Original Article

Feeling Like a Burden

Self-Compassion Buffers Against the Negative Effects of a Poor Performance

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Abstract: We examined the negative outcomes, particularly social costs that result when a person harms their group by performing poorly, and whether self-compassion could buffer against these negative outcomes. In Studies 1 and 2, participants performed poorly and harmed their group or performed equal to their group. Harmful poor-performing participants felt more burdensome, experienced more negative affect, felt more ostracized, anticipated more exclusion, and felt lowered self-esteem than equal-performing participants. Studies 3 and 4 disentangled poor performance from harming a group. Poor-performing participants either harmed the group or caused no harm. Harmful poor-performing participants felt more burdensome and anticipated more exclusion, indicating the additional social consequences of a harmful poor performance over a non-harmful performance. Across studies, trait self-compassion was associated with reduced negative effects.

Keywords: burden, self-compassion, ostracism, exclusion, performance

No one wants to negatively impact his or her group, team, or family. People who believe they are unable to make a sufficient contribution to their group or otherwise believe they are harming their group's well-being may develop a feeling of "perceived burdensomeness" (Bryan, Morrow, Anestis, & Joiner, 2010). There are many instances where individuals may perceive they are burdening others. For example, individuals with advanced cancer (de Faye, Wilson, Chater, Viola, & Hall, 2006), individuals with chronic pain (McPherson, Wilson, Lobchuk, & Brajtman, 2007; Simmons, 2007), elderly individuals (Cahill, Lewis, Barg, & Bogner, 2009; Zweibel & Cassel, 1989), and veteran service members who are acclimating to civilian life (Selby et al., 2010) all reported feeling burdensome. Moreover, when individuals were asked to recall a time when they perceived themselves as burdensome to their group, they talked about situations such as performing poorly on a group task at school or in the workplace, not contributing enough to a shared goal in an extracurricular activity, or causing others to care for them during a personal injury or illness (LeRoy, Lu, Zvolensky, Ramirez, & Fagundes, 2017). Thus, negatively affecting a group and the resulting feeling of perceived burdensomeness are part of the fabric of everyday life.

Perceived burdensomeness is a highly uncomfortable experience that individuals will go to great lengths to avoid. Perceiving oneself as burdensome is associated with general feelings of suffering (Ganzini, Johnston, & Hoffman, 1999), clinical depression (Wilson, Curran, & McPherson, 2005), a weakened will to live (Chochinov et al., 2005), loss of dignity (Chochinov et al., 2002), and pain and physical symptoms (Kowal, Wilson, McWilliams, Péloquin, & Duong, 2012; McClement et al., 2007; Wilson et al., 2005). Individuals who believe they are burdening a group may feel that the group would be better off without them (Joiner, 2005), which may lead to the extreme behavior of self-harm. For instance, feeling like a burden on one's family can be an influential factor in leading individuals to be more likely to commit suicide (DeCatanzaro, 1995; Filiberti et al., 2001; Woznica & Shapiro, 1990). Similarly, individuals with long-term illnesses will attempt to stop burdening others by engaging in death-hastening acts such as declining cardiopulmonary resuscitation (Mead et al., 1995), dialysis (Ashby et al., 2005), or other life-extending medical treatments (Zweibel & Cassel, 1989). In fact, feeling burdensome was a top reason (93% of respondents) why elderly patients did not want life-extending medical treatment (Zweibel & Cassel, 1989).

Outcomes Associated With Perceived Burdensomeness

In addition to feeling burdensome, individuals who negatively impact the group might experience other aversive

consequences. Perceiving oneself as burdensome is associated with feeling unwanted and lowered self-esteem (Van Orden et al., 2010), in addition to increased negative affect and thwarted belongingness (Bryan et al., 2010). Further, participants who recalled a time they perceived themselves as a burden to a group felt increased social and physical pain (LeRoy et al., 2017). These outcomes are all associated with the experience of being ostracized as well (see Bernstein, 2016; Wesselmann & Williams, 2017; Williams, 2009). Indeed, perceived burdensomeness is linked to feeling ostracized (Buelow & Wirth, 2017) and burdensome individuals are targets of ostracism (Wesselmann, Wirth, Pryor, Reeder, & Williams, 2013; Wirth, Bernstein, & LeRoy, 2015). To avoid being ostracized, individuals are perpetually looking for potential indications of forthcoming ostracism (Spoor & Williams, 2007), such as burdening the group. An individual who is negatively impacting a group may be cognizant of their pending "social death" (Williams, 2009).

Thus, negatively impacting a group may have serious consequences, and it is important to understand the circumstances in which these consequences may be alleviated. In the current research, we examine if self-compassion can buffer against the unpleasant outcomes of negatively impacting a group.

Self-Compassion

Based on previous research showing self-compassionate people respond less negatively to failure (Leary, Tate, Adams, Allen, & Hancock, 2007), we propose self-compassion may lessen the unpleasant consequences of negatively impacting the group. Self-compassion entails showing oneself kindness (self-kindness) while keeping one's emotions balanced (mindfulness) and recognizing that all people experience challenges (common humanity; Neff, 2003b). In studies demonstrating self-compassion's efficacy for dealing with negative situations, increases in self-compassion were associated with decreases in mental illness symptoms (MacBeth & Gumley, 2012), less catastrophizing of negative situations, less anxiety following a stressor, and greater overall coping (see Allen & Leary, 2010). For example, self-compassionate people are protected from the negative effects of rejection and ostracism, indicated by responding with less depression and negative affect (Beekman, Stock, & Howe, 2017; Jiang & Chen, 2019).

Additionally, when a self-compassionate individual fails or makes an error, the individual will reassure oneself, rather than criticize (Neff, 2003b). A self-compassionate individual will respond mindfully and recognize that others also fail. Demonstrating the power of self-compassion, researchers (Neff, Hsieh, & Dejitterat, 2005) found self-compassion helped individuals cope more effectively following failure. Self-compassionate people take more responsibility for their personal failures (Leary et al., 2007), have increased self-improvement motivation (Breines & Chen, 2012), and are less likely to accept their own immoral behavior (Wang, Chen, Poon, Teng, & Jin, 2017). Furthermore, in relationships, self-compassionate individuals are more accepting of their partners' imperfections and, subsequently, their partners experience higher relationship satisfaction (Neff & Beretvas, 2013; Zhang, Chen, & Tomova Shakur, 2020).

Self-compassion could also extend to buffering against the consequences of one's poor performance negatively impacting the group. For instance, Leary and colleagues (2007) found participants who imagined negatively impacting a group reacted differently depending on their trait self-compassion. Self-compassionate participants felt less negative affect, catastrophized less, and had a more balanced emotional response than less self-compassionate individuals. Although Leary and colleagues did not directly address the concept of burden, this negative event was inadvertently an experience of being burdensome. The ability of self-compassion to buffer against the consequences of negatively influencing a group could come from the common humanity aspect of self-compassion. Feeling a sense of common humanity involves feeling connected to, rather than isolated from, other people. Self-compassionate people are more likely to see their suffering as something shared by most people (Neff, 2003a; Gilbert & Irons, 2004). Gilbert (2005) proposed that self-compassion involves the activation of an affiliative processing system via the parasympathetic nervous system; thus, self-compassionate people exhibit care-giving tendencies toward themselves similar to the ones they use in relating to others (Hermanto & Zuroff, 2016). Based on these theoretical underpinnings, a self-compassionate person whose performance negatively influences the group should feel less burdensome and less ostracized, and should anticipate less exclusion as a result of his or her own tendency to care for oneself. To determine if self-compassion can, in fact, buffer against the negative impact of performing poorly, we assessed individuals' self-compassion and manipulated participants' performances experimentally on a group task.

Overview of Studies 1 and 2

The majority of research to date on perceiving oneself as burdensome captured lifelong experiences of being burdensome or recalling specific memorable moments. We examined if a common, everyday experience of negatively influencing a group can cause similar outcomes. Specifically, we examined the consequences of negatively impacting a group using multiple scenarios – participants either performed poorly, or recalled/imagined a time when they

performed poorly, on a group task and we then measured several consequences of their poor performance.

In our first two studies, we wanted to demonstrate the consequences of one's poor performance negatively influencing a group and to examine if self-compassion was related to these consequences. To achieve these aims, we compared two everyday experiences, performing poorly and it negatively impacting one's group (e.g., missing basketball shots resulting in the team losing) versus performing equal to the group (e.g., making basketball shots at an equal rate as one's teammates). These studies tested the hypothesis that poor-performers who negatively impacted the group would feel more negative affect, more ostracized, more anticipated exclusion, and lowered self-esteem, and would perceive themselves as more burdensome, than equal-performers. We also hypothesized that more self-compassionate participants would respond more positively than less self-compassionate participants. Finally, we tested the hypothesis that self-compassion would have a buffering effect; specifically, we predicted that there would be less of a difference in outcomes between negatively impacting the group and performing equally when participants were high, versus low, in self-compassion.

For all studies, we conducted our research in accordance with the standards of the American Psychological Association on the ethical treatment of human participants and within the regulations of the institutional review boards. We archived all materials, reported findings of a Study 1 replication, and included all data at the Open Science Framework website (https://osf.io/utk35/).

Study 1

Given a lack of manipulations of poor performance, we started by using an imagined scenario (e.g., Leary et al., 2007) paradigm to imitate real-world group interactions, allowing us to carefully manipulate participants' performances on a group exercise and measure the consequences of their performances.

Method

Participants and Data Collection Plan

In Studies 1–3, we aimed to have 80–100 participants per condition. For Study 1, 162 total Mechanical Turk (MTurk) workers participated. Previous examinations (for a review see Paolacci & Chandler, 2014) indicate MTurk workers are reliable, diligent, and the data are at least as reliable as those data obtained through traditional means (e.g., laboratory experiments; Buhrmester, Kwang, & Gosling, 2011). In this study, we removed participants for failing to follow instructions (n = 4), providing incomplete written responses (n = 2), previously participating in a similar study (n = 5), or finishing the study particularly quickly or slowly (±2 *SD;* n = 8). This resulted in a final sample of 143 participants (51.7% female), who were on average 33.36 years old (*SD* = 12.33, range = 18–74) and primarily Caucasian (78.3%).

Procedure

Following providing consent, participants imagined a scenario in which they played a trivia game with two other people (see Electronic Supplementary Material, ESM 1). We found imagining a scenario to be an appropriate first step given its previous use in social exclusion studies (e.g., Aydin, Fischer, & Frey, 2010; Chen & Williams, 2012; Hitlan, Kelly, Schepman, Schneider, & Zárate, 2006) and because scenario studies produce similar results as other exclusion paradigms (e.g., Cyberball, life-alone; see Wirth, 2016). In the current study, participants were instructed that every group member gets an equal number of turns, the group's goal is to get as many questions correct as possible, and the number of turns each group member gets does not depend on one's performance. To manipulate performance, participants were randomly assigned to imagine answering fewer trivia questions correctly compared to the other group members (poor-performer condition; n = 75) or an equal number of trivia questions (equal-performer condition; n = 68). The poor-performer negatively impacted the group by limiting the number of correct answers the group tallied. All participants were then asked to imagine, for 2 min, talking to themselves about the game, answering the question, "What would you say?" Participants wrote down their response to this question.

Measures

In all studies, participants completed these measures in the following order.

Perceived Burdensomeness

Participants indicated their perceived burdensomeness using the burden subscale of the Interpersonal Needs Questionnaire (Van Orden, Cukrowicz, Witte, & Joiner, 2012). Participants responded based on the scenario they imagined ("During the time I imagined,") to the items (i.e., "…the group would have been better off if I were gone," "the group would have been happier without me," "I thought I had failed the group," "I thought I was a burden on the group," "I thought I contributed to the well-being of the group" [reverse-scored], "I felt like a burden on the people in the group," "I thought the group wished they could be rid of me," "I thought I made things worse for the group," "I thought I mattered to the group" [reverse-scored]) using

a scale from 1 (= *not at all true for me*) to 7 (= *very true for me*) (α = .94).

Negative Affect

Participants reported how down, anxious, isolated, sad, angry, and happy (reverse-scored) they felt during the scenario they imagined (based on Buckley, Winkel, & Leary, 2004) using a scale from 1 (= *very slightly or not at all*) to 5 (= *extremely*) (α = .87).

Feeling Ostracized

We asked participants: "During the scenario that you imagined, how ignored did you feel?" and "During the scenario you imagined, how excluded did you feel?" on a scale from 1 (= *not at all*) to 5 (= *extremely*). We took the mean as a measure of ostracism (r_{sb} = .86).

State Self-Esteem

Participants responded to seven items assessing their state self-esteem on performance tasks (Heatherton & Polivy, 1991; i.e., "I felt confident about my abilities," "I felt frustrated or rattled about my performance," "I felt that I was having trouble understanding things that I read," "I felt as smart as others" [reverse-scored], "I felt confident that I understood things" [reverse-scored], "I felt that I had less scholastic ability than others," "I felt like I was not doing well") on a scale from 1 (= *not at all*) to 5 (= *extremely*) (α = .92).

Anticipated Exclusion

We asked participants to respond based on another round of the trivia game to the following: "How likely is it that the group would reject you?" "How likely would it be that the group would exclude and ignore you?" and "How likely is it that the group would include you?" (reverse-scored) on a scale from 1 (= *not at all*) to 7 (= *very likely*). We took the mean of these items as a measure of anticipated exclusion (α = .90).

Self-Compassion Scale

Participants reported their trait self-compassion by completing the Self-Compassion Scale – Short Form (Raes, Pommier, Neff, & Van Gucht, 2011). Participants responded to 12 statements assessing self-kindness (i.e., "I try to be understanding and patient toward those aspects of my personality I don't like," "When I'm going through a very hard time, I give myself the caring and tenderness I need"), self-judgment (i.e., "I'm disapproving and judgmental about my own flaws and inadequacies," "I'm intolerant and impatient toward those aspects of my personality I don't like" [reverse-scored items]), common humanity (i.e., "I try to see my failings as part of the human condition," "When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people"), isolation (i.e., "When I'm feeling down, I tend to feel like most other people are probably happier than I am," "When I fail at something that's important to me, I tend to feel alone in my failure" [reverse-scored items]), mindfulness (i.e., "When something painful happens I try to take a balanced view of the situation," "When something upsets me I try to keep my emotions in balance"), and over-identification (being consumed by one's emotion; i.e., "When I fail at something important to me I become consumed by feelings of inadequacy," "When I'm feeling down I tend to obsess and fixate on everything that's wrong" [reverse-scored items]) on a scale from 1 (= *almost never)* to 5 (= *almost always*). We calculated an average trait self-compassion score (α = .88).

Manipulation Checks and Demographics

To assess the performance manipulation, participants were asked: "In the scenario that you imagined, how well did you perform compared to your group members?" on a scale from −5 (= *my performance was significantly worse*) to 5 (= *my performance was significantly better*). Participants were also asked: "In the scenario that you imagined, how much did you contribute compared to your group members?" on a scale from −5 (= *my contribution was significantly less*) to 5 (= *my contribution was significantly greater*).

Participants concluded the study by answering basic demographic questions and by receiving debriefing information.

Statistical Analyses

For all of the studies, we did not analyze the data until we completed the data collection and cleaning. We also reported all measures, manipulations, and exclusions. For our statistical analyses, we ran a multiple regression analysis on each measure, except the manipulation checks, using performance condition, centered trait self-compassion, and their interaction term as predictors. Regions of significance were evaluated only for significant interactions to determine at what level of self-compassion there was no longer a difference in responses for the equal-performing and poor-performing conditions. These regions of significance are presented in standard deviation units. Inter-item correlations for each study are reported in Tables 1, 3, 5, and 7.

Results and Discussion

Independent samples *t*-tests indicated a successful manipulation; poor-performers, compared to equal-performers, felt they performed worse ($M = -2.07$, $SD = 2.54$ vs. $M = 0.69$, $SD = 1.69$) and contributed less ($M = -1.15$, $SD = 2.56$ vs. $M = 0.61$, $SD = 1.38$), $ts \geq |5.01|$, $ps < .001$, $ds \geq 0.84$.

Table 1. Means (*M*), standard deviations (*SD*), and intercorrelations for Study 1

Variable	*M*	*SD*	Correlations					
			1	2	3	4	5	6
1. Condition	–	–	–					
2. Self-compassion	3.07	0.75	−.12	–				
3. Feeling burdensome	3.13	1.57	.57***	−.36***	–			
4. Negative affect	2.27	0.92	.39***	−.35***	.75***	–		
5. Feeling ostracized	2.20	1.14	.45***	−.41***	.76***	.68***	–	
6. State self-esteem	3.29	1.11	−.62***	.39***	−.81***	−.69***	−.69***	–
7. Anticipated ostracism	2.97	1.67	.46***	−.31***	.77***	.59***	.72***	−.73***

Note. *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

Table 2. Study 1 regression coefficients for a model predicting the dependent variables from the performance condition (−1 = equal-performer, 1 = poor-performer), trait self-compassion (centered), and their interaction, and the simple slopes

Predictor	Feeling burdensome			Negative affect			Feeling ostracized			State self-esteem			Anticipated exclusion		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Performance	.53	8.31	< .001	.36	4.83	< .001	.41	5.95	< .001	−.58	−9.51	< .001	.43	5.91	< .001
Trait self-compassion	−.28	−4.37	< .001	−.30	−4.00	< .001	−.34	−4.97	< .001	.31	5.08	< .001	−.24	−3.37	.001
Performance × Trait self-compassion interaction	−.16	−2.52	.013	−.13	−1.82	.070	−.17	−2.44	.016	.13	2.08	.039	−.11	−1.57	.119
High self-compassion (+1 *SD*)	.37	4.10	< .001	.22	2.13	.035	.24	2.48	.014	−.45	−5.28	< .001	.31	3.08	.003
Low self-compassion (−1 *SD*)	.70	7.58	< .001	.49	4.66	< .001	.58	5.88	< .001	−.70	−8.11	< .001	.54	5.23	< .001

To test our initial hypotheses, we utilized a multiple regression model with performance type (−1 = equal-performer, 1 = poor-performer), centered trait self-compassion, and their interaction as predictors. We found significant main effects for performance (βs $\geq$ |.36|, *t*s $\geq$ |4.83|, *p*s < .001) and self-compassion (βs $\geq$ |.24|, *t*s $\geq$ |3.37|, *p*s $\leq$ .001) for all dependent measures (see Table 2 for statistics; see also Figure 1). Supporting self-compassion as a buffer, we found significant interactions for perceived burdensomeness, feeling ostracized, and state self-esteem (βs $\geq$ |.13|, *t*s $\geq$ |2.08|, *p*s $\leq$ .039), but there were no significant interactions for negative affect or anticipated exclusion (βs $\leq$ |.13|, *t*s $\leq$ |1.82|, *p*s $\geq$ .070). To interpret the interactions, simple slopes analyses showed that more self-compassionate participants (+1 *SD*; βs $\leq$ |.45|, *t*s $\leq$ |5.28|, range: *p*s < .001 to *p* = .035) reacted more similarly across performance conditions than less self-compassionate participants (−1 *SD*; βs $\geq$ |.49|, *t*s $\geq$ |4.66|, all *p*s < .001). Therefore, more self-compassionate participants were not as negatively impacted by performing poorly compared to less self-compassionate participants. In terms of regions of significance, participants no longer responded differently between the two conditions for perceived burdensomeness, feeling ostracized, and state self-esteem at 1.72, 1.18, and 2.23 *SD* above the mean of self-compassion, respectively.

From this initial study, we learned that performing poorly as part of a group task is an overall unpleasant experience that results in individuals perceiving themselves as burdensome, experiencing negative affect, feeling ostracized, anticipating exclusion, and feeling worsened self-esteem. However, self-compassion was associated with reduced negative outcomes from performing poorly on a group task.[1]

Study 2

We designed Study 2 to generalize the previous results to an in vivo manipulation and to address a key limitation: imagination may not reflect one's actual response. In Study 2, participants completed a word creativity task and either performed poorly, which negatively impacted the group by causing other members to have to do more work, or

[1] We replicated the effects demonstrated in Study 1 by using a different imagine scenario (i.e., an imagined scavenger hunt; see ESM 2). However, there was an unintended significant correlation between self-compassion and performance condition ($r = -.19$, $p = .024$).

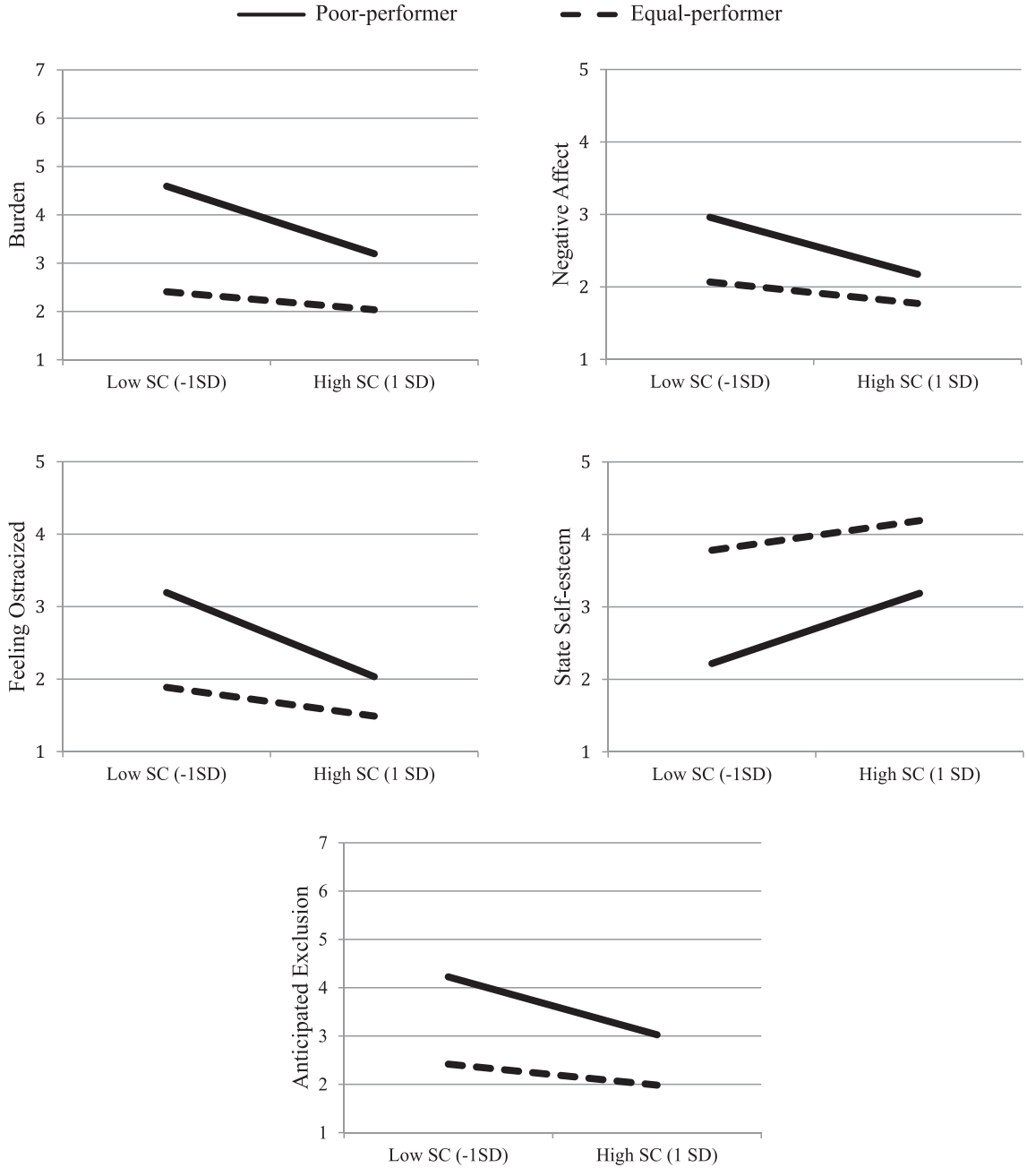

Figure 1. Predicted means for Study 1 dependent variables depicted at low self-compassion (−1 *SD*) and high self-compassion (+1 *SD*) as a function of poor- versus equal-performer.

performed equally as well as the other group members, which had no negative impact for the group.

Method

Participants

We recruited participants (N = 175) through MTurk. Those who failed to complete the dependent measures (n = 13) or indicated suspicion (n = 4) were excluded from the analyses. We analyzed a final sample of 158 participants (51.0% male), who were on average 33.25 years old (SD = 9.73, range = 19–64) and primarily Caucasian (80%).

Procedure

After consenting, participants learned they would be playing a word creativity game with three other group members (actually computer agents; see Wirth, Turchan,

Table 3. Means (*M*), standard deviations (*SD*), and intercorrelations for Study 2

			Correlations					
Variable	*M*	*SD*	1	2	3	4	5	6
1. Condition	–	–	–					
2. Self-compassion	3.23	0.88	−.05	–				
3. Feeling burdensome	2.87	1.92	.80***	−.22**	–			
4. Negative affect	1.60	0.76	.51***	−.40***	.67***	–		
5. Feeling ostracized	1.41	0.76	.42***	−.21**	.56***	.76***	–	
6. State self-esteem	3.94	0.98	−.62***	.34***	−.79***	−.75***	−.60***	–
7. Anticipated ostracism	3.04	2.00	.83***	−.23**	.91***	.68***	.57***	−.78***

Note. *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

Zimmerman, & Bernstein, 2014). We provided detailed instructions explaining the word creativity problems: Remote Associates Test (RAT) items (Bowden & Jung-Beeman, 2003; Mednick, 1968). The items consisted of participants seeing a list of three words and then finding a fourth word (the solution) that links the three given words together, such as "spoon," "cloth," and "card," which are linked by the solution word "table" (i.e., tablespoon, tablecloth, card table). Participants were instructed they would have 15 seconds to type an answer and they should make guesses, if needed. They then did a practice trial and learned they would receive feedback about how all group members performed once each group member was done. Lastly, participants were informed the group needed to reach a total of 50 correctly answered problems or each group member would have to complete 10 problems independently later.

Participants began the word creativity game by waiting for their group members to join. Participants were randomly assigned to the equal- or poor-performer condition. In the equal-performer condition, participants were told they scored 13 out of 14 correct, while the other group members received scores of 13, 13, and 12. Participants completed the 2nd through 15th easiest RAT items (the easiest item was the practice trail) based on previous pretesting (Bowden & Jung-Beeman, 2003), making 13 a plausible score. Ultimately, the group achieved the required 50 correctly answered problems. In the poor-performer condition, participants ostensibly got 9 out of 14 correct while the other group members scored the same as in the equal-performer condition. Participants completed items that were answered correctly, on average, 60.57% of the time in the pretesting. Therefore, the participants' performance matched approximately the performance feedback participants received in the poor-performer condition. In this condition, the poor-performer negatively influenced the group because the group did not correctly answer 50 problems total, meaning each group member had to complete 10 more problems individually (this did not actually occur).

Measures

With one exception, participants completed similar measures as in the previous study. Based on the results of the game, participants reported their perceived burdensomeness (α = .98), how ostracized they felt (r_{sb} = .82), their state self-esteem (α = .93), and their anticipated exclusion (α = .95). To assess negative affect, participants completed a new measure, the negative affect subscale of the Positive and Negative Affect Schedule (PANAS; i.e., "afraid," "scared," "nervous," "jittery," "guilty," "ashamed," "irritable," "hostile," "upset," "distressed"; Watson & Clark, 1994), using a scale from 1 (= *very slightly or not at all*) to 5 (= *extremely*) (α = .93). For this study, participants completed the full 26-item Self-Compassion Scale (Neff, 2003a) using the same instructions and answer choices as before (α = .97).

Again, participants completed the two manipulation check questions evaluating their performance and contribution to the group, answered demographic questions, and reviewed debriefing information.

Results and Discussion

As a manipulation check, independent samples *t*-test indicated poor-performers, compared to equal-performers, felt they performed worse ($M = -2.40$, $SD = 1.59$ vs. $M = 0.76$, $SD = 1.32$) and contributed less ($M = -2.00$, $SD = 1.87$ vs. $M = 0.91$, $SD = 1.46$), $ts \geq |10.95|$, $ps < .001$, $ds \geq 1.73$.

Replicating our Study 1 analyses, we conducted a multiple regression analysis with performance type (−1 = equal-performer, 1 = poor-performer), centered trait self-compassion, and their interaction as predictors. We found main effects for performance ($\beta s \geq |.41|$, $ts \geq |5.91|$, $ps < .001$) and self-compassion ($\beta s \geq |.23|$, $ts \geq |3.20|$, $ps \leq .002$; Table 4 and Figure 2) for all dependent measures. Assessing our interaction hypothesis, we found there were significant interactions for all measured outcomes ($\beta s \geq |.19|$, $ts \geq |2.68|$, $ps \leq .008$). We found there was less of

Table 4. Study 2 regression coefficients for a model predicting the dependent variables from the performance condition (−1 = equal-performer, 1 = poor-performer), trait self-compassion (centered), and their interaction, and the simple slopes

	Feeling burdensome			Negative affect			Feeling ostracized			State self-esteem			Anticipated exclusion		
Predictor	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Performance	.80	18.49	< .001	.50	8.40	< .001	.41	5.91	< .001	−.61	−11.62	< .001	.82	19.72	< .001
Trait self-compassion	−.22	−4.91	< .001	−.42	−6.99	< .001	−.23	−3.12	.002	.36	6.77	< .001	−.22	−5.17	< .001
Performance × Trait self-compassion interaction	−.17	−3.98	< .001	−.25	−4.17	< .001	−.19	−2.68	.008	.29	5.46	< .001	−.15	−3.48	.001
High self-compassion (+1 *SD*)	.62	10.05	< .001	.25	2.88	.005	.22	2.20	.029	−.32	−4.21	< .001	.67	11.25	< .001
Low self-compassion (−1 *SD*)	.97	15.88	< .001	.75	8.91	< .001	.60	6.09	< .001	−.91	−12.10	< .001	.96	16.39	< .001

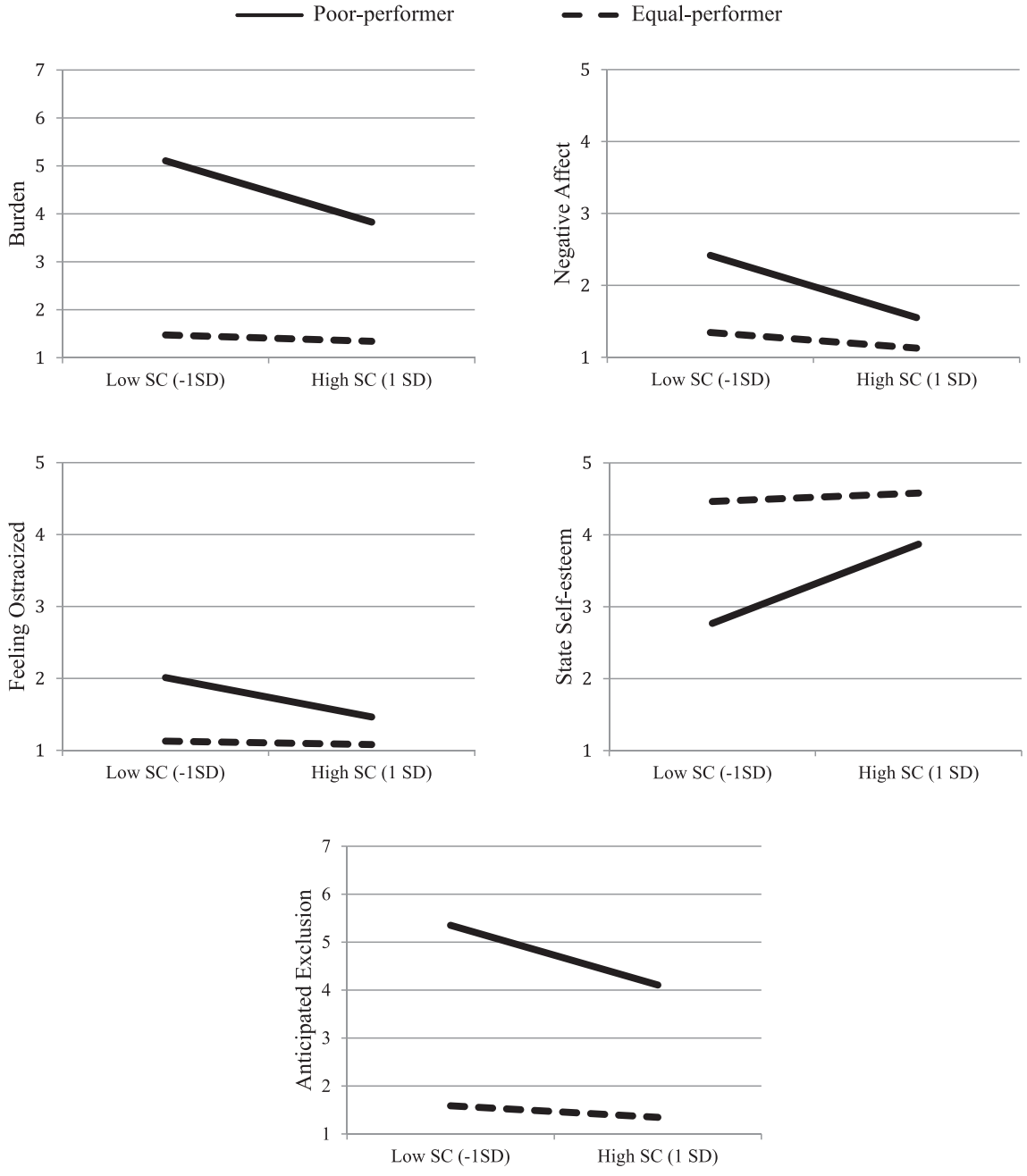

Figure 2. Predicted means for Study 2 dependent variables depicted at low self-compassion (−1 *SD*) and high self-compassion (+1 *SD*) as a function of poor- versus equal-performer.

Table 5. Means (*M*), standard deviations (*SD*), and intercorrelations for Study 3

			Correlations					
Variable	*M*	*SD*	1	2	3	4	5	6
1. Condition	–	–	–					
2. Self-Compassion	2.96	0.80	−.01	–				
3. Feeling burdensome	4.70	1.38	.34***	−.22**	–			
4. Negative affect	2.75	0.96	.17*	−.35***	.51***	–		
5. Feeling ostracized	2.40	1.24	.05	−.21**	.29***	.53***	–	
6. State self-esteem	2.88	0.87	−.18*	.25***	−.57***	−.44***	−.25***	–
7. Anticipated ostracism	3.73	1.84	.19**	−.30***	.46***	.36***	.58***	−.34***

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

a difference between a poor-performer and an equal-performer on perceived burdensomeness, negative affect, feeling ostracized, state self-esteem, and anticipated future exclusion for participants high in self-compassion (βs $\leq$ |.67|, *t*s $\leq$ |11.25|, range: *p*s < .001 to *p* = .029) compared to low in self-compassion (βs $\geq$ |.60|, *t*s $\geq$ |6.09|, all *p*s < .001). Therefore, more self-compassionate participants were less impacted by the poor performance compared to less self-compassionate participants. In terms of regions of significance, participants no longer responded differently between the two conditions for negative affect, feeling ostracized, and state self-esteem at 1.23, 1.08, and 1.45 *SD* above the mean of self-compassion, respectively. However, for perceived burdensomeness and anticipated exclusion, the regions of significance showed responses by poor performers were always significantly ($p < .001$) more negative than those of equal performers even at the highest possible level of self-compassion.

The results of Study 2 replicated Study 1 and added strength to our findings by demonstrating the effects of performance and self-compassion during a group interaction. When poor-performers negatively impacted the group by causing the group to miss its goal and incur a penalty, participants experienced more negative effects. However, individuals who were more self-compassionate reported less negative reactions when they performed poorly (but note the effect of performance was not mitigated entirely by self-compassion).

Overview of Studies 3 and 4

Studies 1 and 2 were essential because they demonstrated the penalties for negatively impacting a group, but these studies failed to differentiate between the consequences of performing poorly and negatively influencing the group. Specifically, in our previous studies, the participant's performance and the consequences of the performance were yoked together – a poor performance also meant the group failed, whereas an equal performance meant the group succeeded. This design limitation left open the possibility that the negative outcomes are a result of general poor performance, not a negative impact on the group. We believe there are important implications stemming from this distinction; therefore, we compared one's poor performance negatively impacting oneself versus one's poor performance also negatively impacting a group.

Previous research suggests we might find an overlap on some consequences of each type of poor performance (i.e., negatively influencing only oneself vs. negatively influencing a group), but not on all. People who performed poorly reported lowered self-esteem and increased negative affect when their poor-performance harmed themselves (e.g., Heatherton & Vohs, 2000; Vohs & Heatherton, 2001, 2004), which are two outcomes individuals also experience after perceiving they have negatively impacted others (Bryan et al., 2010; Van Orden et al., 2010). Although the two types of performance may lead to these same personal outcomes (i.e., negative affect, lowered self-esteem), they may *not* be equivalent on social outcomes. Specifically, groups only want to include those who can share resources (Kurzban & Leary, 2001), promote social exchange (i.e., reciprocal altruism; Trivers, 1971), and contribute to the group (Kerr & Levine, 2008; Trivers, 1971). Negatively influencing a group because of one's poor performance should lead to social consequences resulting from the group's attempt to minimize the poor-performer's negative impact. These social consequences may include perceiving oneself as burdensome to the group, greater feelings of ostracism, and greater anticipation of future exclusion.

In Studies 3 and 4, we compared situations in which one's poor performance *negatively impacts the group* (e.g., missing basketball shots toward the end of the game, costing the team a win) versus a poor performance that *does not negatively impact the group* (e.g., missing basketball shots toward the end of the game, but the team still wins). These studies allowed us to manipulate specifically the

consequences of negatively influencing a group with one's performance, while holding performance constant. This approach gives us a mechanism to establish the unique consequences when one performs poorly in a group.[2]

Anticipated Results

In Studies 3 and 4, we hypothesized that poor-performers who negatively impact the group (a harmful poor performance) would report increased feelings of perceived burdensomeness, ostracism, and anticipated exclusion (i.e., social costs) compared to poor-performers who do not negatively influence the group (a non-harmful poor performance). Based on previous research (e.g., Bryan et al., 2010; Van Orden et al., 2010), we may find poor performers will experience low self-esteem and increased negative affect regardless of negatively influencing the group.

In the forthcoming studies, we continued to test the relationship between self-compassion and reduced negative outcomes when an individual's poor performance negatively impacts a group. We hypothesized that self-compassion would continue to be associated with both the social costs (i.e., greater perceived burdensomeness, increased feelings of ostracism, and greater anticipation of future exclusion) and personal outcomes (i.e., lowered self-esteem, increased negative affect) of performing poorly. This main effect hypothesis of self-compassion was based on research demonstrating self-compassion may be related to outcomes any time an individual is experiencing suffering (Neff, 2003b).

Study 3

To address the limitations of the previous studies and to test our hypotheses, we began by having participants recall a time they performed poorly and their performance either harmed the group or did not harm the group.

Method

Participants

We recruited a total of 202 participants via MTurk. We removed participants for failing to follow instructions (n = 3) and finishing the study particularly slowly (+2 SD; n = 13). The removal of participants led to a final sample of 186 participants (55.9% male), who were on average 33.14 years old (*SD* = 10.41, range = 18–71), and predominantly Caucasian (80.1%).

Procedure

After participants consented, they were randomly assigned to recall a time when their poor performance harmed the group or was non-harmful; all participants recalled a time they performed poorly. Participants in the harmful poor performance condition (n = 92) were asked to, "Please recall a time within the last 5 years when you performed poorly on a group task and it burdened the group, meaning you negatively influenced the group's well-being." Those in the non-harmful poor performance condition (n = 94) instead completed a writing prompt ending with, "but it did not burden the group, meaning you did not negatively influence the group's well-being." All participants were then asked to recall what happened during the group task (step-by-step) and report how they felt during the group task they recalled (see ESM 1). Recall manipulations of social experiences are used steadily in social exclusion research (see Wirth, 2016 for a review), and researchers used similar writing prompts to manipulate negatively impacting a group (e.g., LeRoy et al., 2017).

Measures

Based on the experience participants recalled, participants answered the same questions as in Study 2 to assess how burdensome they perceived themselves to be (α = .89), how ostracized they felt (r_{sb} = .84), their state self-esteem (α = .82), their anticipated exclusion (α = .94), their negative affect (α = .91), and their trait self-compassion (α = .96).

Participants completed the study by answering the two manipulation check questions from previous studies (performance and contribution). Participants also completed an additional manipulation check related to the group's well-being ("During the time you recalled, to what extent did you influence the group's well-being?") on a scale from −5 (= *I negatively influenced the group's well-being to a large extent*) to 5 (= *I positively influenced the group's well-being to a large extent*). Lastly, participants reported their demographics and reviewed debriefing information.

Results and Discussion

We categorized participants' written responses based on the contexts participants in LeRoy et al. (2017) recalled when they were burdensome to a group. Of our 186 responses,

[2] Additionally, based on concerns Leary, Terry, Allen, and Tate (2009) noted when using the RAT as a manipulation involving poor performance and social comparison, it may be unclear if our effects are due to the negative consequences of one's poor performance on the group or the participant earning a lower score than the other group members. We designed Studies 3 and 4 to also address this issue.

Table 6. Study 3 regression coefficients for a model predicting the dependent variables from the performance condition (−1 = non-harmful poor performance, 1 = harmful poor performance), trait self-compassion (centered), and their interaction, and the simple slopes

	Feeling burdensome			Negative affect			Feeling ostracized			State self-esteem			Anticipated exclusion		
Predictor	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Performance	.34	4.98	< .001	.17	2.43	.016	.05	0.70	.487	−.18	−2.50	.013	.19	2.73	.007
Trait self-compassion	−.20	−2.93	.004	−.33	−4.80	< .001	−.19	−2.64	.009	.24	3.41	.001	−.27	−3.95	< .001
Performance × Trait self-compassion interaction	−.10	−1.41	.161	−.12	−1.73	.086	−.13	−1.80	.074	.08	1.81	.239	−.17	−2.46	.015
High self-compassion (+1 *SD*)	.24	2.50	.013	.05	0.48	.633	−.08	−0.79	.431	−.09	−0.92	.359	.02	0.17	.867
Low self-compassion (−1 *SD*)	.43	4.50	< .001	.28	2.93	.004	.18	1.77	.079	−.26	−2.60	.010	.36	3.67	< .001

24.1% participants recalled a group project for school, 15.5% recalled a group task or common goal related to an extracurricular activity (e.g., dance, sports, theater), 49.4% recalled a group task or common goal in the workplace or military, 2.0% (N = 2) recalled a social event, 0.5% (N = 1) recalled a personal injury, 2.1% (N = 4) did not fit directly into one of these categories, and for 6.4% of participants, it was unclear if they recalled a school or work experience.

As we intended, the manipulation checks indicated we held the outcomes of performance constant but varied the impact performance had on the group. We found no significant differences between a harmful poor performance versus a non-harmful poor performance on participants' performance (M = −2.47, SD = 2.57 vs. M = −2.06, SD = 2.53) and contribution compared to the group (M = −1.70, SD = 2.92 vs. M = −2.02, SD = 2.70), ts ≤ |1.08|, ps ≥ .282, ds ≤ 0.16. As designed, participants who harmed the group (M = −2.28, SD = 2.42) reported they more negatively influenced the group's well-being compared to participants who did not harm the group (M = −0.49, SD = 2.15), t = 5.34, p < .001, d = 0.78.

Using a multiple regression model with performance type (−1 = Non-harmful poor performance, 1 = Harmful poor performance), centered trait self-compassion, and their interaction as predictors, we found a harmful poor performance led to feeling more burdensome, more negative affect, less self-esteem, and greater anticipation of exclusion compared to a non-harmful poor performance, βs ≥ |.17|, ts ≥ |2.43|, ps ≤ .016 (Table 6 and Figure 3). However, there was no significant difference between conditions for feeling ostracized, β = .05, t = 0.70, p = .487. We also found as self-compassion increased, participants were buffered significantly on all outcomes, βs ≥ |.19|, ts ≥ |2.64|, ps ≤ .009. We found a significant interaction between performance and self-compassion for anticipated exclusion, β = −.17, t = −2.46, p = .015, but not for any other variables, βs ≤ |.13|, ts ≤ |1.79|, ps ≥ .074. Simple slopes analyses revealed there was no significant difference between a harmful performance and non-harmful performance for participants high in self-compassion, β = .02, t = 0.17, p = .867, but there was a significant different between conditions for participants low in self-compassion, β = .36, t = −3.67, p < .001. In terms of regions of significance, if participants were .27 *SD* above the mean on self-compassion or higher, then condition did not impact their anticipated exclusion. Therefore, more self-compassionate participants did not anticipate more exclusion for a harmful poor performance compared to a non-harmful poor performance, but less self-compassionate participants did.

Results from Study 3 suggest a harmful poor performance is generally more unpleasant than a non-harmful poor performance. The consequences of one's poor performance harming the group included personal (e.g., self-esteem) and social consequences (e.g., perceived burdensomeness). However, contrary to our hypotheses, participants with a harmful poor performance did not feel more ostracized than participants with a non-harmful poor performance. Study 3 results also indicated that self-compassion again was associated with more positive outcomes (both personal and social). We also found an unexpected interaction; there was no difference in anticipated exclusion between poor performances (harmful vs. non-harmful) for participants high in self-compassion, but a difference in anticipated exclusion between performances emerged for those low in self-compassion.

Study 4

In Study 4, we continued to evaluate the differences between one's poor performance harming versus not harming the group and to examine if self-compassion would continue to be associated with buffering against the unpleasant outcomes of performing poorly on a group task. To do so, we used a similar manipulation as Study 2, but with a poor-performer control group where the participant's performance did not harm the group. In Study 4, participants completed a word creativity task where all participants performed poorly compared to the group, but either the poor performance harmed the group (a harmful poor performance; all members had to do additional problems)

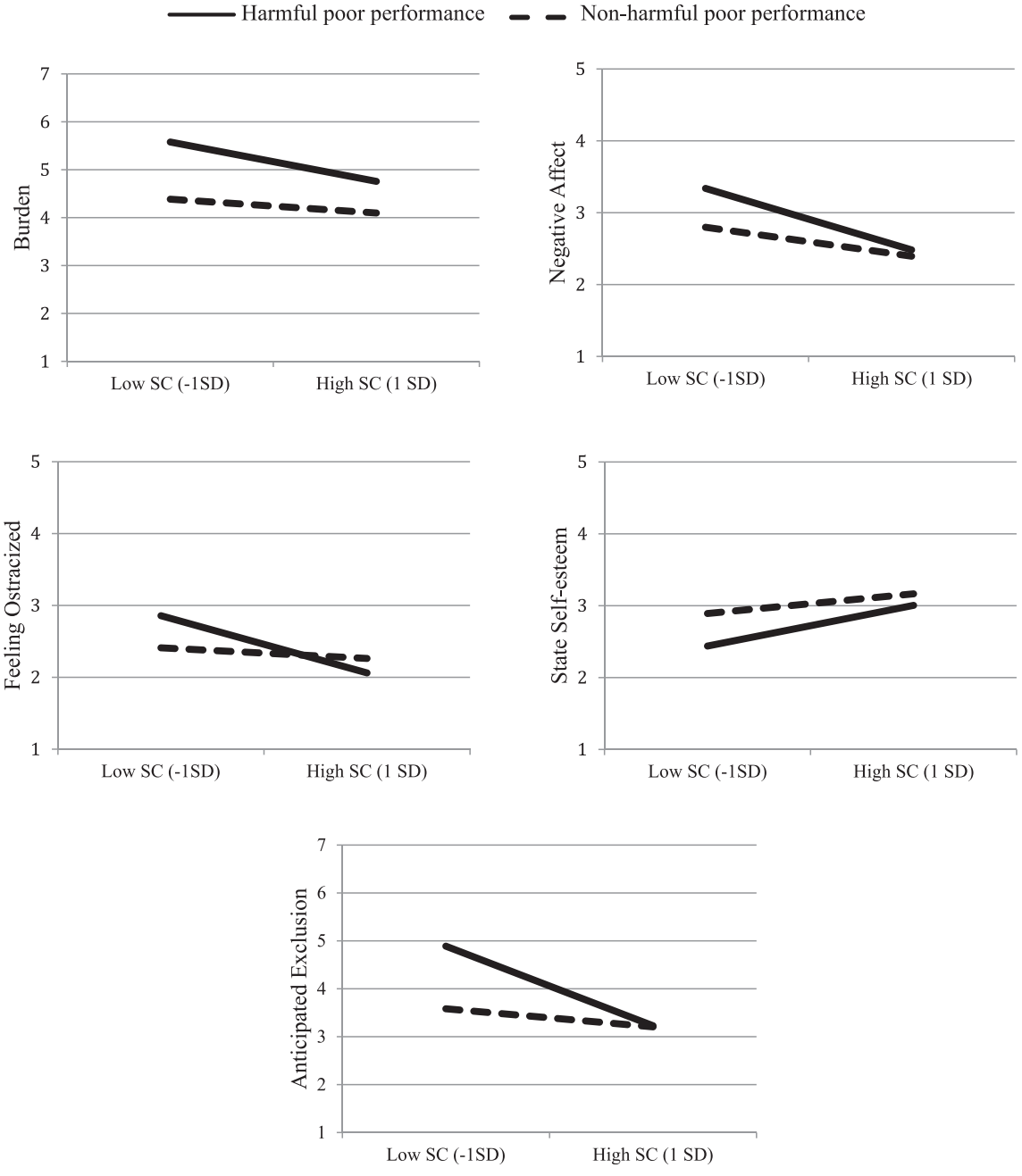

Figure 3. Predicted means for Study 3 dependent variables depicted at low self-compassion (−1 *SD*) and high self-compassion (+1 *SD*) as a function of a harmful poor performance versus a non-harmful poor performance.

or the poor performance was not harmful (a non-harmful poor performance; only the participant had to do additional problems).

Method

Participants and Data Collection Plan

A total of 303 MTurk participants completed the study. We increased the sample size because we were concerned that differences between the conditions would be smaller than they were previously. We removed participants who were suspicious (n = 34), completed the study especially slowly (+2 *SD*; n = 12), or did not complete all measures (n = 1). The final sample was 256 participants (57.0% male), who were an average age of 33.82 years old (*SD* = 10.70, range = 18–67), and the majority were Caucasian (78.9%).

Procedure

We employed the same word creativity game as Study 2 with some revisions to the instructions to create a poor

Table 7. Means (*M*), standard deviations (*SD*), and intercorrelations for Study 4

Variable	*M*	*SD*	Correlations					
			1	2	3	4	5	6
1. Condition	–	–	–					
2. Self-compassion	3.00	0.81	.10	–				
3. Feeling burdensome	4.57	1.60	.24***	−.33***	–			
4. Negative affect	1.98	0.84	.07	−.36***	.47***	–		
5. Feeling ostracized	1.92	1.05	.09	−.24***	.36***	.77***	–	
6. State self-esteem	3.20	0.90	−.04	.37***	−.60***	−.54***	−.41***	–
7. Anticipated ostracism	4.87	1.45	.23***	−.30***	.71***	.36***	.27***	−.49***

Note. *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

performance condition that was harmful or non-harmful. All participants in the current study received the same general word creativity game instructions, practice trials, and did the same word creativity problems as the participants in the poor performance condition in Study 2. In the harmful poor performance condition, we used similar instructions and performance outcomes as the poor-performer condition in Study 2. Specifically, the group needed to reach a total of 50 correctly answered problems or each group member on their own had to do 10 more problems. In the non-harmful poor performance condition, we instructed participants (n = 129), prior to playing the game, that the group member with the lowest score would be asked to complete 10 more problems individually. Participants in both conditions received the same score (9) compared to their group members (13, 13, 12). Participants in the harmful poor performance condition (n = 127) learned that each member had to do 10 more problems because the group did not reach their goal. Participants in the non-harmful poor performance condition learned they would have to complete 10 more problems on their own because they received the lowest score. Thus, performance and doing 10 additional trials (ostensibly) were consistent across conditions, but we varied the participants' performance causing harm or not. No additional trials were completed.

Measures

Participants completed the same measures of perceived burdensomeness (α = .95), feeling ostracized (r_{sb} = .78), state self-esteem (α = .86), anticipated exclusion (α = .87), negative affect (α = .91), trait self-compassion (α = .95), and manipulation checks as Study 3. Participants responded to these items based on the results of the word creativity game.

Results and Discussion

Participants responded on the manipulation checks as we intended. There were no significant differences between a harmful poor performance versus a non-harmful performance on participants' performance (M = −2.63, SD = 1.77 vs. M = −2.46, SD = 1.84) and contribution compared to the group (M = −2.12, SD = 2.12 vs. M = −2.13, SD = 1.87), ts ≤ |0.76|, ps ≥ .449, ds ≤ 0.09. Supporting our manipulation, a harmful poor performance (M = −2.16, SD = 2.48) more negatively influenced the group compared to non-harmful poor performance (M = −1.47, SD = 2.13), t = 2.37, p = .019, d = 0.30.

Similar to Study 3, we conducted a multiple regression analysis with performance type (−1 = Non-harmful poor performance, 1 = Harmful poor performance), centered trait self-compassion, and their interaction as the predictors. Regression analyses indicated participants with a harmful poor-performance perceived themselves as more burdensome and anticipated more exclusion than a non-harmful poor performance, βs ≥ |.26|, ts ≥ |4.46|, ps < .001 (Table 8 and Figure 4). There were no significant differences based on performance condition for negative affect, feeling ostracized, and self-esteem, βs ≤ |.11|, ts ≤ |1.88|, ps ≥ .061. For all measures, we found participants were buffered as self-compassion increased, βs ≥ |.25|, ts ≥ |4.04|, ps < .001. We found a significant interaction between performance condition and self-compassion on negative affect (β = .12, t = 2.09, p = .037), but not for any other measures (βs ≤ |.09|, ts ≤ |1.53|, ps ≥ .128). Examining negative affect, participants high in self-compassion did not experience more negative affect for the harmful poor performance compared to the non-harmful poor performance, β = −.03, t = −0.31, p = .754; however, participants low in self-compassion did show this effect, β = .22, t = 2.66, p = .008. In terms of regions of significance, if participants were .16 *SD* below the mean on self-compassion or higher then condition did not impact their negative affect.

In this study, we demonstrated again the negative social implications of one's poor performance harming the group, versus not harming the group: feeling more burdensome and anticipating more exclusion. Similar to Study 3 and contrary to our hypotheses, we did not see a significant

Table 8. Study 4 regression coefficients for a model predicting the dependent variables from the performance condition (−1 = non-harmful poor performance, 1 = harmful poor performance), trait self-compassion (centered), and their interaction, and the simple slopes

	Feeling burdensome			Negative affect			Feeling ostracized			State self-esteem			Anticipated exclusion		
Predictor	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Performance	.27	4.63	< .001	.10	1.66	.099	.11	1.88	.061	−.07	−1.26	.210	.26	4.46	< .001
Trait self-compassion	−.35	−6.16	< .001	−.36	−6.13	< .001	−.25	−4.04	< .001	.38	6.53	< .001	−.32	−5.48	< .001
Performance × Trait self-compassion interaction	−.07	−1.17	.245	−.12	−2.09	.037	−.09	−1.52	.131	−.08	−1.30	.196	−.09	−1.53	.128
High self-compassion (+1 *SD*)	.20	2.43	.016	−.03	−0.31	.754	.02	0.25	.803	−.15	−1.80	.073	.17	2.06	.041
Low self-compassion (−1 *SD*)	.33	4.11	< .001	.22	2.66	.008	.21	2.41	.017	.00	0.03	.975	.35	4.25	< .001

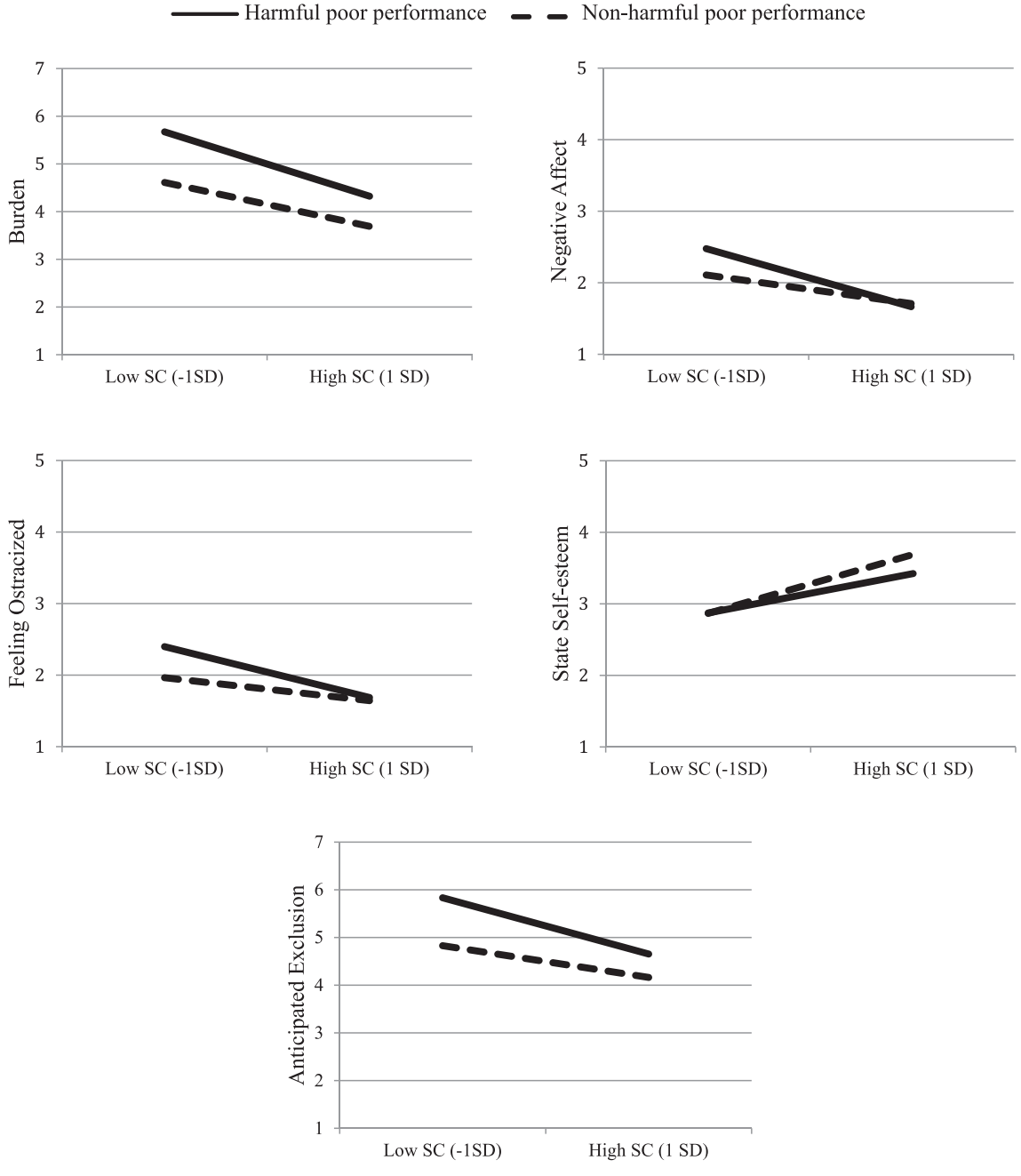

Figure 4. Predicted means for Study 4 dependent variables depicted at low self-compassion (−1 *SD*) and high self-compassion (+1 *SD*) as a function of harmful poor performance versus a non-harmful poor performance.

difference between performance conditions on feeling ostracized. We also found there were no significant differences on self-esteem and negative affect based on the participants' performance affecting the group. Supporting our hypotheses, self-compassion again was associated with improved consequences on both personal and social outcomes. We also found an unexpected interaction between performance condition and trait self-compassion on negative affect such that higher self-compassion mitigated the difference between poor performances (harmful vs. non-harmful), but for those with low self-compassion there was a significant difference between performances.

General Discussion

We demonstrated performing poorly and negatively affecting the group caused individuals to not only feel unpleasant about their own performance but also experience the aversive social consequences of perceiving themselves as burdensome and anticipating future exclusion. These negative repercussions occurred even when individuals performed poorly in a minimal group interaction with very little penalty for a poor performance; this suggests individuals are sensitive to situations where they may negatively impact a group. These studies are some of the first to establish the damaging fallout, especially social, of negatively impacting a group through performing poorly on a group task. These are also some of the first studies to demonstrate that self-compassion is associated with reduced social costs for negatively influencing group members.

In Studies 1 and 2, we found a poor-performer in a group, compared to an equal-performer, felt more burdensome, experienced more negative affect, felt more ostracized, anticipated more exclusion, and felt lower self-esteem. Individuals who negatively impacted their group felt worse compared to those who performed on par with the group. However, to understand the unique social effects of negatively influencing a group through one's poor performance, in Studies 3 and 4, we compared a poor performance that negatively influenced the group (e.g., all group members had to do more work) versus a poor performance that only negatively influenced the participant (e.g., only the participant had to do more work). In these studies, we found a harmful versus non-harmful poor performance led participants to feel more unpleasant social consequences – specifically, perceiving themselves as more burdensome and having greater anticipation of future exclusion by the group. The social implications of negatively influencing a group make the outcomes of one's poor performance that much worse.

Self-Compassion as a Buffer of Poor Performance Outcomes on a Group Task

We found the effects of performing poorly and harming the group were not universal, but rather, an individual's trait self-compassion was associated with reducing their negative consequences resulting from harming a group. When an individual's poor performance negatively impacted the group, increasing degrees of trait self-compassion were associated with experiencing less unpleasant outcomes, both in terms of personal consequences (i.e., self-esteem, negative affect) and social consequences (i.e., perceived burdensomeness, feeling ostracized, anticipated exclusion). Our findings are consistent with previous research (Beekman et al., 2017; Jiang & Chen, 2019; Leary et al., 2007) suggesting self-compassion is related to affective outcomes when an individual is negatively impacted by their poor performance; however, we also found that self-compassion extends to providing a buffer against social consequences of negatively influencing a group. These findings may stem from the fact that self-compassionate people perceive less judgment from others; therefore, they are less likely to see themselves as burdensome or in danger of being ostracized (Long & Neff, 2018). When an individual negatively impacts his or her group, it may be beneficial to practice self-compassion in order to refocus on the task and avoid thinking about being ostracized from the group.

Implications

Our studies are informative for two areas of research that are often overlooked. First, numerous societal groups feel that they are burdening others, including chronic pain patients, palliative care patients, elderly individuals, and veteran service members. We are one of the first sets of researchers to take steps toward better understanding the experience of these individuals experimentally. An experimental approach allows researchers to determine what causes feelings of burdensomeness. Second, we are beginning to examine what leads individuals to anticipate forthcoming exclusion (see also Wirth, Bernstein, Wesselmann, & LeRoy, 2017). By designing a manipulation of a poor performance that negatively impacts one's group, we found that when individuals do not perform as well as their group, they anticipated future exclusion. Harmful poor-performers may have internalized the impact of harming the group by perceiving themselves as burdensome. Previous research was only able to establish the link in the opposite direction – ostracized individuals reported feeling burdensome (Buelow & Wirth, 2017). The link between perceiving oneself as burdensome and ostracism could be supported by the Interpersonal Theory of Suicide (Van Orden et al.,

2010), which proposes suicide desire is caused, in part, by individuals' feelings of thwarted belongingness and perceived burdensomeness. Ultimately, our findings could be a cornerstone to these fields of research.

The current results, in conjunction with previous findings, suggest variability in the role individual differences play when an individual perceives him or herself as burdensome versus being ostracized. In the limited research manipulating experimentally one's perceptions of feeling burdensome and examining individual differences, researchers have identified moderators of perceived burdensomeness: specifically, self-compassion (current research) and anxiety sensitivity (LeRoy et al., 2017). These findings are in contrast to numerous ostracism studies that do not find moderation of ostracism's immediate consequences by individual differences (i.e., gender, age; for a meta-analysis see Hartgerink, van Beest, Wicherts, & Williams, 2015). For instance, whereas anxiety sensitivity moderates the response to perceiving oneself as burdensome (LeRoy et al., 2017), it does not moderate the immediate (reflexive) response to ostracism (Zadro, Boland, & Richardson, 2006). Individual differences may play a more critical role in weaker situations, such as perceptions of burdensomeness caused by a harmful performance in a group, compared to strong situations, such as being ostracized by a group.

Limitations

Some of our results were consistent with our hypotheses and across studies, and some were not. In Studies 3 and 4, we hypothesized that participants who harmed their group would feel more ostracized than participants who did not harm their group, but we did not find this. It seems that when participants performed poorly, they felt similarly ostracized regardless of the consequences to the group (see Spoor & Williams, 2007). This may be because the ostracism questions asked participants to reflect on their thoughts *during* the event where they performed poorly. Participants may have realized they were performing poorly while doing the task but may not have known whether their performance would be bad enough to harm the group or warrant ostracism until after the task was over. After some people learned that they had indeed harmed the group, they then anticipated being excluded in the future. There were also some inconsistent results on the personal outcomes for the self-compassion moderation in Studies 3 and 4 (although the results were at least in the same direction across studies). This was likely due to differences between the experiences in our recall task and our in-vivo task. In short, most of the findings replicated across studies, but our mixed results on some measures prevent us from being able to make strong conclusions about all outcomes.

Given the established overlap between self-compassion and self-esteem, it is possible that self-esteem may be partially responsible for buffering against the negative outcomes of poor-performers (Leary et al., 2007). Although trait self-esteem was not measured in these studies and cannot be controlled for, self-compassion and self-esteem are distinct constructs and have unique predictive ability (Neff & Vonk, 2009). In one study, after participants considered their weaknesses, self-compassion buffered participants from increased anxiety whereas self-esteem did not (Neff, Kirkpatrick, & Rude, 2007). Further, in another study, partial correlations showed that when imagining negative events, self-compassion was associated with less negative affect and personalizing thoughts over and above self-esteem (Leary et al., 2007). Finally, in a series of four studies, Breines and Chen (2012) showed that participants who were exposed to a short self-compassion manipulation had a stronger desire to improve their weaknesses than participants receiving a self-esteem manipulation. These studies provide evidence of self-compassion as a unique construct separate from self-esteem and show why self-compassion is better suited than self-esteem to buffer against the impact of negative events (e.g., perceiving oneself as burdensome).

There were also elements of the experiment that limit the strength of the conclusions we can draw. First, our choice of paradigms may limit our external validity. We designed the word creativity game to manipulate performance and the consequence of performance carefully, but in exchange for internal validity, we limited our external validity by having a lack of in-person interaction. Poor performing participants did not receive social cues of exclusion (e.g., averted eye gaze) they might have received if they were burdening individuals in an in-person context. We attempted to address this limitation through Studies 1 and 3 where participants imagined or recalled the scenario of performing poorly, where they may have imagined or recalled receiving exclusionary cues. As a second limitation, we did not conduct an a priori power analysis, but instead set a target number of participants and collected data until we reached this goal. This procedure may have left us underpowered to detect effects. However, we did have sufficient power to detect interaction effects in the first two studies and the results of the last two studies are consistent with previous literature (e.g., Neff, 2003b). Third, our study is quasi-experimental in nature because we did not manipulate trait self-compassion, which limits our ability to determine causality for our self-compassion effects. Although some argue that trait self-compassion is malleable, increasing self-compassion requires substantial practice over time

(Neff & Germer, 2013). A few studies demonstrated success in manipulating state self-compassion in the laboratory (Breines & Chen, 2012; Leary et al., 2007); however, their findings may be biased by demand characteristics as a result of the self-reported outcomes.

Future Directions

Researchers may be able to investigate a number of questions by utilizing our findings and implementing our research approach. For instance, researchers should consider examining how feeling burdensome is related to sociometer theory. Part of the assessment of the social consequences of being burdensome may be related to relational evaluation, the extent an individual believes another person finds the relationship to be valuable, close, and important (Leary, 1999a, 1999b; Leary & Baumeister, 2000; Leary & Downs, 1995). Relational evaluation is carefully monitored by the social monitoring system as a gauge of one's levels of inclusion in a group. Burdensome group members may also perceive more negative relational evaluation compared to non-burdensome group members, potentially causing a burdensome individual's sociometer to activate. We found evidence suggesting feeling burdensome activates one's sociometer when we found poor performing participants that harmed the group indicated they anticipated more exclusion than non-harmful poor-performers. Ultimately, researchers can address these and other questions by utilizing our simple research paradigm to manipulate performance in a group and measure feeling burdensome.

In the current research, we manipulated burden in the context of performance, but future research could further examine other forms of harming a group (e.g., draining group resources) and factors that influence the outcomes of harming a group. For instance, future research could examine other individual difference moderators such as fear of social pain (Riva, Williams, & Gallucci, 2014) and rejection sensitivity (Downey & Feldman, 1996). Researchers might also examine potential situational moderators of one's performance harming the group, such as entitativity of the group (Lickel et al., 2000), demographics of group members, or the influence of collectivistic versus individualistic cultures (Markus & Kitayama, 1991; Triandis, 1995). Further, researchers could examine other pertinent outcomes for the poor-performer (e.g., behavioral responses, cognition, inner-group dynamics). For instance, researchers could investigate how poor group performance impacts group identification and whether self-compassion's common humanity component influences this relationship. (e.g., Aron, Aron, Tudor, & Nelson, 1991). Additionally, researchers could examine how taking the perspective of the group might influence a poor-performer's response.

Conclusion

We found a poor performance that harms a group, versus being an equal contributor to the group, leads to greater perceptions of burdensomeness, less self-esteem, more negative affect, greater feelings of ostracism, and greater anticipation of exclusion. We also found harming a group with one's poor performance resulted in unique negative social outcomes (i.e., perceiving oneself as burdensome, greater anticipation of exclusion) compared to when one's poor performance does not harm the group. Yet, being self-compassionate reduces the impact of these deleterious outcomes of negatively impacting a group. If perceptions of burdening others become overwhelming, individuals may have a dysfunctional response (e.g., self-harm). While still being alerted to one's poor performance harming the group, self-compassionate individuals may not be as debilitated, leading to a better recovery.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at https://doi.org/10.1027/1864-9335/a000411

ESM 1. Materials include the trivia game scenarios for Study 1, the Remote Associates Test (RAT) instructions and performance manipulation for Study 2, recalling scenarios instructions for Study 3, and the RAT instructions and performance manipulations for Study 4

ESM 2. Materials include a supplemental study using a different imagine scenario and the results

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