The Cost of Exclusion and the Benefit of Overinclusion: Individual Differences Moderate Sensitivity to Inclusionary Status

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Abstract

The current study examined the impact of varying degrees of exclusion and overinclusion on mood and the needs for belonging and control. Participants played an online ball tossing game with two computerized confederates in which they were initially included, then gradually excluded or overincluded. Participants in the *exclusion* condition suffered a reduction in mood and impaired psychological needs (belonging, control). This effect was evident after receiving four (7.4%) fewer tosses than when included. *Overinclusion* resulted in improved psychological needs, but not mood. Rejection sensitivity (RS) did not moderate the effect of exclusion, demonstrating the negative and highly detectable nature of exclusion. RS, however, did moderate the effect of overinclusion, such that high RS individuals experienced improved mood and psychological needs, whereas low RS individuals did not. Implications for future research are discussed.

Keywords: exclusion, overinclusion, rejection sensitivity, individual differences

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Social exclusion, the act of being ignored or excluded by others, is an exceptionally powerful experience. Some of the most potent consequences of exclusion include a dampened sense of control and belonging and a decline in mood (for a review, see Gerber & Wheeler, 2009). The ill effects associated with exclusion are substantial even when the reason others are excluding is unclear, such as when suddenly not being thrown a disc in an online game of toss (Williams, Cheung, & Choi, 2000). These effects remain even if the excluding players are described as computerized confederates (Zadro, Williams, & Richardson, 2004) or members of a strongly disliked group such as the KKK (e.g., Gonsalkorale & Williams, 2007).

Though the consequences of exclusion are well documented in the literature, most of this research has focused on the costs of being completely excluded by being ignored completely by others. Few studies have investigated whether these effects might still occur when exclusion is limited in some way. For example, when participants play an online ball tossing game by two others, and only one excludes while the other includes the participant, the consequences of exclusion are still observed (Chernyak & Zayas, 2010). Moreover, the negative perceptions typically associated with the excluder were attributed to the includer as well. Indeed, situations such as these are not uncommon in everyday life. Other opportunities exist for an individual to be excluded without being completely ignored. For example, during a party a group of people may continue to include a person they do not wish to interact with, but to a lesser extent than they include one another.

Williams, Cheung, and Choi (2000) examined the issue of limited exclusion – being excluded, but not to the point of being completely ignored – to some extent when they developed

Cyberball, an online disc tossing game. In this manipulation, participants play an online game of toss with two other players who are actually computerized confederates programmed to include or exclude the participant to varying degrees by throwing them the disc a certain percentage of the time. Specific to limited exclusion, the authors created one condition in which participants received the disc 20% of the time, with 33% being fairly included. They found that receiving the disc 20% of the time, as opposed to being included by receiving 33% of the tosses—a 13% decrease in disc tosses received—, caused an aversive impact on their mood and a number of psychological needs, such as the need to belong and self-esteem. These effects were not as strong as for those who were totally excluded, receiving no disc tosses. This research provides some insight into the nature of limited exclusion by suggesting it is a negative experience, though not as negative as total exclusion.

Though these findings by Williams et al. (2000) shed light on the experience limited exclusion, it remains unclear when on the inclusion-exclusion continuum individuals begin to have an aversive reaction. In his temporal need-threat model, Williams (2001) proposed that humans are particularly attuned to exclusion and should err towards over-detection, potentially feeling exclusion when it might not be present. The current study aimed to further examine the conditions in which people may begin to respond to exclusion.

Relevant to the concept of limited exclusion is gradual exclusion. That is, the degree to which exclusion can occur may vary, and in some cases occur to an increasing degree over time. Buckley, Winkel, and Leary (2004) conducted a study in which participants responded to various questions, ostensibly on a video feed that a second individual was watching to rate their interest in further getting to know the speaker. These ratings were provided a number of times over the course of five minutes, and in two conditions the participant was lead to believe the individual

was either constantly disinterested or increasingly less interested in further getting to know the participant. Increasing disinterest resulted in a stronger aversive impact than constant disinterest. Although these findings shed light into the overall impact of gradual exclusion, they do not provide understanding of how outcomes might continue to worsen as the level of exclusion increases to a point of total exclusion.

As gradual exclusion only covers half of the inclusionary continuum, we were also interested in the effects of overinclusion. By looking at overinclusion, we would be able to differentiate whether any effects of exclusion were due to being conspicuous. It may be the case that being the center of attention or the "odd man out" is the cause for negative responses to exclusion. If so, overinclusion should also cause an aversive response. Moreover, it remains to be seen whether overinclusion has any specific benefits beyond what is found for inclusion. Only a handful of papers have considered overinclusion in their methodology. Two recent papers explored whether exclusion might be preferred to overinclusion if exclusion held a benefit and overinclusion was inherently costly. When there was a monetary benefit to exclusion and cost to overinclusion, individuals still had an aversive reaction to exclusion and a more positive response to the costly overinclusion (Van Beest & Williams, 2006). Similarly, when a game of online catch was played using a bomb instead of a ball, participants still found exclusion (not receiving the bomb) more aversive than overinclusion (Van Beest, Williams, & Van Dijk, 2011). These studies demonstrate the inherently negative experience of exclusion, as even when exclusion is beneficial, and overinclusion is costly to the point of losing money or hypothetically dying, exclusion is still a more negative experience. The current study hopes to shed light on the conditions in which overinclusion, a positive experience, has an added benefit beyond inclusion. Specifically, we hypothesized that individuals would have a positive response to overinclusion

when it was experienced to a limited degree, but not when completely overincluded, as it would be too conspicuous an experience. The previous research on overinclusion has operationalized it as the experience of receiving all of the attention from the other group members. Their lack of finding a difference between overinclusion and inclusion for mood and psychological needs, such as belonging and control, we believe to potentially be a result of being too overincluded. Thus, by limiting the degree of overinclusion to be somewhat more than inclusion, but less than overinclusion, there may be a difference as it is not so conspicuous as to make the situation awkward and uncomfortable.

Given the ambiguous nature of varying the level of exclusion (and inclusion), we were interested in whether individual differences might moderate responses to exclusion (and inclusion). Rejection sensitivity (RS), an anxious expectation and trait hyper-vigilance to rejection and exclusion (Downey & Feldman, 1996), was expected to be the most relevant individual difference to the questions at hand due to its relevance to interpersonal situations. Highly rejection sensitive individuals (HRS) were predicted to respond to more subtle degrees of exclusion than low rejection sensitive individuals (LRS), as they are vigilant of signals of rejection and constantly expecting to experience it (Downey & Feldman, 1996). To the author's knowledge, no study to date has explored rejection sensitivity as a moderator of limited degrees of exclusion. We did not expect RS to moderate responses to overinclusion, as RS is a hyper-vigilance for exclusion specifically, not inclusionary status. Thus, HRS participants should have the same response to LRS participants for overinclusion.

In the present study, the effects of gradual exclusion and overinclusion will be examined to determine (1) if exclusion has a significant negative impact even when the degree of exclusion is limited to being more excluding than inclusion, though not to the point of being completely

ignored, (2) whether this aversive impact of exclusion is the result of being the conspicuous, "odd man out" in the interaction or a unique response to being excluded, (3) the potential benefits of overinclusion compared to inclusion, and if these benefits are found only in conditions in which overinclusion is limited, such that individuals are included more than an equal percentage of the time, but not receiving all of the attention of every other group member, and (4) if individual differences in rejection sensitivity, a personal disposition that is highly relevant to the processing and emotional response to interpersonal situations, moderate the effects of exclusion (and inclusion).

Method

Participants

Eighty-eight students at Cornell University participated in the study in exchange for course extra credit. Two participants were excluded for not following the instructions properly. The final sample consisted of 86 participants (*Mean* age = 20.03, *SD* = 1.33; 71% female).

Procedure

Participants arrived at the laboratory, were seated at individual cubicles, and told they would be playing an online ball tossing game called Cyberball (Williams et al., 2000). The Cyberball game was created using Inquisit 3.0.5.0 (Inquisit, 2008). Participants were informed that they would be playing with two other participants, actually computerized confederates, who were seated elsewhere in the building. The game screen included two silhouette avatars of the confederates, labeled "Player A" and "Player C" in the upper corners of the screen, with the participant, labeled "You," appearing at the lower-center of the screen. Participants were prompted to use the computer mouse to select which player they wished to throw to by clicking on the avatar associated with "Player A" or "Player C." The game appeared to be continuous,

though participants were actually engaging in five distinct rounds of Cyberball. Each round consisted of 54 ball tosses and lasted approximately 2.5 minutes. At the end of each round the game was "paused" to allow participants to answer questions about their experience.

Participants were randomly assigned to either an *exclusion* or *overinclusion* condition. The first round of both conditions consisted of fair inclusion, during which each of the three players received the ball an equal percentage (33%) of the time. In the *exclusion* condition, participants received two fewer ball tosses from each confederate in each subsequent round, for a total of four (7.4%) fewer tosses per round. By the fifth round, participants received only 2 (3.7%) of the tosses. In the *overinclusion* condition, participants received one more toss from each confederate per round, totaling 2 (4.35%) more tosses per round. Thus, in the fifth round of overinclusion participants received 26 of 54 tosses (48%). The reason for the differing increment of tosses between conditions was to insure a full range of exclusion and overinclusion was achieved. Receiving 3.7% of all tosses is near-total exclusion, whereas 48% of all tosses is near-total overinclusion[1].

Measures

Participants completed an online pretest prior to participating in the lab experiment. The pretest assessed individual differences in rejection sensitivity (RSQ; Downey & Feldman, 1996), trait anxiety (Spielberger; 1983), and attachment style (ECR-S; Wei, Russel, Mallinckrodt, & Vogel, 2007). Trait anxiety and attachment style are not discussed in this paper.

Following each round of Cyberball participants answered 12, randomly presented, bipolar questions on a 9-point sliding scale. Each question was presented with the statement, "*In this moment, I feel…*" to best capture change over time. The questions assessed level of needs for

belonging ("*disconnected/connected*," "*I belong/I don't belong*," "*like an outsider/like an insider*") and control ("*powerless/powerful*," "*I have control/I lack control*," "*uninfluential/influential*") as well as mood ("*sad/happy*," "*friendly/unfriendly*," "*angry/pleasant*") and awkwardness ("*uneasy/easy*," "*comfortable/uncomfortable*," "*awkward/not awkward*"). Awkwardness items were combined with mood items to form a composite score of *mood*. Belonging and control were combined to form a composite score of *psychological needs*. Cronbach's alpha was above .80 for each subscale and composite scale in any given round of both the exclusion and overinclusion condition.

The mood, belonging, and control items were based on Zadro, Williams, and Richardson's (2004) ostracism measure. This measure assesses needs with sentence statements (e.g., "*I felt in control during the Cyberball game*"). The items in the present study were limited in complexity to reduce the possibility of participants becoming aware of the purpose of the study, since the measure appeared several times over the course of the game. Furthermore, past work on exclusion has typically assessed need for self-esteem and meaningful existence in addition to control and belonging. Self-esteem and meaningful existence were excluded for the sake of brevity. Belonging and control were selected based on a meta-analysis of rejection conducted by Gerber and Wheeler (2009), which concluded that, of the four, they were most impacted by exclusion.

Design and Data analytic strategy

To assess the impact of exclusion ($N = 44$) and overinclusion ($N = 42$) over the course of five incremental rounds, data were subjected to several repeated measures general linear models (GLM). These GLMs were comprised of a within subjects factor with 5 levels (each of the

rounds). Analysis concerned with individual differences in RS including it as a continuous predictor in the GLM. The Greenhouse-Geisser correction for sphericity was performed for all instances in which sphericity was violated. All significant results report linear effects, as those were the only significant between subject contrasts. Finally, there were no significant main effects for gender, so it is not discussed.

Results

What are the effects of gradual increases in exclusion and overinclusion?

Exclusion. Incremental exclusion from round 1 to 5 resulted in reduced mood, $F(1, 43) = 58.26$, $p < .001$, $\eta_p^2 = .575$, and impaired in psychological needs $F(1, 43) = 64.42$, $p < .001$, $\eta_p^2 = .600$ (see Figure 1). The effect of exclusion was prominent as early as round 2; after receiving only 4 fewer ball tosses than they had in round 1 (inclusion), participants' mood, $t(43) = 3.48$, $p = .001$, $d = .52$, and psychological needs, $t(43) = 5.00$, $p < .001$, $d = .75$, dropped substantially.

Overinclusion. In response to being gradually and continuously overincluded, participants showed improved psychological need scores, $F(1, 41) = 12.44$, $p = .001$, $\eta_p^2 = .233$, but did not experience a change in mood, $F(1, 41) = .90$, *ns* (see Figure 2). To assess whether the aversive impact of exclusion was due to feeling conspicuous as a result of receiving an unfair level of attention, changes in psychological needs and mood from inclusion to overinclusion were assessed. Unlike in the exclusion condition, there was no significant change in mood, $t(41) = -.20$, *ns*, or psychological needs, $t(41) = .13$, *ns*, from the initial inclusion round to the second round, consisting of 2 additional tosses (3.7%). Given that overinclusion occurred more gradually than exclusion in this experiment, differences from the initial round of inclusion to the third round, consisting of 4 additional tosses (7.4%) were also assessed. There was still no

significant change in mood, $t(41) = -1.38$, *ns*, and although psychological needs approached significance from inclusion to round 3, $t(41) = -1.93$, $p = .061$, the effect was in the direction of *greater* feelings of belonging and control.

Do individual differences in rejection sensitivity moderate responses to exclusion or overinclusion?

Individual differences were assessed using the procedures outlined in the data analytic strategy section. Due to some participants failing to complete the online pretest, the sample size for exclusion ($N = 37$) and overinclusion ($N = 33$) were reduced.

Exclusion and rejection sensitivity. RS did not moderate the effect of exclusion for psychological needs, $F(4, 140) = .50$, *ns*, or mood, $F(4, 140) = .61$, *ns* (see Figure 3).

Overinclusion and rejection sensitivity. The interaction between round and RS for both mood, $F(1, 31) = 6.32$, $p = .017$, $\eta_p^2 = .169$, and psychological needs, $F(1, 31) = 9.88$, $p = .004$, $\eta_p^2 = .242$, was significant (see Figure 4). Specifically, HRS participants experienced significantly improved mood and psychological needs with greater levels of overinclusion, while these benefits were not found for LRS individuals. Additionally, HRS participants may find increasing amounts of overinclusion more comfortable and less awkward, as this was a subscale of the mood score. A general linear model of the awkwardness subscale for the interaction between round and RS supports this interpretation, $F(4, 124) = 7.30$, $p = .011$, $\eta_p^2 = .191$.

To determine whether the effect of RS was present with limited amounts of overinclusion, change scores were computed for the initial round of inclusion and the first round of overinclusion. The change scores were then correlated with RS. RS was significantly correlated with changes in psychological needs from the initial inclusion round to the first round

of overinclusion in which participants received two (3.7%) additional ball tosses, r =.371, p = .034. The correlation for change from inclusion to the first round of overinclusion with RS was marginally significant, r =.339, p = .054.

Discussion

The present research demonstrates the deleterious effects of exclusion. Participants responded strongly to increasing levels of exclusion with decreased mood and thwarted psychological needs. These effects were significant as early as the second round of the game, in which they were excluded by 4 ball tosses, receiving 7.4% fewer tosses than the previous, inclusion round. Notably, this effect was not the result of becoming more conspicuous, as being overincluded by 4 more ball tosses resulted in no significant change in mood or needs. These findings add further support to Williams' (2001) temporal need-threat model, which argues the importance of a hyper-vigilance to ostracism. The ability to detect ostracism quickly and early on allows for maximum opportunity to avoid the negative consequence associated with being excluded by the group, which in some circumstances could result in death.

Rejection sensitivity was predicted to moderate the effects of exclusion, such that HRS participants would be negatively impacted by exclusion earlier on in the game. This was not found to be the case, which was true for past research exploring individual differences in the immediate response to exclusion (e.g., Buckley et al., 2004; Zadro, Boland, & Richardson, 2006; Zadro et al., 2004; Williams et al., 2000;). Even 7.4% fewer tosses than inclusion is enough to be negative for all. It is possible that our manipulation was simply not subtle enough to detect these differences. Future research should consider using even more subtle manipulations of exclusion when studying individual differences as moderators to exclusion.

Overinclusion resulted in as high a level of mood and belonging as inclusion, if not higher levels. Though participants as a whole did increase in mood, their psychological needs were improved by overinclusion. There was an upward trend, such that greater levels of overinclusion resulted in even greater benefits to psychological needs. This did not match our original prediction that gains would be greatest somewhere between inclusion and total overinclusion. However, these effects appeared to be driven by individual differences in RS.

HRS participants showed a significant boost in mood and needs in response to overinclusion. In contrast, LRS participants showed no gain, and even showed a slightly aversive reaction to overinclusion. Given that HRS participants started off with lower mood and lower need satisfaction than LRS participants, albeit not a significant difference, one interpretation is that HRS individuals experience inclusion as less including than LRS individuals. That is, relatively speaking, HRS individuals feel excluded when they are included, which may reflect a state of feeling constantly deprived of inclusion. Because of these constant feelings of exclusion, individuals who are sensitive to rejection experience overinclusion as a satiation of their need for inclusion. This prediction finds some empirical support in the rejection sensitivity literature. For example, HRS individuals have been found to be constantly seeking acceptance (e.g., Romero-Canyas & Downey, 2005).

The interpretation put forth suggests that HRS individuals are not only constantly seeking acceptance, they are also constantly seeking to meet a certain level of inclusionary status which appears to be higher than the level sought by LRS individuals. Future work will be needed to investigate this hypothesis empirically. It would be of particular value to see if depriving LRS individuals of inclusionary status, then providing them with an encounter of fair inclusion produces similar patterns. Finally, future research should investigate responses to overinclusion

for high compared to low RS individuals. Much of the work on rejection sensitivity has identified a number of patterns of behavior, which HRS individuals engage in following exclusion, including hostility and aggression (e.g., Downey & Feldman, 1996) and servile attempts at reintegrating (Sommer, Williams, Ciarocco, & Baumeister, 2001). It remains to be seen whether more positive behaviors will be found following overinclusion.

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Footnotes

[1] Participants must throw the ball to the confederates in order to receive the ball again and cannot throw to themselves. This limits participants to receiving the ball a maximum of 50% of the time.

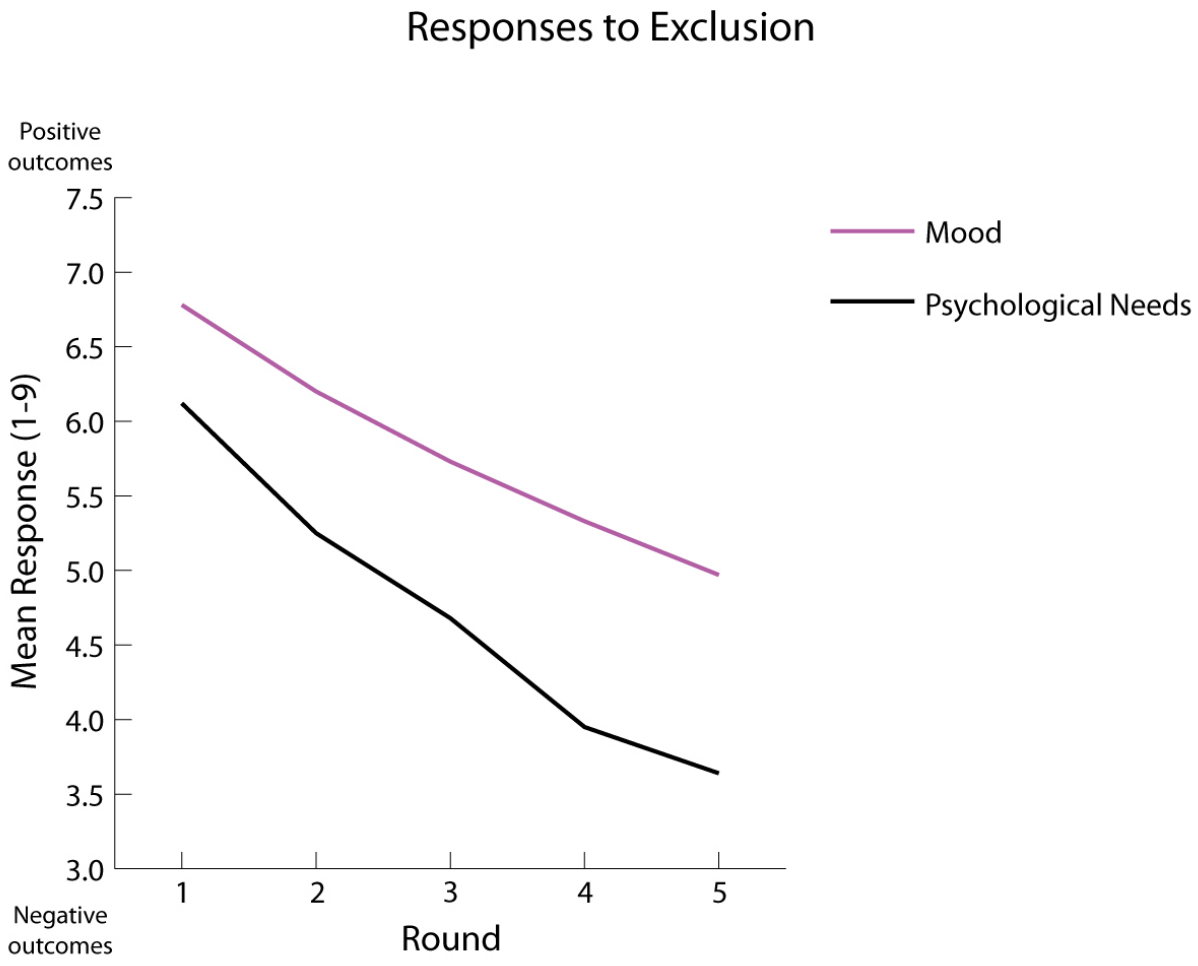

Figure 1. Changes in mood and psychological needs over the course of incremental exclusion.

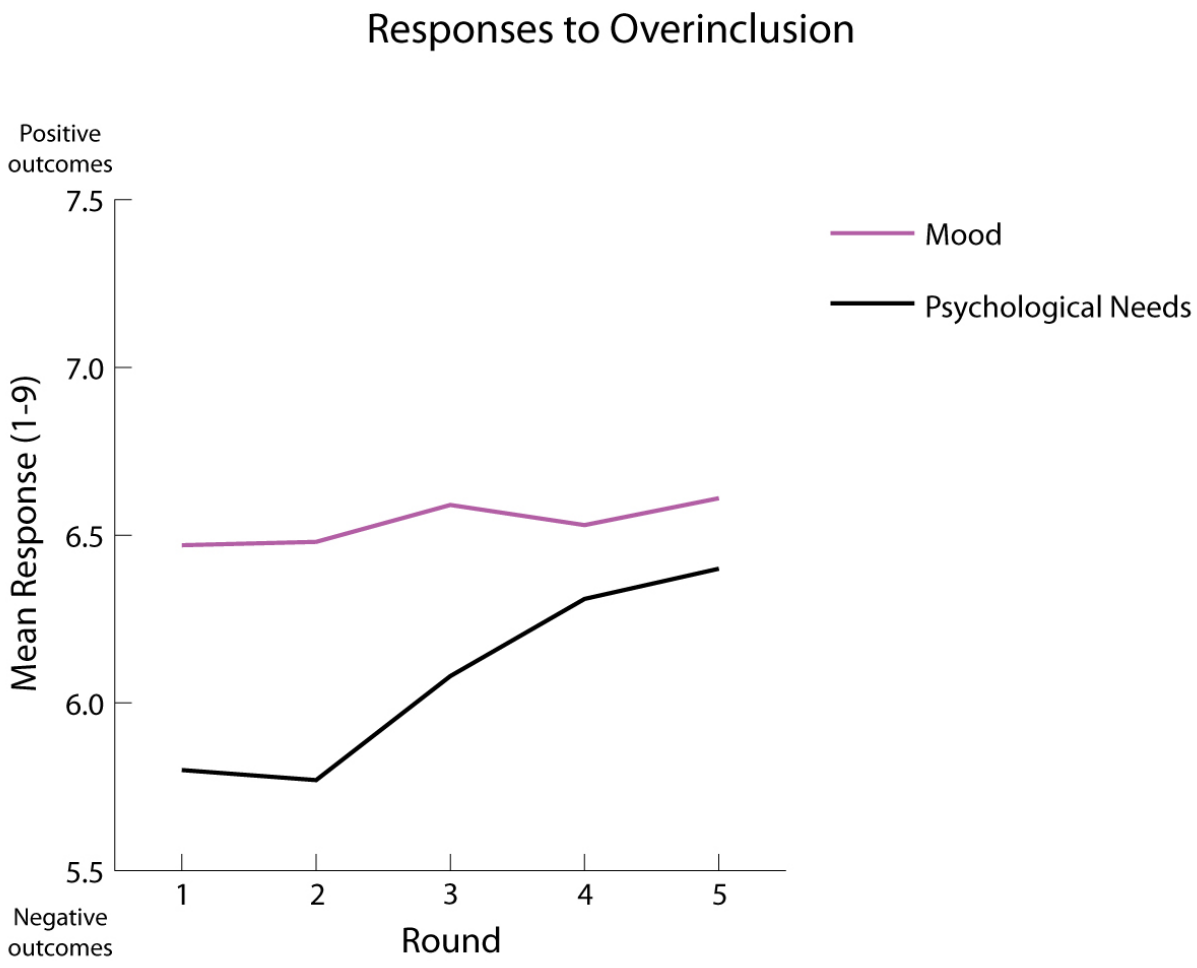

Figure 2. Changes in mood and psychological needs over the course of incremental overinclusion.

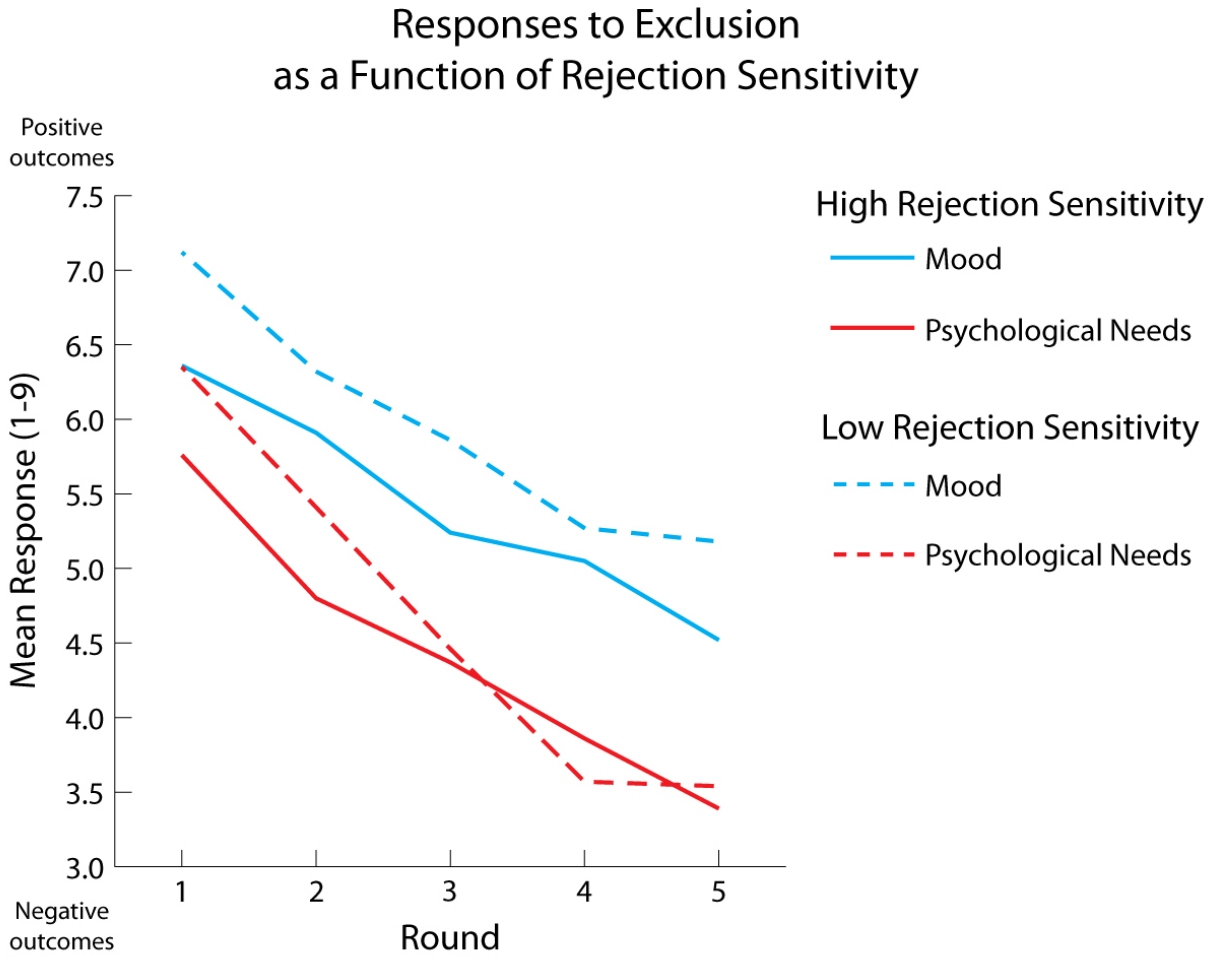

Figure 3. Responses to exclusion as a function of individual differences in rejection sensitivity for mood and psychological needs. High and low levels of rejection sensitivity were determined by a median split.

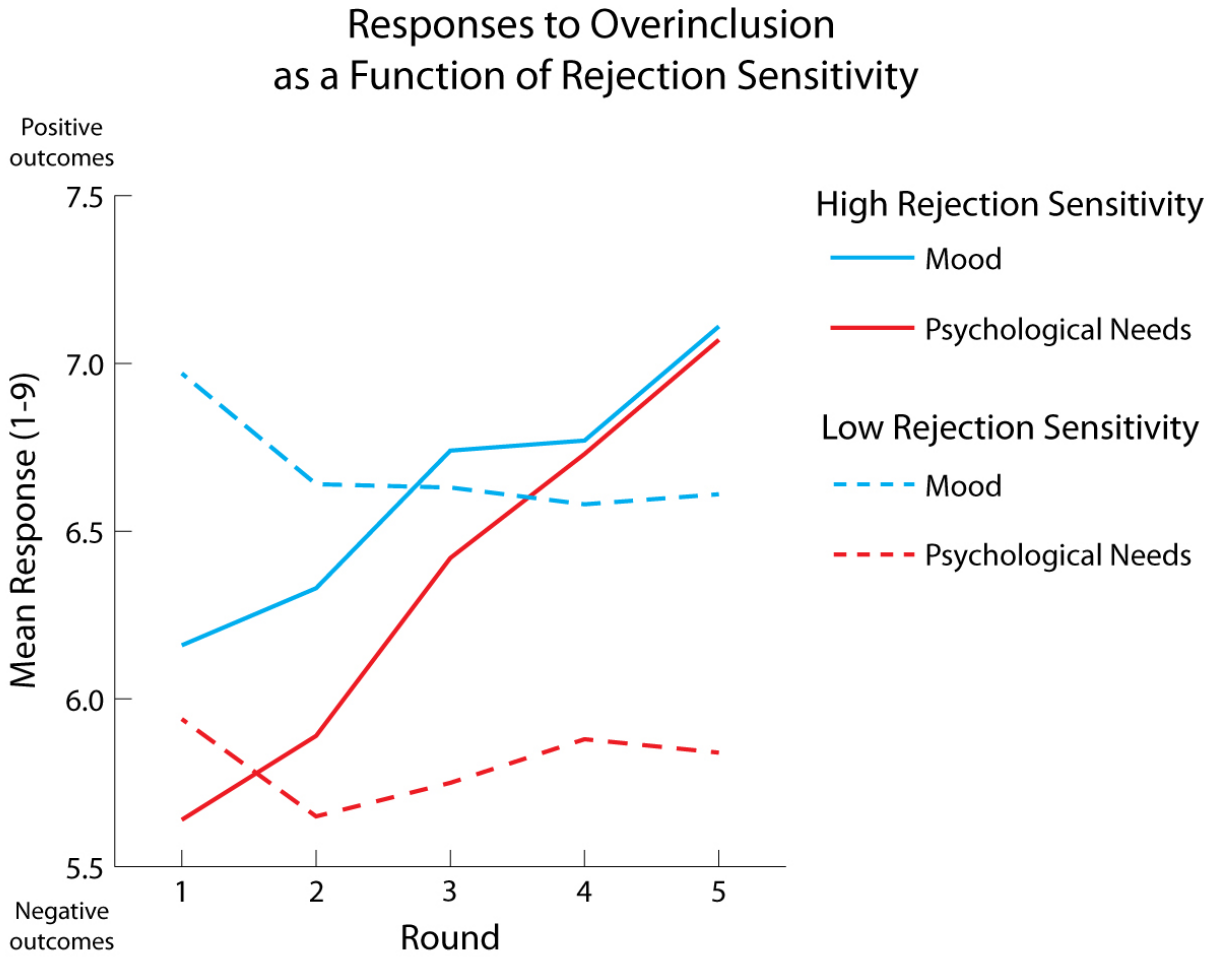

Figure 4. Responses to overinclusion as a function of individual differences in rejection sensitivity for mood and psychological needs. High and low levels of rejection sensitivity were determined by a median split.