thirty-one first-year women participating in sorority recruitment completed the first, prerecruitment questionnaire, and 114 of those women completed all three surveys (87% retention rate). Participants were compensated $15.00 for completing all three surveys. For the comparison group who did not participate in recruitment, 21 women completed the prerecruitment survey, and 19 of those women completed both the prerecruitment survey and the 3-month postrecruitment survey.

Results

Rejected Status Classification

At many universities, including the one at which this study was conducted, most women receive a bid on bid day,[2] although not necessarily a bid from a sorority that they desire to join. Thus, some women withdraw from recruitment after they are not invited back to any of their desired sororities or reject their final bid if it is from one of the least selective sororities. Because these women withdraw from the process after it is clear to them that they have been rejected by their preferred sororities, they are similar to women who complete the process but who do not receive a bid from any sorority. Thus, women who

withdrew from recruitment ($n = 24$), did not receive a bid on bid day ($n = 2$), or immediately declined their bid ($n = 7$) were classified as "rejected," whereas women who completed recruitment and accepted a bid were classified as "accepted." This classification is consistent with that used in previous research on sorority recruitment (Chapman et al., 2008; Keller & Hart, 1982; Mathalon, 1992).

Because we could not randomly assign participants to conditions in this study, we could not predict how many of our participants would fit the rejected status classification at Time 2 (directly after recruitment). In order to increase the likelihood that a sufficient number of the participants would meet the criteria for rejected status, we emailed the majority of first-year women with an invitation to participate in our study. Based on sample sizes used in prior rejection research (Leary et al., 1995; van Beest & Williams, 2006; Zadro et al., 2004) and minimum sample size suggestions for mixed-design ANOVAs (Meyers, Gamst, & Guarino, 2013), we aimed for at least 20 women in the sample to meet the criteria for rejected status when they were assessed at Time 2. Seventy-three women met the criteria for accepted status, and 33 women met the criteria for rejected status, which exceeded our minimum sample size goal. An additional eight women withdrew from recruitment before learning which sororities asked them back after Round 1, and were thus excluded from analysis.[3]

Preliminary analyses confirmed that women in the rejected status category experienced more rejection, both subjectively and objectively, than women in the accepted status category. Women in the rejected status category ($M = 3.79$, $SD = 0.81$) felt significantly more rejected than accepted women ($M = 2.36$, $SD = 1.03$), $F(1, 108) = 52.02$, $p < .001$, 95% CI [1.04, 1.83], $\eta^2 = .33$. Women in the rejected status categeory were also asked back to significantly fewer sororities than accepted women following all three selective rounds of recruitment (see Table 1 for statistics).

Table 1. Mean number of round invites women received from sororities for each round by rejected status.

	Accepted	Rejected	F	η^2
Round 2	5.61	4.05	16.13***	.13
	(1.83)	(1.94)		
Round 3	4.05	2.92	13.03***	.13
	(1.37)	(1.38)		
Round 4	2.63	1.69	16.24***	.16
	(0.78)	(0.75)		

Note. Standard deviations appear in the parentheses below means. Women could be asked back to up to seven sororities for Round 2, five for Round 3, and three for Round 4.
***$p < .001$.

In addition, the women who withdrew from recruitment or rejected their bid on bid day were asked to indicate the extent to which they felt that joining the final sorority(s) that asked them back (either for a round or on bid day) would be stigmatizing on campus. The modal response was the highest point on the scale (5 = *very much so*), and the mean response was 4.72 ($SD = 0.89$), indicating that the majority of women who did not join a sorority perceived a high level of stigma in joining the sorority(s) that they had the option left to join.

Plan of Analysis

Means, standard deviations, and Cronbach's alpha coefficients are presented in Table 2. Mixed-design analyses of variance (ANOVAs) were conducted to analyze the effect of rejected status (accepted vs. rejected) on depressive symptoms, positive mental health (the Warwick–Edinburgh Mental Well-Being Scale), happiness, satisfaction with life, sense of belonging, and perceived social status over the three time points (before recruitment, directly after recruitment, 3 months later). Pairwise comparisons were used to test between-group effects at each time point, as well as change over time within groups. Because the comparison group completed measures at Time 1 and Time 3 only, a separate

Table 2. Means and standard deviations for each measure at each timepoint by rejected status.

	Time 1		Time 2		Time 3	
	M	*SD*	*M*	*SD*	*M*	*SD*
Depr. symptoms (1–4)*	Cronbach's α = .79		Cronbach's α = .84		Cronbach's α = .85	
Accepted	1.74	0.49	2.03	0.53	1.79	0.51
Rejected	1.67	0.47	2.34	0.64	2.01	0.61
Did not participate	1.80	0.54			1.90	0.60
Pos. mental health (1–5)	Cronbach's α = .93		Cronbach's α = .95		Cronbach's α = .94	
Accepted	3.72	0.63	3.55	0.65	3.65	0.62
Rejected	3.88	0.70	3.10	0.77	3.45	0.82
Did not participate	3.39	0.58			3.38	0.58
Happiness (1–7)						
Accepted	5.22	1.45	5.95	1.08	5.73	1.24
Rejected	5.48	1.15	3.64	2.00	5.12	1.45
Did not participate	5.06	1.59			5.39	1.33
Satisfaction with life (1–5)	Cronbach's α = .86				Cronbach's α = .89	
Accepted	5.40	1.25			5.52	1.02
Rejected	5.43	1.13			5.10	1.32
Did not participate	5.32	1.21			5.28	1.17
Belonging (1–5)	Cronbach's α = .93		Cronbach's α = .95		Cronbach's α = .93	
Accepted	4.01	0.80	4.04	0.69	4.01	0.70
Rejected	4.11	0.67	3.70	0.84	3.72	0.90
Did not participate	3.99	0.71			4.01	0.81
Perc. social status (1–10)						
Accepted	6.46	1.38	6.68	1.59	6.82	1.29
Rejected	6.57	1.44	5.42	1.61	6.00	1.53
Did not participate	4.66	1.75			5.27	1.52

*Scale range.

repeated measures ANOVA examined changes in well-being for the comparison group.

The assumptions of normality and sphericity were met in all analyses. Levene's test of homogeneity of variance was significant for Time 2 happiness, Time 3 positive mental health, and Time 3 belonging. However, examination of the variances revealed the ratio of largest to smallest variance was small in all three cases (2.4:1, 1.75:1, and 1.64:1, respectively), so it was appropriate to proceed (Meyers et al., 2013). Power was above .80 for all interactions between rejected status and time for each measure (0.86–1.00). No scores were greater than three standard deviations above or below the means for each measure (with accepted and rejected status groups examined seperately), so no cases were removed as outliers (Meyers et al., 2013).

Short- and Long-Term Effects of Rejection

Depressive symptoms. The mixed ANOVA for depressive symptoms yielded a significant main effect of time, $F(2, 200) = 34.50$, $p < .001$, $\eta_G^2 = .10$, and a marginally significant main effect of rejected status, $F(1, 100) = 2.73$, $p = .101$, $\eta_G^2 = .02$. These main effects were qualified by a significant interaction between time and rejected status, $F(2, 200) = 5.76$, $p = .004$, $\eta_G^2 = .02$. As seen in Figure 1, accepted and rejected women did not differ in depressive symptoms before recruitment, $F(1, 100) = 0.40$, $p = .527$, 95%
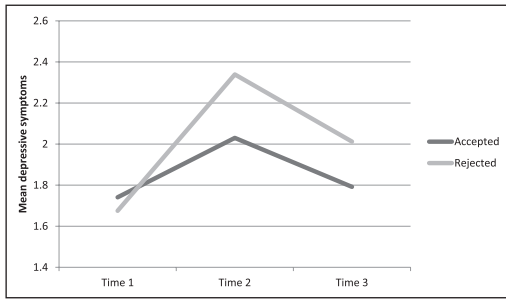
Figure 1. Depressive Symptoms.

Figure 2. Positive mental health.

CI [−0.27, 0.14], d = .13. However, rejected women reported significantly higher depressive symptoms than accepted women directly after recruitment, $F(1, 100)$ = 6.39, p = . 013, 95% CI [0.07, 0.55], d = .66, and were marginally more depressed than accepted women 3 months after recruitment, $F(1, 100)$ = 3.57, p = .062, 95% CI [−0.01, 0.45], d = .39 (means are shown in Table 2). Looking at changes within groups, accepted women's depressive symptoms increased significantly from Time 1 to Time 2, p < .001, 95% CI [0.16, 0.42], d = .60, but had returned to baseline by Time 3, p = .394, 95% CI [−0.07, 0.16], d = .10. For rejected women, however, depressive symptoms increased significantly from Time 1 to Time 2, p < .001, 95% CI [0.46, 0.86], d = .96, and were still significantly higher than baseline at Time 3, p < .001, 95% CI [0.16, 0.52], d = .65.

Positive mental health (Warwick–Edinburgh Mental Well-Being Scale). The mixed ANOVA for positive mental health revealed a significant main effect of time, $F(2, 200)$ = 22.28, p < .001, η_G^2 = .07, but no main effect for rejection, $F(1, 100)$ = 1.81, p = .181, η_G^2 = .01. The main effect of time was qualified by a significant interaction between time and rejected status, $F(2, 200)$ = 9.08, p < .001, η_G^2 = .03, with the interaction following a similar pattern to depressive symptoms. As seen in Figure 2, accepted and rejected women did not differ in positive mental health before recruitment, $F(1, 100)$ = 1.27, p = .262, 95% CI [−0.44, 0.12], d = −.23, but accepted women had significantly higher positive mental health than rejected women immediately after 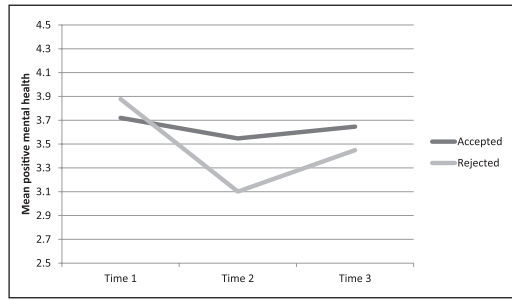recruitment, $F(1, 100)$ = 8.96, p = .003, 95% CI [0.15, 0.74], d = .62. Positive mental health did not differ significantly between the groups 3 months later, $F(1, 100)$ = 1.77, p = .186, 95% CI [−0.10, 0.49], d = .27. Both accepted and rejected women experienced short-term declines in positive mental health, p = .034, 95% CI [−0.33, −0.01], d = −.27 and p < .001, 95% CI [−1.02, −0.54], d = −.99, respectively, but accepted women returned to baseline by Time 3, p = .347, 95% CI [−0.23, 0.08], d = −.11, whereas rejected women did not, p < .001, 95% CI [−0.66, −0.19], d = −.61.

Happiness. Significant main effects of time, $F(2, 208)$ = 7.01, p < .01, η_G^2 = .06, and rejected status, $F(1, 104)$ = 21.38, p < .001, η_G^2 = .14, were qualified by a significant interaction of time and rejected status, $F(2, 208)$ = 25.04, p < .001, η_G^2 = .19. The interaction showed that, as seen in Figure 3, accepted and rejected women did not differ in happiness before recruitment, $F(1, 104)$ = 0.86, p = .354, 95% CI [−0.83, 0.30], d = −.20. However, accepted women were significantly
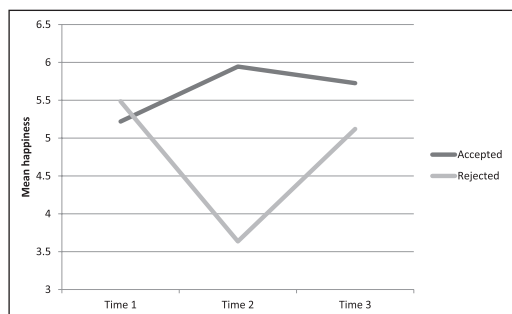

Figure 3. Happiness.

happier than rejected women directly after recruitment, $F(1, 104) = 59.59$, $p < .001$, 95% CI [1.72, 2.90], $d = 1.50$, as well as 3 months later, $F(1, 104) = 4.85$, $p = .030$, 95% CI [0.06, 1.15], $d = .44$. Looking at changes within groups over time, accepted women's happiness increased significantly from Time 1 to Time 2, $p = .001$, 95% CI [0.30, 1.16], $d = .42$, and their happiness at Time 3 was significantly higher than it was at Time 1, $p = .011$, 95% CI [0.12, 0.90], $d = .28$. For rejected women, happiness decreased significantly from Time 1 to Time 2, $p < .001$, 95% CI [−2.49, −1.21], $d = −.92$, but had returned to baseline level by Time 3, $p = .217$, 95% CI [−0.94, 0.22], $d = −.27$.

Satisfaction with life. The main effects of time and rejected status on satisfaction with life were not significant, $Fs(1, 103) < .98$, $ps > .32$, $\eta_G^2s < .01$, but a significant interaction between time and rejected status was obtained, $F(1, 103) = 4.83$, $p = .030$, $\eta_G^2 = .01$. Before recruitment, accepted and rejected women did not differ in satisfaction with life, $F(1, 103) = 0.02$, $p = .895$, 95% CI [−0.47, 0.55], $d = .02$, but accepted women had marginally higher satisfaction with life than rejected women 3 months after recruitment, $F(1, 103) = 3.18$, $p = .077$, 95% CI [−0.05, 0.89], $d = .36$. Accepted women's satisfaction with life did not change from Time 1 to Time 3, $p = .275$, 95% CI [−0.10, 0.35], $d = .13$, but rejected women's satisfaction with life marginally decreased from Time 1 to Time 3, $p = .059$, 95% CI [−0.68, 0.01], $d = −.33$ (see Figure 4).
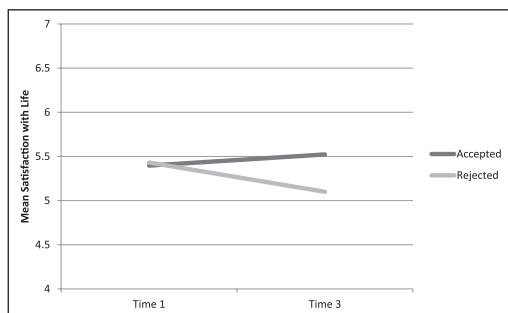

Figure 4. Satisfaction with life.

Belonging. Analyses revealed a significant main effect of time, $F(2, 200) = 6.91$, $p = .001$, $\eta_G^2 = .01$, but not of rejected status, $F(1, 100) = 1.43$, $p = .234$, $\eta_G^2 = .01$, for ratings of belonging at the university. These results were qualified by a significant interaction between time and rejected status, $F(2, 200) = 7.86$, $p = .001$, $\eta_G^2 = .01$. Accepted and rejected women did not differ in belonging before recruitment, $F(1, 100) = 0.37$, $p = .540$, 95% CI [−0.42, 0.225], $d = −.13$. As seen in Figure 5, directly after recruitment, accepted women rated their sense of belonging significantly higher than rejected women, $F(1, 100) = 4.63$, $p = .034$, 95% CI [0.03, 0.66], $d = .47$. Three months afterwards, accepted women's ratings of belonging were marginally higher than those of rejected women, $F(1, 100) = 3.02$, $p = .085$, 95% CI [−0.04, 0.61], $d = .35$. Accepted women showed no changes in belonging over time, $ps > .599$, $ds < .05$, but rejected women's belonging decreased significantly from Time 1 to Time 2, $p < .001$, 95% CI [−0.61, −0.22], $d = −.65$ and remained significantly lower than their baseline at Time 3, $p = .001$, 95% CI [−0.62, −0.17], $d = −.67$.
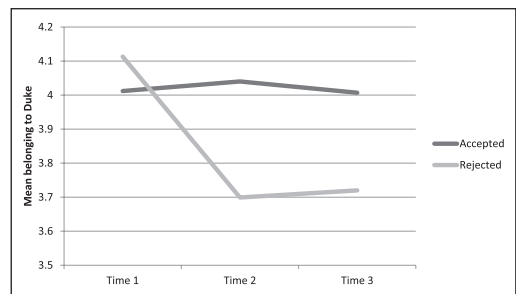

Figure 5. Belonging to the university.

Perceived social status. Analyses revealed a significant main effect of time, $F(2, 186) = 6.20$, $p < .001$, $\eta_G^2 = .02$ and rejected status, $F(1, 93) = 5.64$, $p = .020$, $\eta_G^2 = .04$, for perceived social status. A significant interaction between time and rejected status, $F(2, 186) = 12.83$, $p < .001$, $\eta_G^2 = .03$, showed that accepted and rejected women did not differ in perceived social status prior to recruitment, $F(1, 93) = 0.11$, $p = .734$, 95% CI

[−0.72, 0.51], d = .07 (see Figure 6). However, accepted women rated their social status significantly higher than rejected women both directly after recruitment, $F(1, 93)$ = 13.01, p = .001, 95% CI [0.57, 1.97], d = .79, and 3 months later, $F(1, 93)$ = 7.42, p = .008, 95% CI [0.22, 1.42], d = .58. Looking at changes over time, accepted women did not differ in perceived social status from Time 1 to Time 2, p = .197, 95% CI [−0.56, 0.12], d = .16, but their perceived status increased significantly from Time 1 to Time 3, p = .019, 95% CI [0.06, 0.66], d = .31. In contrast, rejected women's perceived social status decreased significantly from Time 1 to Time 2, p < .001, 95% CI [−1.65, −0.65], d = −.81 and was still significantly lower at Time 3, p = .012, 95% CI [−1.01, −0.13], d = −.42.
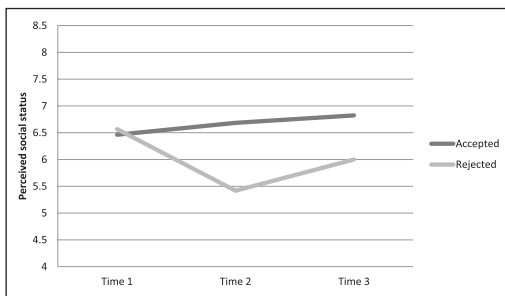

Figure 6. Perceived social status.

Comparison group. Women who did not participate in sorority recruitment showed no changes in any of the measures from Time 1 to Time 3, Fs < 1.54, ps > .14, η^2s < .13. The comparison group did not differ significantly from rejected or accepted participants on any measures at Time 1, with the exception of perceived social status, $F(2, 130)$ = 8.63, p < .001, η^2 = .12. Post hoc Tukey tests showed that participants who chose not to participate in recruitment had lower perceived social status at Time 1 than participants in the accepted group, p < .001, 95% CI [−2.32, −0.58], d = −.88, and rejected group, p = .001, 95% CI [−2.44, −0.54], d = −.87 (see Table 2 for means and standard deviations). Participants who did not participate in recruitment also did not differ from accepted or rejected

participants on any measures at Time 3, except for perceived social status, $F(2, 125)$ = 8.30, p < .001, η^2 = .12, on which they remained lower than accepted participants, p = .001, 95% CI [−2.34, −0.49], d = −1.50, but no longer differed from rejected participants, p = .347, 95% CI [−1.59, 0.41], d = −.38.

Mediation of Long-Term Effects

An SPSS macro for multiple mediation (Hayes, 2009; Preacher & Hayes, 2014) was used to test the hypothesis that belonging, but not social status, mediated the long-term effects of rejection. This hypothesis was based on the idea that perceived status is a component of perceived belonging (Leary et al., 2014) and research showing that the effects of perceived status on emotion become nonsignificant when acceptance is partialed out (Anderson et al., 2012). Belonging at Time 1, social status at Time 1, and the outcome variable at Time 1 were included as covariates in all models to control for preexisting differences among groups. Even though the difference between rejected and accepted women in positive mental health at Time 3 was not significant, we nonetheless conducted a mediation analysis for positive mental health, as there is evidence to suggest that indirect effects can be present even with a nonsignificant X–Y link (Zhao, Lynch, & Chen, 2010).

Depressive symptoms. Being rejected significantly predicted both lower belonging, b = −0.47, $t(91)$ = −3.86, p < .001, 95% CI [−0.70, −0.22], and lower perceived social status, b = −1.26, $t(91)$ = −4.34, p < .001, 95% CI [0.68, 1.84], at Time 2. Belonging at Time 2 predicted depressive symptoms at Time 3, b = −0.16, $t(91)$ = −1.78, p = .079, 95% CI [−0.33, 0.02], but social status did not, b = −0.03, $t(91)$ = 0.84, p = .405, 95% CI [−0.11, 0.04]. The effect of rejected status on depressive symptoms at Time 3 was significantly mediated by perceived belonging at Time 2, b = 0.07, 95% bias-corrected CI [0.004, 0.16], but not by perceived social status, b = −0.04, 95% bias-corrected CI [−0.15, 0.03]. The effect of rejected
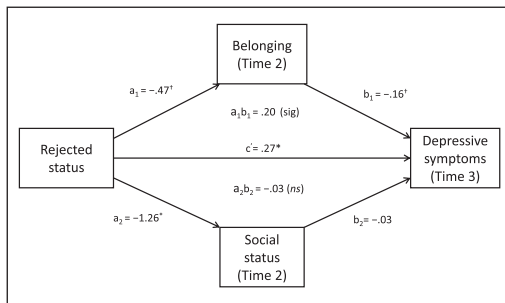
Figure 7. Multiple mediation model of the effect of rejected status on depressive symptoms through belonging and social status. Unstandardized regression coefficients are shown.
*p < .01. †p < .08.

status on depressive symptoms, controlling for the mediators, remained significant, $b = 0.27$, $t(91) = 2.52$, $p = .013$, 95% CI [0.06, 0.49]. The ratio of the indirect to total effect shows that 24% of the effect of rejected status on depression at Time 3 can be explained by belonging at Time 2 (see Figure 7 for full mediation model).

Happiness. Belonging at Time 2 significantly predicted happiness at Time 3, $b = 0.61$, $t(92) = 2.40$, $p = .019$, 95% CI [0.11, 1.12], but social status did not, $b = 0.13$, $t(92) = -1.24$, $p = .218$, 95% CI [−0.08, 0.34]. The effect of rejected status on happiness at Time 3 was significantly mediated by perceived belonging at Time 2, $b = -0.28$, 95% bias-corrected CI [−0.65, 0.06], but not by perceived social status, $b = 0.17$, 95% bias-corrected CI [−0.15, 0.63]. The effect of rejected status on happiness remained significant after controlling for the mediators, $b = -0.63$, $t(92) = -1.98$, $p = .051$, 95% CI [−1.26, 0.003]. Belonging at Time 2 accounted for 38% of the effect of rejected status on happiness at Time 3. Thus, the difference between rejected and accepted women on happiness at Time 3 was significantly mediated by changes in belonging but not by changes in social status.

Positive mental health. As previously stated, being rejected significantly predicted both lower belonging, $b = -0.48$, $t(91) = -3.93$, $p < .001$,

95% CI [−0.72, −0.24], and lower perceived social status, $b = -1.29$, $t(91) = -4.35$, $p < .001$, 95% CI [−1.87, −0.70], at Time 2. Belonging at Time 2 predicted positive mental health at Time 3, $b = 0.25$, $t(91) = 2.16$, $p = .033$, 95% CI [0.02, 0.47], but social status did not, $b = 0.02$, $t(91) = 0.32$, $p = .749$, 95% CI [−0.08, 0.11]. Analyses revealed a significant indirect effect of rejected status on positive mental health at Time 3 through perceived belonging at Time 2, $b = -0.12$, 95% bias-corrected CI [−0.26, −0.02], but not through perceived social status, $b = -0.02$, 95% bias-corrected CI [−0.14, 0.07]. The effect of rejected status on positive mental health, controlling for the mediators, remained nonsignificant, $b = -0.21$, $t(91) = -1.51$, $p = .133$, 95% CI [0.16, 0.79]. The ratio of the indirect to total effect shows that 34% of the total effect can be explained by belonging at Time 2.

Satisfaction with life. Satisfaction with life followed the same mediation pattern as the other well-being measures. Belonging at Time 2 predicted satisfaction with life at Time 3, $b = 0.48$, $t(92) = 3.03$, $p = .003$, 95% CI [0.16, 0.79] but perceived social status at Time 2 did not, $b = 0.05$, $t(92) = 0.73$, $p = .468$, 95% CI [−0.08, 0.17]. The effect of rejected status on satisfaction with life was significantly mediated by perceived belonging, $b = -0.21$, 95% bias-corrected CI [−0.45, −0.06], but not perceived social status, $b = -0.06$, 95% bias-corrected CI [−0.08, 0.22]. The effect of rejected status on satisfaction with life remained significant after controlling for the mediators, $b = -0.44$, $t(92) = -2.30$, $p = .024$, 95% CI [−0.82, −0.06]. The ratio of the indirect to total effect shows that 36% of the effect of rejected status on satisfaction with life at Time 3 can be explained by belonging at Time 2.

Discussion

This research was conducted to examine the short-term and long-term impact of meaningful rejection on emotional well-being. Women who were accepted versus rejected during sorority recruitment did not differ significantly on any of

the well-being measures before recruitment began (Time 1). However, directly after recruitment (Time 2), rejected women showed an increase in depressive symptoms and a decrease in positive mental health and happiness relative to the accepted women as well as relative to their own baseline scores. These findings are consistent with research from laboratory studies (Gerber & Wheeler, 2009; van Beest & Williams, 2006; Zadro et al., 2004) and replicate the short-term effects of rejection in a real-world setting. Accepted women also showed an increase in depression and decrease in positive mental health at Time 2, which was likely due to the fact that those measures assessed feelings over the past week, and the recruitment process was stressful even for women who were ultimately accepted into a desired sorority.

Intriguingly, some of the effects of rejection persisted up to 3 months later. Rejected women did not return to their baseline levels of depressive symptoms or positive mental health, although they did return to baseline on reported happiness. They also did not return to baseline on perceived belonging or social status. Women who did not participate in recruitment showed no significant changes from Time 1 to Time 3, which suggests that the observed decreases in well-being were not a normative part of the first year of college but rather the effects of sorority recruitment.

Participants' experiences of rejection in this study may have been longer lasting than other rejections studied in previous research because of the context in which the rejection took place. When people are rejected by a romantic partner, the former romantic partner usually falls out of their daily lives. When a professor is not granted tenure by his or her tenure review committee, he or she usually moves to a different job. When people do not receive a job offer from a given company, they obviously do not go to work everyday with the people who did not hire them. Thus, although these rejections are powerful and important, they do not have a lasting impact as people move on with their lives and find new sources of acceptance and belonging. In some cases, however, people continue to live among those who rejected them. For instance, studies on peer rejection show long-lasting effects of rejection from peers in school (Bierman, 2004). Similarly, sororities (and fraternities) do not go away after a student is unsuccessful in joining one. Rather, the organizations—and their members—have a presence on the campus, serving as an ongoing reminder that one does not belong. Furthermore, social rejection from peers is highly personal in nature. Students may find it more difficult to recover from rejection when it is based on their personal characteristics than when it is based on their lack of a specific skillset (such as when one is turned down for a job), although more research is needed on this question.

Perceived belonging significantly mediated the long-term, between-groups effects of rejection on depressive symptoms, happiness, positive mental health, and satisfaction with life. Although perceived social status was significantly undermined by rejection, it did not mediate the effects of rejection. This pattern provides evidence relevant to the relative impact of perceived belonging versus subjective social status for well-being. Studies have suggested that subjective social status has adverse consequences on health (Archie, Altmann, & Alberts, 2012; Wilkinson & Pickett, 2006), but few have controlled for subjective belonging or considered the possibility that social status is based partly on the degree to which one is accepted and belongs to social groups (Leary et al., 2014). A person's sense of belonging in college is likely influenced both by perceptions of acceptance as well as perceived social status. Thus, this finding does not suggest that social status is unimportant; rather, in some contexts, perceived social status may be a facet of broader feelings of belonging.

Although laboratory studies have generally shown that being accepted does not increase positive feelings above what they were before the acceptance, or above those of a neutral comparison group (Gerber & Wheeler, 2009; Leary et al., 1995), women who were accepted into a sorority showed significant long-term increases in both happiness and perceived social status. These differing results may be due to the fact that, in

experimental studies, acceptance is a short-lived event with no implications for participants' lives beyond the laboratory context. In contrast, acceptance into a sorority provides an ongoing experience of acceptance and belonging, as well as a variety of enjoyable social experiences that may serve to maintain happiness in the long run. This finding highlights the importance of complementing laboratory research on short-term rejection with research in natural settings.

Because we could not randomly assign participants to be accepted or rejected during sorority recruitment, the findings are open to alternative explanations. For example, we hypothesize that the rejected group's decrease in well-being was due to the rejection, but an alternative explanation is that those participants may have already been on a downward trajectory that would have occurred regardless of their participation in sorority recruitment. Although we cannot rule this possibility out, the lack of differences between the groups on any personality[4] or well-being measures at Time 1 suggests that the groups were likely on similar trajectories prior to recruitment. Furthermore, the Time 2 assesment was only 2 weeks after Time 1, making it highly unlikely that the strong effects observed at Time 2 would have occurred even if recruitment had not taken place.

Because the students knew that the study was about their experience of sorority recruitment, one possible explanation for the long-term effects we observed is that completing the survey at Time 3 reminded participants of their recruitment experience, and reliving this experience caused participants to report lower well-being at Time 3 than they actually had before completing the measures. However, happiness was the first well-being measure assessed in the survey, and, in contrast to the very strong short-term effects of rejection on happiness, there were no long-term within-subject effects of rejection on happiness, which suggests that participants' responses were not simply a reflection of reliving the social pain of recruitment. Furthermore, one could also argue that knowing that the study was about sorority recruitment effects could motivate the women to respond more positively at Time 3

than they were actually feeling in order to display a face of recovery and resilience (Privitera, 2013; Rosenberg, 1975).

Although we followed-up with the participants 3 months after recruitment began, it is unclear whether the effects of the rejection would persist over a longer time frame. Furthermore, this research took place in a specific setting (sorority recruitment) that has features that differ from those in other types of rejection. Even so, this work is a first step in showing that rejection experiences can have long-lasting effects, at least under certain conditions. Future work should examine the long-term effects of other forms of rejection, especially rejections that have implications for community belonging.

Joining a sorority or fraternity is often viewed as a relatively unimportant, if not superficial, decision, making it easy to downplay the effects of the recruitment process on students' well-being (Becker, 2015). Yet, as our results showed, negative recruitment experiences can have notable effects. Currently, little research exists on how women are affected by the recruitment process, despite the fact that tens of thousands of women participate in sorority recruitment every year. This study provides initial evidence regarding the unintended consequences of this process and suggests that colleges and universities should examine the sorority recruitment processes on their campuses. More broadly, the findings highlight the impact of rejection by people with whom one must have at least passing contact in the future. Although people certainly adapt to rejection events, full recovery from rejection may be particularly difficult when it remains salient and has ongoing implications for belonging.

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Notes

1. Bid day is the final day of sorority recruitment, when the women are invited to join ("offered a bid" to join) one sorority.
2. If women go to all of the sororities that invited them back for each round of recruitment and rank all of their options on preference night (the final night of recruitment, when they rank their final options), they will receive a bid on bid day, although not necessarily to a sorority they want to join.
3. Because these women withdrew before any round invitations were disbursed, they did not experience explicit rejection and were thus excluded from the rejected status classification. However, results are the same, if not stronger, with these women included in the analysis.
4. The three groups did not differ on trait self-esteem (Rosenberg, 1975), fear of negative evaluation (Leary, 1983), or concern with status (Blader & Chen, 2011), which were the only personality variables measured in this study. These measures were not reported in the main text in the interest of space.

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