

- Savage-Rumbaugh, S. (1994). Hominid evolution: Looking to modern apes for clues. In D. Quatt & J. Itani (Eds.), *Hominid culture in primate perspective* (pp. 7-49). Niwot: University Press of Colorado.
- Schlenker, B. R. (1985). Identity and self-identification. In B. R. Schlenker (Ed.), *The self and social life* (pp. 65-99). New York: McGraw-Hill.
- Sedikides, C., & Skowronski, J. J. (1997). The symbolic self in evolutionary context. *Personality and Social Psychology Review*, 1, 80-102.
- Sedikides, C., & Skowronski, J. J. (2002). Evolution of the symbolic self: Issues and prospects. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 594-609). New York: Guilford Press.
- Tooby, J., & Cosmides, L. (1996). Friendship and the banker's paradox: Other pathways to the evolution of adaptations for altruism. *Proceedings of the British Academy*, 88, 119-143.
- Whiten, A., & Byrne, R. W. (1988). The Machiavellian intelligence hypothesis: Editorial. In R. Byrne & A. Whiten (Eds.), *Machiavellian intelligence: Social expertise and the evolution of intellect in monkeys, apes, and humans* (pp. 1-9). Oxford, UK: Clarendon Press.
- Zihlman, A. L., Cronin, J. E., Cramer, D. L., & Sarich, V. M. (1978). Pygmy chimpanzee as a possible prototype for the common ancestor of humans and gorillas. *Nature*, 275, 744-746.

C H A P T E R 1 2

Rejection's Impact on Self-Defeating, Prosocial, Antisocial, and Self-Regulatory Behaviors

GINETTE C. BLACKHART

ROY F. BAUMEISTER

JEAN M. TWENGE

One key to understanding human nature is to recognize that what exists and what happens *inside* the individual is largely there in order to serve what happens *between* people (e.g., Baumeister, 2005). The intrapsychic serves the interpersonal. Most likely this is because nature has designed human beings to seek connections with other people as their principal means of getting what they want. Unlike most other species, human beings obtain most of their food and information from each other rather than directly from the physical environment.

The purpose of this chapter is to explore a particularly challenging and troubling link between inner and interpersonal processes. Specifically, we cover a recent program of research designed to study how self-defeating responses follow from interpersonal rejection and exclusion. Rejection thwarts the need to belong and is therefore profoundly problematic to an organism that is overwhelmingly designed to seek acceptance. Self-defeating behavior thwarts the rational pursuit of enlightened self-interest and is therefore profoundly problematic to any organism that seeks to survive and flourish.

Humans' innate motivation to belong is demonstrated by the "pervasive drive to form and maintain at least a minimum quantity of lasting, posi-

tive, and significant interpersonal relationships" (Baumeister & Leary, 1995, p. 497). This belongingness motive appears to have an evolutionary basis. Forming and maintaining social bonds would have had both survival and reproductive benefits (see Baumeister & Leary, 1995). Humans are not born with the ability to survive on their own, and as a result they must depend on others for food, water, and protection. Small groups could share food, fight off enemies, help care for offspring, and provide protection for one another, thereby increasing the chances of survival for everyone in the group. Those who formed attachments to others were more likely to reproduce than those who did not form those attachments, and, if long-term attachments were formed, the chances of survival for their offspring increased (see Baumeister & Leary, 1995).

Even today, humans are dependent on others for survival. People need others to care for them when they are very young, when they are sick or injured, and when they are very old. Families and friends share resources to enable survival in the everyday struggles all people experience. In fact, research has shown that those with strong social support networks are less likely to suffer from psychological disorders (e.g., Joiner, 1997). Among those with psychological disorders, a strong social support network is associated with less severe symptoms and better recovery rates (e.g., Hann et al., 2002). Even those with cancer and other life-threatening physical disorders are more likely to survive if they have a strong social support network (e.g., Michael, Berkman, Colditz, Holmes, & Kawachi, 2002).

Because of humans' innate motivation to form and maintain social bonds, threats to their need to belong should result in increased efforts to obtain social acceptance. Thus when one is socially rejected, one should increase prosocial behaviors in order to garner social acceptance and belonging. In addition, one's self-regulation should increase in order to enable one to alter his or her behaviors to conform to the ideals, expectations, values, norms, and other standards that the social group holds. This increase in self-regulatory and prosocial behaviors would increase social acceptance from the group, thereby increasing the likelihood that one would be accepted (either by the group that initially rejected the person or by a new group). Laboratory research, however, has shown quite an opposite pattern of results. After being socially rejected or being told they will end up alone later in life, research participants actually exhibit an increase in selfish and self-defeating behaviors, including a decrease in prosocial behaviors and an increase in antisocial behaviors.

It may be argued that exhibiting less prosocial behavior and acting aggressively toward others is in and of itself self-defeating. If a person's need to belong is threatened by interpersonal rejection, that person should theoretically want to behave in such a way as to be socially accepted by others. Decreased prosocial behaviors, such as helping, and increased aggression

toward others would not generally have the desired effect—if anything, they would have the opposite effect of decreasing social acceptance. Instead of finding that rejection causes people to be more prosocial, however, several studies from our labs have shown that socially rejected individuals are in fact less prosocial and more antisocial. These behaviors are self-defeating in general because they reduce a person's chances of securing desired social acceptance. As a result, this chapter not only discusses research indicating that social rejection causes increases in self-defeating behaviors, but also research showing that social rejection causes decreased prosocial behavior, increased aggression, and decreased self-control.

INCREASES IN SELF-DEFEATING BEHAVIOR

Research has shown that once a person has been socially rejected by others, he or she will exhibit increases in self-destructive and self-defeating behavior. For instance, Twenge, Catanese, and Baumeister (2002, 2003) found that socially rejected participants were more likely to make irrational and risky decisions, were more likely to engage in unhealthy behaviors, engaged in more procrastination, and were less likely to delay gratification than non-rejected participants.

The methods for the ensuing studies followed a similar pattern: Participants first completed the Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975) and were given accurate feedback about their score on the Extraversion scale by the experimenter. Participants were then told that their level of Extraversion/Introversion was (1) bad for relationships, and they would end up alone later in life (future alone condition); (2) good for relationships, and they would always have friends and people who care about them (future belonging condition); or (3) indicative of being accident-prone, and they would have a lot of accidents later in life (misfortune control condition). The misfortune control condition was included because it described a negative outcome that was not related to relationships or social exclusion.

After giving the participants bogus feedback, Twenge and colleagues (2002) offered them a choice between two lotteries. This procedure had been developed by Leith and Baumeister (1996) to study self-defeating behavior in the form of taking foolish risks. Participants were told that if they won the lottery, they would win money. If they lost the lottery, however, not only would they not win any money, but they would also be subjected to a 3-minute audiotape of fingernails scraping against a chalkboard. Lottery A offered a 70% chance of winning \$2 and a 30% chance of winning no money and being subjected to the noise on the audiotape. Lottery B offered a 2% chance of winning \$25 and a 98% chance of winning no money and being subjected to the noise on the audiotape. Although the maximum gains expected from winning

Lottery B were substantially larger than the gains expected from winning Lottery A, the chances of winning Lottery B were so low it would be logical to conclude that most people would choose Lottery A to increase their chances of winning money and to substantially decrease their chances of being subjected to an intolerable noise. If one calculates expected gain by multiplying probabilities by outcomes, it is obvious that Lottery A was the more rational choice. In that sense, choosing Lottery B qualifies as a self-defeating behavior (Leith & Baumeister, 1996).

Those participants given feedback that they would end up alone later in life made a poorer and riskier decision on the lottery choice paradigm than participants in the other groups, choosing the lottery that only gave them a 2% chance of winning (Lottery B) over the lottery that gave them a 70% chance of winning (Lottery A). In fact, while only 6% of those in the future belonging condition chose Lottery B, over 60% of those in the future alone condition chose Lottery B. This choice is self-defeating, insofar as rejected participants chose the lottery that gave them little chance of reward and great chance for punishment.

Receiving the future alone feedback also affected participants' choices between healthy and unhealthy behaviors (Twenge et al., 2002). After receiving bogus feedback (that they would end up alone later in life, would always have people who cared about them, or were accident-prone), participants were first given a choice between a candy bar or a lower fat granola bar. Participants next were told that they needed to wait in the lab for a period of time. While they were waiting, they could choose either to fill out a health survey that would help them improve their health or read entertainment magazines (e.g., *People*, *Entertainment Weekly*). Then the experimenter told participants that she needed to take their pulse as a measurement of their overall health: Participants could choose either to have their resting pulse or their running pulse taken. Participants were told that the running pulse would require them to run in place for 2 minutes, but that it was a better measure of their overall health than a resting pulse measurement. Participants given future alone feedback were significantly more likely than those in the future belonging or accident-prone groups to choose the three unhealthy behaviors over the healthy ones. That is, they were more likely to choose the candy bar over the granola bar, to read entertainment magazines rather than complete the health questionnaire, and to have their resting pulse taken rather than their running pulse. Choosing to engage in unhealthy behaviors over healthy ones is self-defeating in that the unhealthy behaviors portend negative long-term consequences.

Procrastination is another important form of self-defeating behavior insofar as it causes health problems, stress, and inferior performance (Tice & Baumeister, 1997). Procrastination is also increased by rejection experiences (Twenge et al., 2002). Participants were told that they would be taking a non-verbal intelligence test that would consist of arithmetic problems assessing the

participant's skills on quantitative reasoning, analytical abilities, and fluid thinking. Participants were subsequently told that they would have the opportunity to practice these types of problems before the test. The experimenter explained that previous research indicated that practicing the arithmetic problems for 10–15 minutes would significantly improve their performance on the nonverbal intelligence test. Participants were informed that they would have 15 minutes to practice, and that at least some of that time should be spent practicing the arithmetic problems. They were also told, however, that if they did not want to practice the equations the whole time, they could engage in a number of other tasks, such as playing a handheld video game (Nintendo Game Boy with Tetris) or reading entertaining magazines (e.g., *Cosmopolitan*, *Maxim*). Participants given feedback that they would be alone later in life procrastinated more than participants who received belonging or accident-prone feedback. Participants in the future alone condition chose to engage in pleasurable activities, such as playing the video game or reading the magazines, rather than completing math problems that would improve their performance on the upcoming intelligence test.

The negative impact of interpersonal rejection on delay of gratification was also shown by Twenge and colleagues (2003). Delay of gratification is a crucial trait in many spheres of human success, from farming to obtaining higher education. Thus failure to delay gratification is a potentially costly and self-defeating pattern. In the Twenge and colleagues study, an experimental manipulation different from that used in the previous studies was employed. Participants arrived in groups of four to six, all of the same gender. After a 15-minute introductory session, participants were told that they would be paired with another participant to work on a task, and all were asked to indicate the two people from the group they most wanted to work with on this next task. Participants were next told that either (1) no one chose to work with them (rejected condition) or (2) everyone chose to work with them (accepted condition). After being given this bogus feedback, participants read a scenario in which they were asked to imagine that a friend had received two job offers. One job offered a higher beginning salary, but little opportunity for advancement or a better income, therefore favoring a short-term gain at the expense of a long-term gain. The other job offered a considerably lower beginning salary, but the possibility of substantial advancement and a higher income later, therefore favoring a long-term gain over a short-term gain (which requires a higher delay of gratification). When given the choice to advise the friend to take one of these two jobs, rejected condition participants were more likely than accepted condition participants to advise the friend to take the job with a higher salary but little opportunity for advancement, thereby favoring short-term rewards over long-term benefits.

In summary, these studies indicate that when participants are led to believe that they have been rejected by others or will end up alone later in life, they engage in self-defeating and self-destructive behaviors. Rejected

participants made an irrational, risky decision in a lottery paradigm, choosing the lottery that had a greater payout but a very low chance of winning over a lottery with a lower payout but a greater chance of winning (and of avoiding an unbearable noise). Rejected participants also chose unhealthy behaviors over healthy ones, such as choosing a candy bar over a granola bar, opting to read entertainment magazines over taking a health survey that could help them increase healthy behaviors, and deciding to have their resting pulse taken over their running pulse. Rejected participants also procrastinated prior to an upcoming test, insofar as they read entertaining magazines or played video games rather than practicing for the exam. In addition, rejected participants said they would advise a friend to take a job with a high starting salary but little possibility for future advancement over a job with a lower starting salary but with opportunities for substantial advancements in the future, a clear sign of inability to delay gratification.

DECREASE IN PROSOCIAL BEHAVIORS

As discussed earlier, decreased prosocial behavior following rejection is self-defeating if an individual has the goal of gaining acceptance and inclusion. Prosocial behaviors include a wide range of actions, such as sharing, helping, giving, and comforting. Although it would be expected that socially rejected individuals would increase their prosocial behaviors to gain acceptance from others, research has shown that social rejection leads to significant decreases in prosocial behavior. For instance, Twenge, Ciarocco, Cuervo, Bartels, and Baumeister (2005) found that socially excluded participants donated less money to an important cause, were unwilling to volunteer for future studies, were less helpful, and cooperated less with others, as compared to participants who were accepted by others.

In this study, after completing the EPQ, participants received the same bogus feedback used by Twenge and colleagues (2002, 2003)—that is, they were given future alone feedback, future belonging feedback, and accident-prone control feedback. Participants then received \$2.00 in quarters as payment for participation in the experiment. After receiving payment, participants were given the opportunity to donate money to a "Student Emergency Fund." Participants in the future alone condition donated significantly less money to the fund than participants in the other two groups.

In another study conducted by Twenge and colleagues (2005), after participants were given the same bogus feedback, the experimenter knocked a cup of pencils onto the floor, giving participants the opportunity to help the experimenter pick up the pencils (based on a bystander intervention study by Latané & Darley, 1975). Participants in the future alone condition were less likely to help the experimenter pick up pencils after the cup of pencils fell to

the floor than those in the other groups. In fact, only 15% of future alone participants helped the experimenter pick up pencils, as compared to 64% of those in the other groups.

Participants who had been led to expect a lonely life were also less likely to cooperate on a prisoner's dilemma game (Twenge et al., 2005). The prisoner's dilemma game (Rapoport & Channanah, 1965) is a widely used research method that involves a non-zero-sum game in which each player must choose between two responses. One response option is to cooperate with the opponent in the pursuit of maximum mutual gain, but this option exposes the player to the risk of being exploited by the other person. The second response option protects the individual against exploitation and creates the possibility of maximum individual gain; however, if both players choose this option, both of them lose. Only by mutual cooperation can both players achieve favorable outcomes. As a result, cooperating is considered a prosocial behavior that in this case benefits the self as well as others. Participants were told they were playing the game with another participant, but in actuality they were playing against a computer.

In this study, the computer was programmed to defect on the first turn and every fourth turn thereafter. On any of the other turns, the computer was programmed to mimic the participant's response on the subsequent turn. For example, if the participant defected on his or her first turn, the computer would then defect on its next turn. If the participant cooperated on his or her first turn, then the computer cooperated on the next turn.

The results showed that participants in the future alone condition were more likely to defect and less likely to cooperate during the game than participants in the other conditions, thus showing less prosocial behavior toward their supposed opponent. This was true even when the opponent (the computer) cooperated on the first turn and participants played for money rather than for points. These same results were still apparent when participants received feedback (future alone, future belonging, or accident-prone) on a piece of paper rather than orally from the experimenter and the experimenter was blind to the condition. Thus, even when the opponent cooperated, when the participant was motivated by money, or when the experimenter was blind to the condition the participant was assigned to, socially rejected participants were still less likely to cooperate than those in the other groups.

Social rejection also had an impact on participants' helpfulness (Twenge et al., 2005). Participants arrived in groups of four to six and, after a brief interaction period, were given feedback consistent with rejection or acceptance by others in the group. After being given feedback, participants were then presented the option of leaving or participating in one, two, or three more experiments to help out the experimenter. Participants receiving rejection feedback volunteered to participate in significantly fewer experiments than those receiving acceptance feedback.

These studies illustrate that after people have been rejected by others, they engage in less prosocial behavior. Excluded participants donated less money to an important cause, were less likely to help the experimenter after a mishap, were less cooperative, and volunteered to participate in fewer studies to help the experimenter than accepted or control participants.

INCREASE IN ANTISOCIAL AND AGGRESSIVE BEHAVIORS

Antisocial and aggressive behavior may also be considered self-defeating insofar as an individual wishes to befriend and gain acceptance from other people. A number of studies have shown that after being socially rejected, people exhibit an increase in antisocial behaviors toward other people. For instance, Bourgeois and Leary (2001) found that participants who were chosen last by a team captain displayed significantly more disparagement toward the team captain than those who were chosen first. In addition, Murray, Rose, Bellavia, Holmes, and Kusche (2002) found that when faced with the threat of rejection from their romantic partners, low self-esteem participants derogated their partners and reduced closeness to their partners.

Participants also have been found to act aggressively toward others following rejection (Twenge, Baumeister, Tice, & Stucke, 2001). In this experiment, participants arrived in pairs and then filled out the EPQ. Next, they wrote an essay expressing their opinion on the abortion issue (they were required to choose one side of the issue). Participants next evaluated an essay supposedly written by the other participant (it was actually written by the experimenter) expressing views opposite to the participant's own views. After evaluating the essay, participants received feedback on the EPQ and were placed into either the future alone condition, the future belonging condition, the accident-prone control condition, or a no feedback condition. After receiving either positive ("a very good essay!") or negative ("one of the worst essays I've read!") feedback from the other "participant" regarding their own essay, participants evaluated the other participant on 10 statements. Those in the future alone condition who received negative feedback on their essay were significantly more negative in their evaluations of the other participant than those in any of the other conditions. This indicates that anticipating a lonely future caused people to be harsh and aggressive toward someone who had recently criticized them.

Rejected participants were also aggressive toward others when playing a computer game (Twenge et al., 2001). After arriving in groups of four to six people and a period of interaction with the group, participants were told that either no one wanted to work with them or that everyone wanted to work with them on the next task. They were next informed that they would complete a task with another person who was *not* in the group with which

they had previously interacted. Participants received negative feedback on an essay they had written, ostensibly from the person they would be working with on the next task. Participants were then told they would play a computer game with this participant (participants were actually playing against the computer, which was programmed to mimic the participant's responses). In this game, participants were given the goal of pressing a button as fast as they could. Whoever lost the turn would hear a blast of white noise through headphones. The participant administered white noise blasts to the other "participant" whenever the other player lost. Participants were also able to control the duration and intensity of the noise blast when administering it to the other player.

Participants in the rejected group were considerably more aggressive toward their supposed opponent in that the duration of the noise blasts were significantly longer and the intensity was significantly greater than those administered by participants in the accepted condition. This finding occurred even when the participant believed the person they were playing against had not given them negative feedback and was therefore a neutral, innocent third-party. Thus aggression toward another person occurred even without direct provocation. These results were further supported by Twenge and Campbell (2003), who reported that social exclusion produced exceptionally high levels of aggression among people who scored high in narcissism. Similar results were also reported by Kirkpatrick, Waugh, Valencia, and Webster (2002), who found that participants lower in self-reported social inclusion were more aggressive (assigning higher portions of hot sauce to tasters who were known not to like spicy food) toward their supposed opponents, as compared to participants who reported more social connectedness.

Support for the idea that social rejection leads to antisocial behavior and aggression toward others has also been reported in studies of children who have been rejected by their peers. Several studies have found that children rejected by their peers are aggressive and antisocial (see McDougall, Hymel, Vailencourt, & Mercer, 2001, for a review). For instance, Leary, Kowalski, Smith, and Phillips (2003) examined the cases of children involved in school shootings. They found that in all but two of the cases that occurred between 1995 and 2001 that they examined, the children who had committed the violence against their peers had experienced acute or chronic social rejection in the form of ostracism, bullying, and/or romantic rejection. In a longitudinal study, Ialongo, Vaden-Kiernan, and Kellum (1998) found that early peer rejection was a significant predictor of aggressive behavior in later childhood and adolescence. Additionally, Hubbard (2001) found that when children who reported being rejected or accepted by their peers played competitive games with a confederate, rejected children displayed more facial and verbal anger after unfavorable outcomes than accepted children. Thus the pattern of social rejection leading to increased aggression and antisocial behavior can be seen

in both laboratory studies and observational and longitudinal studies in both children and adults.

Thus far, this chapter has discussed literature suggesting that interpersonal rejection leads to selfish and self-destructive behavior. Rejection from others leads people to act in a self-defeating manner, such as procrastinating, engaging in unhealthy behaviors, making risky decisions, and not delaying gratification. These self-defeating behaviors also include acting aggressively toward others and not engaging in prosocial behaviors inasmuch as the self desires to be included and accepted by others. As a lack of self-regulation has been implicated in many of these behaviors, it is suggested that social rejection leads to deficits in self-regulation, thus causing self-defeating behavior following rejection by others.

DECREASE IN SELF-REGULATION

The ability to control and regulate impulses, desires, wishes, emotions, and other behaviors is a core feature of the self. In fact, many vital functions of the self involve regulation, such as making decisions, inhibiting and initiating behavior, taking responsibility, and making and carrying out plans (Baumeister, 1998). Recent research, however, has shown that social rejection cause deficits in self-regulation.

As discussed, rejected participants were less likely to delay gratification than accepted participants, which in itself is a form of self-regulation failure. Rejected participants have also shown deficits in self-regulation in other laboratory studies. For instance, after giving participants bogus feedback about their future following completion of the EPQ (see Twenge et al., 2002), participants in the future alone condition drank less of a bad-tasting yet healthy beverage than participants in the future belonging, accident-prone control, and no feedback control conditions (Baumeister, DeWall, Ciarocco, & Twenge, 2005). Participants in the future alone condition also gave up significantly faster when trying to solve unsolvable puzzles and committed significantly more errors on a dichotic listening task as compared to participants in the other three conditions (Baumeister et al., 2005).

Rejection also influenced participants' inhibition in terms of not eating unhealthy food. Participants arrived at the laboratory in groups of four to six people. After an introductory session, they were given feedback consistent with their placement into either the rejected or the accepted conditions. Participants were subsequently told that they were going to perform a taste-testing task. Participants were given a bowl of 35 bite-size chocolate chip cookies and instructed to eat as many cookies as necessary in order to accurately evaluate the smell, taste, and texture of the cookies. Participants in the rejected condition ate significantly more cookies during the taste-testing task

as compared to accepted participants. These results are noteworthy given that Tice, Bratslavsky, and Baumeister (2001) found that participants in a similar sample viewed eating cookies as an unhealthy and undesirable behavior that should be regulated by the self. In addition, Vohs and Heatherton (2000) found that self-regulatory resource depletion led to increased consumption of ice cream, indicating that overeating is a reliable indicator of self-control failure. When participants were rejected, their self-regulation deteriorated, and they ate more cookies.

In an observational study, rejection by peers also had a negative impact on learning-disabled children's attentiveness and hyperactivity, a behavioral pattern that learning-disabled children who had not been socially rejected did not display (Kistner & Gatlin, 1989). Recent research has suggested, however, that the effects of social exclusion on self-regulation may depend on the prospect of future acceptance by others (DeWall, Baumeister, & Vohs, 2005). Participants in two studies were either given future alone or future belonging bogus feedback after completing the EPQ (similar to that used by Twenge et al., 2002, 2003). Participants in a third study were either told that a research assistant did not want to work with them on a task (rejection condition) or that the research assistant had to leave unexpectedly (control condition). Participants next completed self-regulation tasks (i.e., playing the game Operation, in which performance is judged by both speed and accuracy, the Stroop color-word task, or a dichotic listening task). Before engaging in these tasks, half of the participants were told that better performance on these tasks were diagnostic indicators of interpersonally helpful traits, such as empathy and social sensitivity, or were predictive of healthy and successful relationships, including the quality and quantity of friendships. Consistent with past research, among participants not given this information prior to completing the self-regulation tasks, rejected participants performed worse on the task than nonrejected participants. For those participants told that performance on the self-regulation task was indicative of good social skills or healthy relationships, however, rejected participants performed better on the task than nonrejected participants. These results suggest that social rejection only causes a reduction in self-regulation if participants do not believe self-regulation will lead to increased acceptance by others. When motivated by the chance of social acceptance, rejected people can overcome the temptation to fail at self-regulation.

Research has thus shown that when people are socially rejected, they exhibit decrements in self-regulation as demonstrated by less persistence on unsolvable puzzles, committing more errors on a dichotic listening task, exhibiting less ability to delay gratification, displaying deficits in attention, drinking less of a bad-tasting but healthy beverage, and consuming more cookies during a taste test than nonrejected participants. It appears that the only time social rejection does not cause deficits in self-regulation is when

participants believe that exhibiting self-control will increase social acceptance. Because social rejection consistently led to decreased self-control, with the one exception, could self-regulation act as a mediating factor between social rejection and self-defeating behaviors?

POSSIBLE MEDIATORS

Several variables have been suggested as mediators between social rejection and self-defeating behaviors. One variable that has been suggested is mood or affect. Belongingness theory (Baumeister & Leary, 1995) states that when one is socially rejected or excluded, one should experience a significant amount of distress and/or negative affect. Laboratory studies examining reactions to rejection in nondepressed samples, however, have failed to find increased distress or negative affect following rejection (e.g., Bourgeois & Leary, 2001; Twenge et al., 2002, 2003). In addition, several studies examining negative affect as a possible mediating factor have shown that mood does not mediate the relationship between social rejection and self-defeating behavior (Baumeister, Twenge, & Nuss, 2002; Twenge et al., 2001, 2002, 2003, 2005). Several other variables, such as self-esteem, belongingness, trust in others, sense of control, and self-awareness have also been tested as possible mediators. Twenge and colleagues (2005) reported, however, that none of these variables were significant mediators of the relationship between social rejection and self-defeating behaviors.

Another possible factor that may mediate the relationship between social rejection and self-defeating behaviors is self-regulation. Given that recent studies have indicated that social rejection leads to deficits in self-regulation (DeWall et al., 2005), it is plausible that deficits in self-regulation increase self-defeating behaviors. For instance, Feldman, Rosenthal, Brown, and Canning (1995) found that children who were rejected by their peers in the sixth grade reported having a greater number of sexual partners 4 years later, which was mediated by self-restraint. In addition, Ayduk and colleagues (2000) found that greater ability in delay of gratification actually buffered participants from interpersonal difficulties (e.g., aggression) following perceived or actual rejection.

Self-regulation may act as a possible mediator because self-regulation failure is implicated in antisocial behavior, aggression, a lack of prosocial behavior, and self-defeating behaviors, such as procrastination, inability to delay gratification, choosing unhealthy over healthy behaviors, and the like. Future laboratory studies, however, will need to examine in greater depth whether self-regulation acts as a mediating factor between rejection and self-defeating behaviors. In addition, research will need to investigate whether self-regulation mediates only unidirectional or bidirectional relationships.

That is, does self-regulation act as a mediator when social rejection leads to greater aggression, as well as when aggressive behavior leads to social rejection by peers? As no research has been conducted to directly test self-regulation as a mediating factor in the relationship between social rejection and self-defeating behaviors, it is suggested that future studies focus on this area. In addition, other possible mediating factors should be examined as well, such as physiological and/or biological variables.

DIRECTION OF CAUSALITY

Research has shown that social rejection leads to an increase in a number of selfish and self-defeating behaviors, as well as deficits in self-regulation and self-control. Do these processes influence each other mutually or is causality unidirectional? That is, is it the case that social rejection causes these behaviors, or can engaging in self-defeating behaviors and exhibiting deficits in self-regulation actually cause rejection by others as well? Research has suggested that perhaps there is a bidirectional relationship between social rejection and aggression/antisocial behavior (including decreases in prosocial behavior), as well as between rejection and self-regulation.

Although there is well-documented support for the idea that social rejection leads to increases in aggression and antisocial behavior, several studies also suggest that those who display antisocial behaviors and who are aggressive toward others are likely to be rejected by their peers. Both physical and verbal aggression have been closely linked to peer rejection in children in the United States (Crick & Grotpeter, 1995; Wood, Cowan, & Baker, 2002) and in Italy (Tomada & Schneider, 1997). In a prospective study, Little and Garber (1995) found that aggression directly predicted peer rejection 3 months later in fifth and sixth graders. Based on these findings, it would appear that while social rejection can predict an increase in aggressive and antisocial behavior, as well as a decrease in prosocial behavior, aggressive and antisocial behavior also predicts later rejection by peers.

Additional studies suggest that the relationship between social rejection and self-control is bidirectional as well. For instance, Ferrer and Krantz (1987) found that self-control negatively correlated with social rejection in third and fifth graders, in that those who were rejected by their peers also displayed less self-control. Wood and colleagues (2002) also reported that, in preschool-age children, those who were rejected by their peers were also non-compliant and hyperactive. Because these studies are strictly correlational, however, direction cannot be determined on the basis of these results alone. A longitudinal study (Feldman et al., 1995) found, however, that sixth graders who were socially rejected by their peers reported a greater number of sexual partners in adolescence. Feldman and colleagues (1995) also reported that

those sixth graders who were low in self-restraint were more likely to be rejected by their peers than those with greater self-restraint. It would appear, based on this research, that not only can social exclusion predict a decrease in self-regulation, but deficits in self-regulation also predict social rejection.

Asking whether these relationships influence each other mutually or if the causality is unidirectional is important for understanding how these relationships operate. Although rejection leads to aggression, aggression toward others can also lead to rejection by others. While being rejected by others may lead us to decrease prosocial behaviors toward others, such as helping, not helping others may appear rude to others and therefore cause someone to be rejected. While failures in self-regulation and self-control may lead to rejection by others, being rejected by others can also cause failures in self-regulation. Even self-defeating behaviors, such as procrastination, can lead to rejection by others, but being rejected can increase procrastination. Thus it is not merely that interpersonal rejection causes selfish and self-destructive behaviors, but in fact that these self-destructive and selfish behaviors also lead to rejection by others. This research thus indicates that the behaviors people display *after* being rejected, such as aggression, less prosocial behavior, self-defeating behaviors, and deficits in self-regulatory behaviors, may actually bring about further rejection by others.

CONCLUSION

Several lines of research have shown that social rejection has deleterious effects on well-being by increasing the occurrence of self-destructive and selfish behaviors. When rejected by others, people consequently make poor and risky choices, engage in unhealthy behaviors, procrastinate, and are unable to delay gratification. In addition, rejected participants are reluctant to donate money to an important cause, are unwilling to volunteer for future studies, are unhelpful after a mishap, are uncooperative, and display aggressive behavior toward others.

This increase in self-defeating behavior following social rejection may be mediated by self-regulation. A number of studies have shown that following interpersonal rejection, participants displayed significant deficits on several different self-regulation tasks (there was one exception: when participants believed that self-regulation could lead to an increase in acceptance by others, rejected participants exhibited self-control). In addition, it is important to consider self-regulation as a possible mediator because self-regulation failure has been implicated in antisocial behavior, aggression, a lack of prosocial behavior, and self-defeating behaviors such as procrastination, inability to delay gratification, and choosing unhealthy over healthy behaviors. Further research will be needed in order to determine whether self-regulation does in

fact act as a mediator in the relationship between social rejection and self-destructive behaviors.

Research has also indicated that perhaps social rejection and self-defeating behaviors (including aggressive and prosocial behaviors) influence each other in a bidirectional fashion. Following social rejection, rejected individuals are aggressive toward others, but those exhibiting aggressive and antisocial behaviors are also more likely to be rejected by their peers. Rejected individuals are less prosocial, but exhibiting less prosocial behaviors, such as helping, may be considered rude and can therefore elicit rejection by others. Engaging in certain self-defeating behaviors may lead to rejection by others, and, conversely, interpersonal rejection increases the likelihood that one will commit self-defeating acts. Those who are rejected additionally exhibit deficits on self-regulatory tasks, while deficits in self-regulation may also lead individuals to be rejected by their peers. Whereas rejection may lead to increased selfish and self-destructive behaviors and deficits in self-regulation, these behaviors in turn may lead to further rejection by others.

The significance of these findings, that social exclusion leads to self-defeating behaviors, is that if people are to increase their chances of being accepted by others, they need to increase prosocial and decrease antisocial behaviors toward others as well as exhibit greater self-regulation and self-control. It appears, however, that when socially rejected individuals believe that exhibiting greater self-regulation will gain them more acceptance by others, they are motivated to self-regulate. A majority of the studies reviewed, however, indicated that when people are socially rejected, they instead engage in behaviors that not only hurt themselves, but that also hurt their chances of being accepted by others. Perhaps future research will be able to uncover additional factors that may prevent individuals from engaging in self-defeating behaviors once they have been socially rejected, therefore enabling people to gain acceptance from others even following rejection.

REFERENCES

- Ayduk, O., Mendoza-Denton, R., Mischel, W., Downey, G., Peake, P. K., & Rodriguez, M. (2000). Regulating the interpersonal self: Strategic self-regulation for coping with rejection sensitivity. *Journal of Personality and Social Psychology*, 79, 776-792.
- Baumeister, R. F. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 680-740). New York: McGraw-Hill.
- Baumeister, R. F. (2005). *The cultural animal: Human nature, meaning, and social life*. New York: Oxford University Press.
- Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology*, 88, 589-604.

- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2002). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83, 817-827.
- Bourgeois, K. S., & Leary, M. R. (2001). Coping with rejection: Derogating those who choose us last. *Motivation and Emotion*, 25, 101-111.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66, 710-722.
- DeWall, C. N., Baumeister, R. F., & Vohs, K. D. (2005). *Recovering from rejection: Undoing the self-regulation deficits stemming from social exclusion*. Manuscript submitted for publication.
- Feldman, S. S., Rosenthal, D. R., Brown, N. L., & Canning, R. D. (1995). Predicting sexual experience in adolescent boys from peer rejection and acceptance during childhood. *Journal of Research on Adolescence*, 5, 387-411.
- Ferrer, M., & Krantz, M. (1987). Self-control, locus of control and social status in children. *Psychological Reports*, 60, 355-358.
- Hann, D., Baker, F., Denniston, M., Gesme, D., Reding, D., Flynn, T., et al. (2002). The influence of social support on depressive symptoms in cancer patients: Age and gender differences. *Journal of Psychosomatic Research*, 52, 279-283.
- Hubbard, J. A. (2001). Emotion expression processes in children's peer interaction: The role of peer rejection, aggression, and gender. *Child Development*, 72, 1426-1438.
- Alongo, N. S., Vaden-Kiernan, N., & Kellam, S. (1998). Early peer rejection and aggression: Longitudinal relations with adolescent behavior. *Journal of Developmental and Physical Abilities*, 10, 199-213.
- Joiner, T. E. Jr. (1997). Shyness and low social support as interactive diatheses, with loneliness as mediator: Testing an interpersonal-personality view of vulnerability to depressive symptoms. *Journal of Abnormal Psychology*, 106, 386-394.
- Kirkpatrick, L. A., Waugh, C. E., Valencia, A., & Webster, G. D. (2002). The functional domain specificity of self-esteem and the differential prediction of aggression. *Journal of Personality and Social Psychology*, 82, 756-767.
- Kistner, J. A., & Gatlin, D. (1989). Correlates of peer rejection among children with learning disabilities. *Learning Disabilities Quarterly*, 12, 133-140.
- Latané, B., & Dabbs, J. M. Jr. (1975). Sex, group size, and helping in three cities. *Sociometry*, 38, 180-194.
- Leary, M. R., Kowalski, R. M., Smith, L., & Phillips, S. (2003). Teasing, rejection, and violence: Case studies of the school shootings. *Aggressive Behavior*, 29, 202-214.
- Leith, K. P., & Baumeister, R. F. (1996). Why do bad moods increase self-defeating behavior? Emotion, risk taking, and self-regulation. *Journal of Personality and Social Psychology*, 71, 1250-1267.
- Little, S. A., & Garber, J. (1995). Aggression, depression, and stressful life events predicting peer rejection in children. *Development and Psychopathology*, 7, 845-856.
- McDougall, P., Hymel, S., Vaillancourt, T., & Mercer, L. (2001). The consequences of

- childhood peer rejection. In M. R. Leary (Ed.), *Interpersonal rejection* (pp. 213-247). London: Oxford University Press.
- Michael, Y. L., Berkman, L. F., Colditz, G. A., Holmes, M. D., & Kawachi, I. (2002). Social networks and health-related quality of life in breast cancer survivors: A prospective study. *Journal of Psychosomatic Research*, 52, 285-293.
- Murray, S. L., Rose, P., Bellavia, G. M., Holmes, J. G., & Kusche, A. G. (2002). When rejection stings: How self-esteem constrains relationship-enhancement processes. *Journal of Personality and Social Psychology*, 83, 556-573.
- Rapoport, A., & Chammah, A. M. (1965). *Prisoner's dilemma*. Ann Arbor: University of Michigan Press.
- Tice, D. M., & Baumeister, R. F. (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. *Psychological Science*, 8, 454-458.
- Tice, D. M., Bratslavsky, E., & Baumeister, R. F. (2001). Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *Journal of Personality and Social Psychology*, 80, 53-67.
- Tomada, G., & Schneider, B. H. (1997). Relational aggression, gender, and peer acceptance: Invariance across culture, stability over time, and concordance among informants. *Developmental Psychology*, 33, 601-609.
- Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them, beat them: Effects of social exclusion on aggressive behavior. *Journal of Personality and Social Psychology*, 81, 1058-1069.
- Twenge, J. M., & Campbell, W. K. (2003). "Isn't it fun to get the respect that we're going to deserve?": Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin*, 29, 261-272.
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2002). Social exclusion causes self-defeating behavior. *Journal of Personality and Social Psychology*, 83, 606-615.
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2003). Social exclusion and the deconstructed state: Time perception, meaninglessness, lethargy, lack of emotion, and self-awareness. *Journal of Personality and Social Psychology*, 85, 409-423.
- Twenge, J. M., Ciarraco, N. J., Cuervo, D., Bartels, J. M., & Baumeister, R. F. (2005). *Social exclusion decreases prosocial behavior*. Manuscript submitted for publication.
- Vohs, K. D., & Heatherton, T. F. (2000). Self-regulatory failure: A resource-depletion approach. *Psychological Science*, 11, 249-254.
- Wood, J. J., Cowan, P. A., & Baker, B. L. (2002). Behavior problems and peer rejection in preschool boys and girls. *Journal of Genetic Psychology*, 163, 72-88.