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The stress-affiliation paradigm revisited: Do people prefer the kindness of strangers or their attractiveness?

Norman P. Li ^{a,*}, Rose A. Halterman ^b, Margaret J. Cason ^a,
George P. Knight ^c, Jon K. Maner ^d

^a Department of Psychology, University of Texas at Austin, 1 University Station A8000, Austin, TX 78712, United States

^b Department of Psychology, University of Iowa, E11 Seashore Hall, Iowa City, IA 52240, United States

^c Department of Psychology, Arizona State University, P.O. Box 871104, Tempe, AZ 85287, United States

^d Department of Psychology, Florida State University, 1107 W. Call Street, Tallahassee, FL 32306, United States

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Abstract

Two studies employed a classic affiliation-under-stress paradigm and examined people's preferences for affiliating with kind versus attractive same- and opposite-sex targets. When men were under default conditions of low stress, they preferred to affiliate with attractive women. However, men placed in a high stress situation instead preferred to interact with kind women. Regardless of stress level, women preferred to affiliate with kind, rather than attractive, men. When choosing among interaction partners of their own sex, participants uniformly chose to interact with kind others, regardless of stress level. This research builds on traditional stress-affiliation research, which has focused on whether people wish to affiliate with others who are currently in or have already experienced the same stressful situations. The current research suggests that stress may affect the enduring personal traits we seek in others. Possible motivations underlying men's and women's preferences in the current study (e.g., mating goals, self-protective goals) are discussed.

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* Corresponding author.

E-mail address: normli@mail.utexas.edu (N.P. Li).

1. Introduction

People often find themselves feeling fearful or stressed, while at the same time needing to interact with strangers. With what sort of strangers do fearful or stressed people seek to affiliate? Previous research has focused primarily on the tendency for people to seek emotional similarity from those undergoing similar threats (Schachter, 1959) or cognitive clarity from people who have experience with such threats (e.g., Kirkpatrick & Shaver, 1998; Kulik & Mahler, 1989). However, people often may not be in the company of others who are in the same predicament or who can offer wisdom from experience. Accordingly, when considering stranger affiliation preferences, it also is important to identify other, more general, traits to which people under stress are drawn. The current research examines affiliation choices using a traditional stress-affiliation paradigm and investigates whether people under stress seek to affiliate with others who are kind versus others who are physically attractive – two attributes that play a key role in relationship processes. Which of these qualities is preferred may involve a tradeoff between basic social motives.

1.1. *A history of stress-affiliation research*

Classic theories of social comparison imply that, in evaluating their own opinions and abilities, people commonly compare themselves with others (Festinger, 1954). Building off of social comparison theory, Schachter (1959) proposed an emotional comparison theory, in which people currently experiencing a novel, high-stress situation are hypothesized to seek to affiliate with others who are facing the same threatening situation. By comparing oneself to others who share one's plight, one is presumably better able to assess one's own emotional reaction, and to evaluate one's current situation.

A number of studies seem to support this hypothesis. The classic stress-affiliation paradigm involves assigning some participants to anticipate a stressful event (e.g., experiencing painful electric shocks) and then having them choose an affiliate with whom to wait prior to the event. Evidence suggests that, under such conditions, participants typically seek to wait with others who are experiencing the same situation or emotional state. In contrast, participants in low stress control conditions typically are indifferent or prefer to be alone (Schachter, 1959).

In addition to emotional comparison, the desire for cognitive clarity has been proposed as a motive underlying this preference for similarity (e.g., Kirkpatrick & Shaver, 1998; Kulik, Mahler, & Moore, 1996). Evidence suggests that, when given the opportunity, participants anticipating a stressful event seek to interact with people who are experienced (and emotionally dissimilar) so that they may learn how to cope with the impending threat. Despite their differences, theories of emotional comparison and cognitive clarity imply that people who are experiencing stress tend to seek interaction with others in order to gain insight into their own predicament.

1.2. *Tradeoffs between mating and self-protection*

In investigating emotional comparison and cognitive clarity, past stress-affiliation research has allowed participants to seek affiliation with others who were currently undergoing or had previously undergone similar predicaments. However, people often lack this luxury, and instead must face stressful situations by interacting with complete strangers – strangers who have little

knowledge of one's predicament. Under such circumstances, people may seek to affiliate with others who possess certain traits. Such traits may make people seem like better affiliation partners, particularly when one is under stress (see Ambady, Hallahan, & Rosenthal, 1995; Kurzban & Leary, 2001; Maner, DeWall, Baumeister, & Schaller, 2007).

Which traits are especially valued in others? The answer may depend on a person's motivational state. Motivational states, commonly elicited by emotions, function to guide cognition, affect, and behavior in order to solve adaptive problems (e.g., Frijda, 1986; Maner et al., 2005, 2007; Zajonc, 1998). For instance, the stress of rejection can promote a desire for social acceptance and lead people to seek affiliation with others, particularly others who seem like a good bet for forming a friendship. Similarly, we expect that one's choice of affiliation partner will be guided by an individual's current social goals.

Under default conditions of little or no stress, mating goals may influence the processing of social information (e.g., Haselton & Buss, 2000; Maner et al., 2003; Miller & Todd, 1998) and may guide people's social choices. When considering potential mates, physical attractiveness is highly valued (e.g., Buunk, Dijkstra, Fetchenhauer, & Kenrick, 2002; Fletcher, Tither, O'Loughlin, Friesen, & Overall, 2004) and is used for initial screening by men considering long-term mates (Li, Bailey, Kenrick, & Linsenmeier, 2002) and by both sexes considering short-term mates (Li & Kenrick, 2006). From an evolutionary perspective, physical attractiveness serves as a cue to health (Shackelford & Larsen, 1999), fertility (Singh, 1993), and genetic fitness (e.g., Thornhill & Gangestad, 1993). Thus, under default conditions of low stress, mating goals may be active and physical attractiveness may be especially relevant when people are choosing to affiliate with members of the opposite sex. Because men's mating strategies incline them to be more eager for sexual opportunities (Buss & Schmitt, 1993; Clark & Hatfield, 1989), default mating goals may be more active in men than in women. Therefore, under conditions of low stress, men may be more inclined than women to seek out members of the opposite sex who are physically attractive.

In a fearful or stressful situation, however, a self-protective goal may become active. A self-protective goal, in turn, is likely to affect people's choices of affiliation partner. In particular, seeking kindness might be especially beneficial when one is under stress, as a kind individual can provide desired comfort and support (Rofe, 1984) and may make a good ally.

1.3. Overview of the current research

To investigate trait preference tradeoffs in affiliation choice, we utilized a traditional stress-affiliation paradigm. Participants in two studies were placed under situations of high or low stress and given a choice to affiliate with one of four targets: attractive/kind, attractive/unkind, unattractive/kind, and unattractive/unkind. Previous affiliation research (Rofe, 1984) suggests that a kind target would be especially desirable, and mate preference research has shown that physical attractiveness is valued by both sexes, though even more so for men (e.g., Buss, Shackelford, Kirkpatrick, & Larsen, 2001; Regan & Berscheid, 1997). Hence, for both high and low stress conditions, it was predicted that the most favored affiliate would be one who is both attractive and kind – the best of both worlds. Conversely, a target who is both unattractive and unkind should be the least desirable affiliate. Thus, preferences between the attractive/unkind and unattractive/kind targets were of particular interest, as they reflect the tradeoff between mating goals and self-protective goals.

In Study 1, kindness and attractiveness were pitted against one another under different levels of stress in opposite-sex affiliation scenarios. Under default conditions of low stress, mating goals may be more likely to be active. When seeking a long-term mate, women value physical attractiveness but seem to favor prosociality even more (Jensen-Campbell, Graziano, & West, 1995; Li et al., 2002). A kind, prosocial man – one exhibiting altruistic and agreeable behavior – is more likely to form an intimate, committed relationship in which he is willing to provide for his partner's needs. In addition, although mating goals might normally be present for women, women may consider affiliation with male strangers to be stressful. Therefore, under default low experimental stress, women were expected to value kindness over attractiveness for an opposite-sex affiliate. In contrast, men tend to be more open to and more perceptive of mating opportunities (e.g., Abbey, 1982; Clark & Hatfield, 1989; Li & Kenrick, 2006) and may be more likely to have mating goals active by default. Also, men tend to prioritize physical attractiveness for all types of mates (Li & Kenrick, 2006). Therefore, under default low stress conditions, men were expected to favor the physically attractive female targets.

Under threat or uncertainty (i.e., a high stress condition), fear may lead people to reprioritize their goals, and to seek out others who can help reduce their distress and sense of vulnerability (Buck, 1999). To this end, both men and women under conditions of stress are expected to prioritize others who are kind, and who therefore can offer comfort and support. Thus, men who are experiencing stress are expected to change their preference from an attractive partner to a kind partner. Women are expected to prioritize kindness regardless of stress level. Study 2 investigated preferences in choosing among interaction partners of the participants' own sex, to establish the sex-specificity of the findings, and to further delineate the motives underlying people's choices.

2. Study 1

2.1. Method

2.1.1. Participants

Participants were 175 (81 male and 94 female) introductory psychology undergraduates. One participant dropped out upon hearing about the study (resulting in 93 female participants).

2.1.2. Procedure

Participants came into the lab for an alleged experiment on simple task performance. Participants were randomly assigned to a high or low stress condition. Those in the high stress condition were informed that they would perform tasks while receiving periodic electric shocks that would be “painful but would not cause any permanent tissue damage”. To bolster credibility, an electronic device with electrodes was present in the room, with rubbing alcohol and applicator pads placed on the same table. Participants in the low stress condition were told that they would perform tasks under normal circumstances. Results from pre-testing (1 = not at all, 7 = very much so) indicated that being in the high stress condition was more stressful ($M = 5.3$, $SD = 1.5$) than being in the low stress condition ($M = 2.5$, $SD = 1.2$), $t(28) = 5.45$, $p < .001$, $d = 1.99$.

Next, participants were told that a separate study was simultaneously being conducted at the other end of the hall. The supposed purpose of this other study was to assess how people's

interpersonal styles affect their interactions with others. The experimenter explained that while the task for the current study was being prepared, participants would interact with a participant from the other study for 10–15 min. Participants were shown a kindness questionnaire that people in the other study had supposedly completed. The questionnaire consisted of nine questions using Likert-type scales (1 = “Not at all”, 10 = “Extremely”). Examples include “How much do you enjoy comforting others?” and “If a classmate was depressed and asked for your help, would you give them your time?”

Participants were also given summary sheets for four opposite-sex individuals supposedly from the other study. Each summary sheet contained a photocopied ID picture and a mean kindness score. Two attractive and two unattractive photos of each sex were used for the ID pictures. The pre-rated attractiveness (1 = extremely unattractive, 7 = extremely attractive) for the photos were – unattractive males: $M = 2.2$, $SD = 0.9$; $M = 2.3$, $SD = 1.0$; unattractive females: $M = 2.2$, $SD = 1.0$; $M = 2.4$, $SD = 1.0$; attractive males: $M = 4.5$, $SD = 1.1$, $M = 5.5$, $SD = .9$; attractive females: $M = 4.9$, $SD = 1.2$; $M = 5.3$, $SD = .6$. Two summary sheets showed low mean kindness scores (2.5, 2.7), and two showed high mean kindness scores (7.4, 7.6). The pairing of kindness scores and photos was counterbalanced. Levels of kindness and attractiveness were crossed, such that participants received one of each target type: attractive/kind, attractive/unkind, unattractive/kind, and unattractive/unkind.

The experimenter then asked the participants to indicate the person with whom they wanted to interact by placing the summary sheets in order of preference, with the most preferred affiliate on top. The experimenter left the room to “check on the preparations for the task study” and returned after five minutes. Summary sheets were collected and participants were debriefed.

2.2. Results

The study employed target attractiveness (attractive, unattractive) and target kindness (kind, unkind) as within-subject variables, and subject sex (male, female) and stress condition (low, high) as between-subject variables. For ease of interpretability, we coded each target’s score to reflect the number of targets that it outranked. Thus, the most preferred target scored a 3 (it ranked higher than 3 targets), the second most preferred target a 2, etc. As shown in Fig. 1, across all

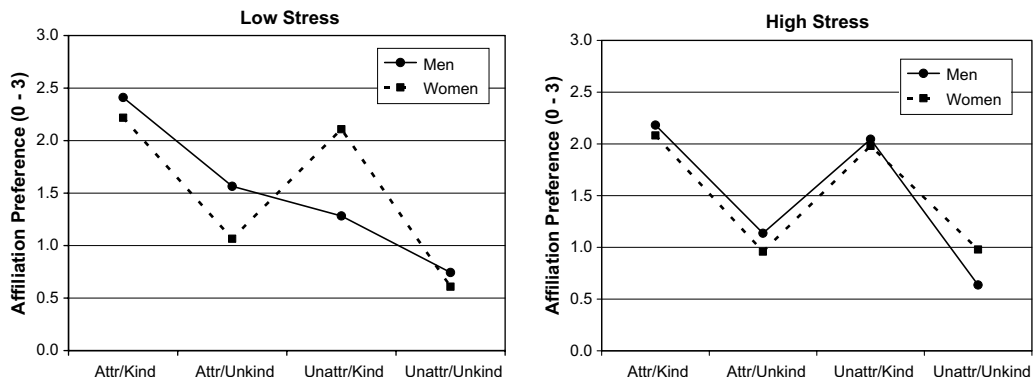


Fig. 1. Study 1: Men’s and women’s preferences for opposite-sex affiliation targets when under low and high stress.

conditions, the most preferred target was the attractive/kind target, and the least preferred was the unattractive/unkind one. Comparing the two tradeoff targets (attractive/unkind vs. kind/unattractive) for male participants under low stress, 22 preferred to affiliate with the attractive target, and 15 favored the kind target. Under high stress, this preference reversed: 11 men preferred the attractive target, and 33 men preferred the kind one. A Chi-Square revealed that the difference in patterns was significant, $X(1) = 9.886$, $p = .002$. For women under low stress, 11 favored the attractive target over the kind one, and 35 favored the kind one over the attractive one. Under high stress, a similar pattern was observed: 11 favored the attractive target, and 36 favored the kind one. The difference for women was non-significant, $X(1) = .003$.

An overall factorial analysis of variance (ANOVA) was also conducted on the reverse rankings. This analysis indicated a 4-way attractiveness \times kindness \times subject sex \times stress interaction, $F(1, 174) = 4.440$, $p = .037$, $r = .158$, reflecting different affiliation preferences for men and women across stress conditions. To interpret this interaction we probed the constituent 3- and 2-way interactions separately for kindness and attractiveness. A 3-way kindness \times subject sex \times stress interaction, $F(1, 174) = 4.712$, $p = .031$, $r = .162$, indicated that although women consistently preferred kind targets over unkind targets, men preferred kind targets more under high stress than low stress. Interactions of attractiveness \times subject sex, $F(1, 174) = 8.291$, $p = .004$, $r = .213$, and attractiveness \times stress, $F(1, 174) = 7.118$, $p = .008$, $r = .200$, indicated that men, more than women, preferred attractive targets over unattractive ones, and that men's preference for attractive targets was more prevalent under low stress than high stress. A post-hoc analysis revealed a significant attractiveness \times stress interaction for men, $F(1, 175) = 6.21$, $p = .014$, $r = .185$, but not for women, $F = 1.19$, $r = .082$.

2.3. Discussion

A participant's preference for kindness versus attractiveness depended on one's sex and level of stress. Under low stress, men favored attractive women over kind women, whereas women favored kind men over attractive men. Under high stress, men switched their preferences and favored kind affiliates. Women continued to favor kind affiliates under high stress. These findings are consistent with our hypothesis that under default conditions, mating motives may guide people's choices of opposite-sex affiliation partners. Under default conditions men sought to interact with attractive women, whereas women preferred to interact with kind men. This is consistent with evidence that men tend to place greater emphasis than women do on a potential mate's attractiveness (e.g., Li et al., 2002). Women, in contrast, may have prioritized kindness in their choice of partner because they prefer kind mates, although mating concerns also simply may have been less salient for women.

Perhaps most important, we found that men's choice of affiliation partner changed when they were placed under stress. Under stress, men no longer preferred an attractive member of the opposite sex, instead prioritizing kindness in a female partner. This is consistent with our hypothesis that the stressful anticipation of pain would activate self-protective concerns, leading men to seek safety and reassurance.

One limitation of this study is that we examined choices among only opposite-sex interaction partners. To delineate the specificity of these findings, therefore, Study 2 examined choices among members of the participant's own sex.

3. Study 2

We examined same-sex affiliate preferences in Study 2. If, for example, men prefer to affiliate with attractive male targets when under low stress, then it is unlikely that these preferences are driven by mating motives.

3.1. Method

Participants were 138 (64 male and 74 female) introductory psychology undergraduates. The method of Study 2 was identical to that of Study 1, except that same-sex targets were used in Study 2.

3.2. Results and discussion

Same-sex affiliation ratings are pictured in Fig. 2. For both sexes under both stress conditions, the attractive/kind target was the most preferred one, with the unattractive/kind target being a close second. The attractive/kind target was a distant third choice, and the unattractive/unkind target was a close fourth choice. A comparison of men's choices between targets in the two trade-off conditions (attractive/unkind, unattractive/kind) showed that the kind target was preferred over the attractive target under low stress (27 to 5) and under high stress (22 to 10). This pattern did not differ between stress conditions, $X(1) = 2.17$. Likewise, women preferred the kind/unattractive target over the attractive/unkind target under both low stress (29 to 7) and high stress (34 to 4). This pattern also did not differ between stress conditions, $X(1) = 1.16$.

An ANOVA revealed only an effect of kindness, $F(1, 174) = 136.641$, $p < .001$, $r = .663$, reflecting that both sexes, regardless of stress level, preferred kind same-sex targets over unkind ones. Thus, across the two studies, both sexes similarly valued kindness in their affiliates when under high stress. Under low stress, both sexes preferred kindness in same-sex affiliates, but only women preferred kindness in opposite-sex affiliates. While under low stress, men preferred attractive women over kind women.

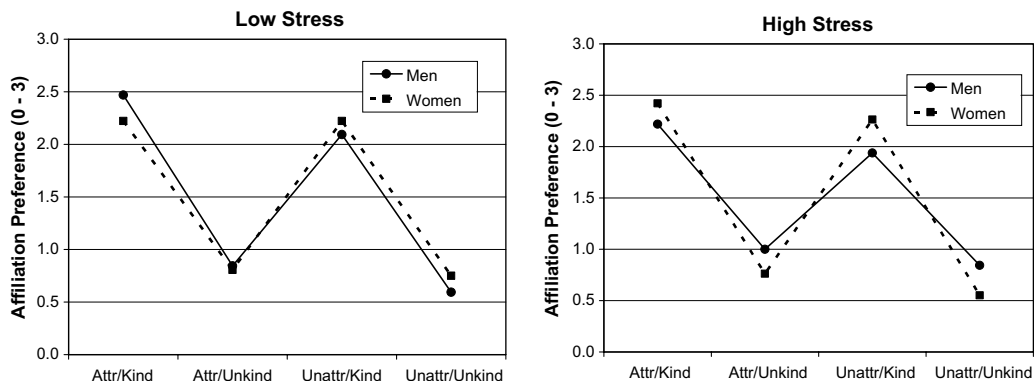


Fig. 2. Men's and women's ratings for same-sex affiliation targets when under low and high stress.

4. General discussion

Two studies examined affiliation preferences under low and high stress, toward opposite- and same-sex individuals who varied in physical attractiveness and kindness. Findings suggest that when there are tradeoffs in interpersonal affiliation alternatives, people's choices may reflect their current needs and motives.

In Study 1, men under default conditions of low stress preferred to affiliate with attractive women. However, under high stress, their preferences changed toward kind women, thereby suggesting that different underlying motivations may be active when men are under low versus high stress. Results from Study 2 helped to clarify what these motivations might be. Men under low stress did not value attractiveness in male affiliates, thus lending support to the hypothesis that when affiliating with novel women, men may have a mating motive present under normal conditions. But, if undue stress is present, such motives may be overridden by needs for safety and comfort, in which case a kind individual is preferred. Because men's affiliation preferences toward other men were similar across both stress conditions, the underlying motives may be similar for these conditions. For men, kind men may be sought for the same reason that kind women are sought – because they are likely to provide desired support and reassurance.

When women were under low stress, they preferred kind men over attractive men. Although this specific finding is consistent with women having a default mating goal with preferences for a kind mate, women consistently favored a kind affiliate regardless of affiliate sex or whether experimentally induced stress was present. Thus, a more parsimonious explanation is that across all conditions, participants were expecting to meet a stranger and then perform an unknown task; either of these expectations may have been sufficiently stress-provoking to women. Across various species, including humans, females under stress tend to family and befriend other females (Taylor et al., 2000). This tending and befriending behavior is consistent with seeking out kindness in others during stress.

Our studies add a new dimension to stress-affiliation research. In distinguishing between needs for emotional similarity and needs for cognitive clarity, stress-affiliation researchers have tended not to focus on people's desire for affiliation with others who possess certain enduring traits, such as kindness or attractiveness. Our findings suggest that people do consider these traits and, more importantly, that the particular traits sought depend on whether a person is under stress (and therefore desires support and reassurance). In conducting this research, we incorporated input from two seemingly disparate areas of psychological research – stress-affiliation and mate preferences, and uncovered evidence that people's social choices reflect intrinsic tradeoffs that reflect competing motivations. Although our findings were based on stranger affiliation, implications may extend to familiar individuals. For instance, when facing pressure and difficulties at work, men may be more likely to seek comfort from their wives rather than from potential or existing affair partners.

4.1. Limitations and future directions

Although two studies indicated clear affiliation patterns, we can make only indirect inferences about what specific motivations shaped people's affiliative choices. For example, although men may have had mating motives under low stress and self-protective motives under high stress,

we can only infer the presence of these motives. Still, there is a sizable literature suggesting that, under default conditions, many college students are especially concerned with mating (e.g., Maner et al., 2003), and that fear produces a desire to protect oneself from harm (e.g., Maner et al., 2005). Additional research is needed to more directly evaluate the links between particular social motives and the prioritization of particular traits in others.

Another limitation of the current research is that we have investigated only two of the many traits people may seek in others. There are likely to be many traits that people seek in others – for example, being trustworthy, agreeable, likeable, intelligent, or accepting – and preferences for these traits are likely to vary with the particular constraints of the situation, and the particular types of stressors people encounter (e.g., Cottrell, Neuberg, & Li, 2007). Also, for each sex, we used two photos for each attractiveness condition. Ideally, a greater number of photos would be used to further rule out the possibility that results were due to idiosyncratic differences among the photo stimuli (Wells & Windschitl, 1999).

4.2. Conclusion

With whom do people seek to affiliate? The current research suggests that the answer to this question depends on a person's sex and level of stress. The current findings suggest that people's preferences for affiliation partners who are kind versus attractive may be guided by current social motives related to mating and self-protection.

Given that the modern world offers abundant sources of stress, and most people around us are strangers who have no relation to any predicaments that we may be facing (nor any useful insights to mastering them), it may not be surprising that a benevolent stranger is more often preferred over an attractive one. Although relatively more research has focused on the trait of physical attractiveness, it also may be worthwhile to further understand a less visible but potentially more desirable trait in stressful times – kindness.

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