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Ostracism in Real Life: Evidence That Ostracizing Others Has Costs, Even When It Feels Justified

Nicole Legate[a], Netta Weinstein[b], and Richard M. Ryan[c,d]

[a]Illinois Institute of Technology; [b]University of Reading; [c]Australian Catholic University; [d]University of Rochester

ABSTRACT

An extensive literature on ostracism shows clear costs for targets; less clear is whether sources of ostracism also face costs. Further, most ostracism experiments fail to speak to ostracism in "real life." Two studies informed by self-determination theory (SDT) tested whether ostracizers suffer in comparable ways to targets of ostracism in real-life experiences. Results of a diary study found both ostracizing and being ostracized related to worse psychological health because of thwarted psychological needs for autonomy and relatedness. A follow-up experiment found that ostracizing, even when it felt justified, yielded psychological costs, and all groups involved in ostracism suffered because of thwarted autonomy and relatedness. Findings provide evidence for SDT hypotheses concerning inherent costs of harming others.

Ostracism hurts. Anecdotal evidence and decades of experimental work show that being ostracized, defined as being ignored or excluded by others (Williams, 2007), is unequivocally and universally painful (Hartgerink et al., 2015). But the picture is unclear concerning sources of ostracism. Only a handful of studies have tested whether ostracizers suffer too, and these studies have yielded contradictory results. Further limiting conclusions, many of these studies examined ostracizer effects in cases of complying with an experimental directive to ostracize. These methods find negative effects for ostracizers but confound the act of ostracizing with the experience of being required to comply, which can have negative effects in its own right. Thus although such "compliant ostracism" is in itself interesting, these findings may not generalize to more naturally occurring cases of ostracizing in which a person may actively decide to ostracize another. As a result of these issues, we do not know whether ostracizing others has costs for the well-being of the ostracizer. In this research we sought to fill this gap in understanding by directly comparing experiences of being ostracized with experiences of ostracizing others for different motivations. We argue that there will be psychological costs across ostracism conditions, and that these costs should stem from a shared mechanism of thwarted psychological needs for autonomy and relatedness. By testing this, we clarify the potential costs, and why those costs might occur for different naturally occurring experiences of ostracism—namely, ostracizing with direct pressure, ostracizing without direct pressure, and being the target of ostracism.

Being ostracized hurts, but does ostracizing hurt too?

A recent meta-analysis of experiments manipulating ostracism (Hartgerink et al., 2015) found that being a target has robust negative effects across a range of psychological and relational outcomes. Negative effects occur even when the ostracism experience is minimal (Wesselmann et al., 2012). Such psychological costs have been shown in experiments as well as in naturalistic settings (Nezlek et al., 2012; Ryan & Ryan, 2019).

Fewer studies have explored the question of whether ostracizers face psychological costs for their actions. Experimental studies inducing people to ostracize have revealed negative outcomes including ego depletion (Ciarocco et al., 2001), feeling disconnected from others (Zhou et al., 2009) and worse mood (Legate et al., 2015), when compared to participants in a neutral group. Results are less clear when directly comparing targets and sources, with findings showing (a) targets faring worse, (b) ostracizers faring worse, and (c) no difference (i.e., both feeling worse) (Daniels, 2011; Legate et al., 2013; Poulsen & Kashy, 2012).

CONTACT Nicole Legate nlegate@iit.edu Department of Psychology, Illinois Institute of Technology, Chicago, IL, USA.

A limitation of these experiments is that they manipulate ostracism by instructing people to ostracize, failing to address cases in which people ostracize in the absence of directives. To address this issue, a handful of studies have examined willing or self-initiated instances of ostracism. For example, Bastian et al. (2013) asked participants to recall an experience in which they ostracized others, and found worse outcomes including lower mood and feelings of disconnection compared to those recalling a neutral interaction. Similarly, Chen et al. (2014) showed that recalling an experience of rejecting someone was perceived to be painful compared to a neutral condition. While both studies found that these cases of ostracism showed costs, they did not directly compare these different types of ostracism with the more frequently documented effects of being ostracized or of induced ostracism. One exception is Gooley et al. (2015), who compared costs of "motivated ostracism" (ostracizing for a good reason) with induced ostracism and being a target of ostracism. Interestingly, their results ran counter to Chen et al. (2014) and Bastian et al. (2013), finding more positive outcomes when people ostracized for a good reason compared to the other ostracism groups, and no differences compared to a neutral condition. The mixed findings across these few studies leave room for further investigation on the issue of whether ostracizing in the absence of direct pressure is psychologically costly to people. Taking this small literature in sum, to date we cannot make any conclusions about the well-being impacts of ostracizing.

Ostracism hurts because it undermines psychological needs

To build a richer understanding of how ostracizing affects well-being, we must further examine *why* different experiences of ostracism, including those where people are willingly ostracizing someone else, might be harmful. A likely candidate to explain the costs of both ostracizing and being ostracized is the capacity of both these experiences to undermine psychological needs, a view consistent with the need-threat model of ostracism (Williams, 2009; Zhou et al., 2009), and psychological needs as conceptualized within self-determination theory (SDT; Ryan & Deci, 2017). Indeed, there is substantial overlap across both need traditions (Gerber et al., 2017). The SDT framework guided previous research finding that sources and targets of ostracism both suffer for the same reason–their needs for autonomy and relatedness are undermined (Legate et al., 2013). *Autonomy* is the need to experience one's own behavior as volitional, authentic, and self-endorsed at the highest level of reflection. Complying with ostracism resulted in the highest cost to autonomy as compared to complying with a directive to include another person, being a target of ostracism, and a neutral condition. Further, *relatedness* is the need to experience close and caring connections with others, and it is no surprise that ostracism also thwarted this for sources and targets alike as it, by definition, severs connections with others.

This earlier research, in which people followed directives to ostracize, guided our thinking around the costs of naturally occurring cases of ostracism. In real-life experiences of ostracism, we suspected that ostracizing others would undermine relatedness, as people experience fewer connections with others after ostracism, an experience likely more salient than any social gains occurring from excluding others. Indeed, in the only prior diary study examining ostracizers, Nezlek et al. (2015) found lower feelings of belonging after ostracizing versus before ostracizing. We expected autonomy to be undermined as well, as ostracizing is a type of hurtful behavior that goes against most people's deeply-held values to be prosocial and inclusive (Amiot et al., 2012; Ryan & Deci, 2017). Indeed, work in SDT shows that helping others satisfies the need for autonomy, as this is a behavior most people value (e.g., Martela & Ryan, 2016; Weinstein & Ryan, 2010), while hurting others thwarts needs since most people cannot do this for autonomous reasons, which involve reflective endorsement of one's actions (Amiot et al., 2012). It is perhaps for this reason that people see themselves as less human after ostracizing others (Bastian et al., 2013).

Importantly, the current research tests recent formulations within SDT concerning how benevolence and prosocial behavior supports basic needs, enhancing subjective well-being, whereas harmful or antisocial behaviors are attended by need frustration, and lower subjective well-being. That is, SDT proposes a "dual process" model, arguing that when people intentionally help (or harm) others, their own needs can be satisfied (or frustrated) as a result of those same actions, leading to enhanced (or diminished) well-being (Vansteenkiste et al., 2020). Whereas this mediation model has been well-tested in experiments and field studies on the prosocial side of the ledger (e.g., Martela & Ryan, 2016; Weinstein & Ryan 2010), the impact of harm doing has been harder to study. These studies thus advance inquiry into these potential costs of actively harming others especially because we

anticipated this inadvertent self-undermining effect would be in evidence even when one can justify the hurting, or engages in ostracism without being directed or compelled. Indeed, examining "justified" ostracism more strongly tests the theory than prior work that examined complying with external directives to ostracize (e.g., Legate et al., 2013) as the act of compliance, especially with an unfair order, can have its own need thwarting effects. Thus, the present studies represent a more stringent test of whether the act of harming others is need thwarting in *itself*.

If, in fact, even self-justified harming of others thwarts the actors' needs this would have implications not only for SDT's theory development, but also for debates about human nature more broadly (Ryan & Deci, 2017). Specifically, such research helps us refine our understanding of how the pervasive prosociality of humans is maintained, not only through positive psychological need satisfactions, but also through the basic psychological need frustrations accompanying behaviors running contrary to these prosocial propensities. SDT, that is, assumes that humans have need-based mechanisms through which they are "naturally" prone to be good, and averse to harm doing (Ryan & Hawley, 2016). Although work in SDT has found support for basic need satisfactions in helping others, finding that people suffer need frustrations even when willingly harming others would be the most direct evidence to date for this dual process model.

The current research

In this work we used ecologically valid approaches to understand whether people suffer when they ostracize others, comparing experiences of ostracizers with those who have been ostracized. To capture real-life experiences of ostracizing and being ostracized, in a first study we used a daily-diary approach. The second study was an experiment comparing recalled experiences of being ostracized with recalled experiences of ostracizing others for different motives–either a time when one felt justified in ostracizing someone or a time when one felt pressured by someone else to ostracize. Guided by SDT, we expected real-life experiences of ostracizing others–with or without pressure to do so–would cause people to suffer because it would thwart psychological needs for autonomy and relatedness. We further expected that psychological costs would be comparably high for both experiences of being ostracized and ostracizing others.

Study 1

Daily-diary data were collected in fraternities and sororities, a rich context for studying ostracism since members of a chapter spend significant time together, often live in the same house, and are thought to engage in relationally and physically aggressive behaviors (Goldman & Hogg, 2016; Perkins et al., 2011). Two prior studies employed experience-sampling methodology to study ostracism (Nezlek et al., 2012, 2015), but neither compared experiences of being ostracized and ostracizing others side-by-side. We hypothesized that daily experiences of ostracizing others and being ostracized would both relate to lower daily need satisfaction, which in turn would predict lower daily psychological health. The study was approved by a University Review Board (#IRB2017-002).

Methods

Participants and procedure

To take part, individuals were required to be age 18 years or above, a member of a fraternity or sorority, and have access to a laptop, iPad, or smartphone in order to access surveys over the diary period. Participants were recruited for the "*everyday ups and downs in Greek life*"[1] study at fraternity and sorority chapter meetings at a Midwestern university in the US. Initial sessions were conducted in groups at the fraternity and sorority chapter meeting, and during this time we obtained informed consent, instructed participants on study procedures, but not study content. Participants were instructed that emails would be sent each evening of the study with a short survey taking approximately 3–5 min, as well as a reminder later that night if they had not yet completed the survey. During this initial session participants also completed a baseline survey assessing demographics and psychological health, and other measures not used in our analyses. Researchers set up a unique survey link for each participant to track responses across the 5-day period. A total of six chapters participated, which ranged widely in the number of members participating (range: 7–38 students per chapter; $M = 9.7$; $SD = 12.2$).

This yielded 132 participants who completed the baseline survey (72 women, 57 men, one transgender man, and two individuals not reporting gender). Ages ranged from 18 to 26 years ($M = 20$ years, $SD = 1.52$). Over half (56.8%) of the sample was White, 15.2% were Hispanic, 10.6% Asian/Pacific Islander, 6.1% Black/African-American and 9.8% other/multi-racial.

Table 1. Study 1 means, standard deviations, and correlations of variables (at baseline and averaged across the diary).

	M	*SD*	1	2	3	4	5	6
1. M_{diary} ostracizer	1.10	0.18	–					
2. M_{diary} ostracized	1.25	0.30	.41	–				
3. M_{diary} need satisfaction	3.52	0.40	−.33	−.63	–			
4. M_{diary} psychological health	3.32	0.56	−.21	−.35	.39	–		
5. BL psychological health	3.84	0.73	−.13	−.29	.36	.36	–	
6. Total diaries completed	3.47	1.85	−.17	−.08	.10	.10	−.05	–
7. Gender	1.44	0.50	−.16	−.17	.20	.19	.25	−.05

Note. Correlations based on $N = 114$; *M* and *SD* are used to represent mean and standard deviation, respectively. M_{diary} refers to person-level mean aggregated values across the diary period; BL refers to the variable assessed at baseline. Gender is coded 1 for women and 2 for men.

Most (60%) were currently living in their sorority/fraternity house. We offered an incentive of a $250 gift card to the chapter with the highest percentage of participation, as well as extra credit for any individual enrolled in a psychology class.

Due to a malfunction in the tracking procedure, eight participants (6%) never received diary surveys. Those remaining ($n = 124$) completed a total of 437 surveys, averaging 3.7 surveys over the diary period ($SD = 1.65$). Ten participants (8%) did not complete any, and were not included in analyses, whereas 92.1% completed at least two and 75.4% completed four or more. The number of total diaries completed was unrelated to study variables, suggesting this variable was not missing systematically (see Table 1). For more information on study methods and all measures including those outside the scope of the current study: https://osf.io/fjq7h/.

Baseline measures

Psychological health. Psychological health scores were derived using items from four well-validated instruments. Symptoms of depression were assessed with three items from the Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977): *sad, depressed, lonely*. Self-esteem was measured with three items from the Rosenberg Self-Esteem Scale (Rosenberg, 1965): *satisfied with myself, feel useless*, and *have a positive attitude toward myself*. Three items assessing anger were adapted from the State-Trait Anger Scale (Spielberger et al., 1983): *mad or irritated, angry, hostile*. Lastly, three anxiety items from the *General Health Questionnaire* (Goldberg & Hillier, 1979) were used: *scared or panicky*, *edgy or anxious*, *nervous and uptight*. The approach of using these brief versions of validated scales as an assessment of well-being has been used in previous research and shown comparable effects to the full measures (e.g., Weinstein et al., 2017). Participants were asked to rate their feelings over the last month on a 5-point scale from *not at all true* to *very true*. Negatively worded items were reverse-coded, and all items were aggregated into one composite, with higher scores reflecting better psychological health ($\alpha = .89$).

Diary measures

Ostracism. Daily experiences of ostracism in the chapter were assessed with items from the *Ostracism Experiences Scale-Adolescents* (Gilman et al., 2013). Six items were adapted to assess experiences of being ostracized that day (e.g., "Today, people in my chapter treated me as if I was invisible"). Items were paired with a scale ranging from 1 (*completely disagree*) to 4 (*completely agree*). Those same six items were adapted to assess experiences of ostracizing others that day (e.g., "Today I treated someone in my chapter as if he/she was invisible"), paired with the same 4-point scale. Both ostracism assessments were randomly presented across persons and days. Multilevel reliability estimates for the two scales were calculated at within- and between-person levels (Geldhof et al., 2014). For ostracizing others, reliability was acceptable at the within-person level ($\alpha = .68$) and good at the between-person level ($\alpha = .93$). For being ostracized, reliability was low within-person ($\alpha = .49$) but acceptable between-person ($\alpha = .78$). Though lower reliability at the within-person level is common when the number of repeated measures is small, we decided to remove two items about being "invited to hang out" and "go out to eat" that loaded onto a different factor in our dataset and in that of Gilman et al.'s (2013). This improved reliability (within-person: $\alpha = .66$; between-person: $\alpha = .88$) and thus we used these four items for the being ostracized composite.

Need satisfaction and thwarting. Daily need satisfaction experienced within the chapter was assessed with items modified from the *Basic Need Satisfaction in Relationships Scale* (La Guardia et al., 2000) and the *Psychological Need Thwarting Scale* (Bartholomew et al., 2011). One item measured autonomy satisfaction ("Today I was able to be myself with people in my chapter") and another autonomy thwarting ("Today I felt pushed to behave in certain ways in my chapter"). Similarly, one item measured relatedness satisfaction ("Today I felt connected to people in my chapter") and one relatedness thwarting ("Today I felt rejected in my chapter"). Items were rated on a 1 (*strongly disagree*) to 4 (*strongly agree*) scale. These four items were chosen because they showed good reliability and validity in prior diary research (Legate et al., 2017). Need thwarting items were reverse-coded and

combined with need satisfaction items into a composite that showed acceptable within-person ($\alpha = .68$) and between-person ($\alpha = .96$) reliability.

Psychological health. The same items assessed at baseline were used to measure daily psychological health "right now." Participants responded on a scale ranging from 1 (*not at all true*) to 4 (*very true*). All four constructs were combined into one aggregate psychological health variable that showed good reliability: α within = .79, α between = .93.

Results

Descriptive statistics and zero-order correlations for study variables–which were averaged and aggregated across the diary period–are presented in Table 1. Mplus software (version 7.4; Muthén & Muthén, 1998–2014) was used to test the hypothesized meditational path model (Figure 1). Following recommendations for multilevel mediation (Preacher et al., 2010), we built a model testing effects at the daily level (Level-1) and aggregated across the diary period (Level-2). Although we were most interested in relations at the daily level (Level-1), it is important to partition variance into both levels, especially when testing mediation (see Preacher et al., 2010). Multilevel models not only accommodate the nested structure of the data, they are better suited than ordinary-least squares regression to handle missing data (Bolger & Shrout, 2007; Little & Rubin, 1987). Expectably, a source of missing data was the number of diary surveys provided, but these did not relate to study variables (Table 1). We examined intraclass correlation coefficients (ICCs) to determine the variance explained at the between-person level (ICCs of need satisfaction = .43 and psychological health = .69), indicating sufficient variance was present for outcomes at both between and within-person levels.

Engaging in ostracizing others and being ostracized were entered as simultaneous predictors of need satisfaction, and in turn, need satisfaction predicted psychological health. The predictors and mediator were left uncentered as they were modeled at both Levels-1 and 2. Additionally, controls were added at Level-2. Baseline psychological health (grand-mean centered) predicted average psychological health across the diary period. As the number of diaries completed varied widely across participants, we also included it (grand-mean centered) as a Level-2 predictor of psychological health. Finally, as gender correlated with many variables in the model, a dichotomous gender variable at Level-2 (women coded 1 and men coded 2) predicted

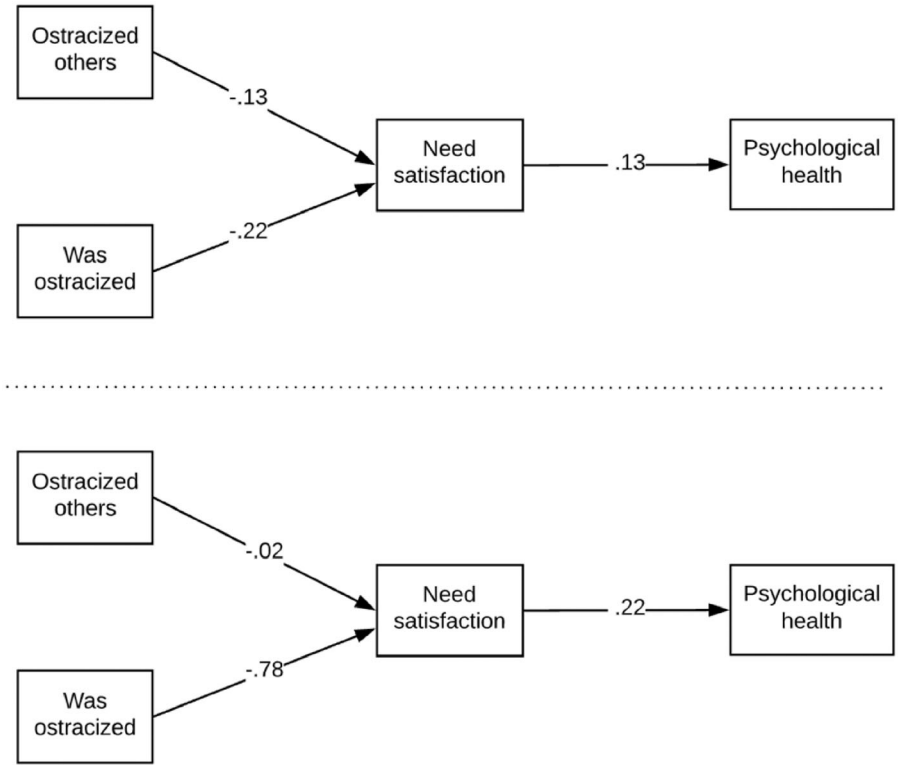

Figure 1. Multilevel structural equation (SEM) path model of ostracism experiences predicting psychological health through need satisfaction tested at both within-person (above dotted line) and between-person (below dotted line) levels, Study 1. *Note.* $N = 113$; Values are standardized regression coefficients.

psychological health. We present unstandardized coefficients and their standard errors along with standardized coefficients to indicate the magnitude of effects (Lorah, 2018).

To evaluate model fit, we followed recommendations by Kline (2005) and Marsh et al. (2004) to seek benchmarks of a comparative fit index (CFI) above .95, and the root mean square error of approximation (RMSEA) and standardized root mean square residuals (SRMR) below 0.08. Using these benchmarks, our model showed good fit, $\chi^2(7, N = 113) = 8.65$, CFI = .99, RMSEA= .02, $SRMR_{within} = .04$, $SRMR_{between} = .03$. Further, we considered a model adding direct paths from being ostracized and ostracizing others to well-being, but we retained the less complex model, as adding these direct paths worsened model fit (the BIC increased from 1350 to 1367; Raftery, 1995).[2]

Examining the first set of predictive paths, both being ostracized and ostracizing others predicted lower need satisfaction at Level-1 (within-person; see Figure 1). Specifically, lower need satisfaction at the daily level was predicted by both daily experiences of being ostracized ($B = -.29$, $SE = .08$, $\beta = -.22$), and ostracizing ($B = -.29$, $SE = .12$, $\beta = -.13$). Thus, on days in which individuals were either ostracized or ostracized others, they experienced less need satisfaction. Yet, when examining need satisfaction averaged across the diary period (to examine individual differences in constructs at Level-2), only experiences of being ostracized related negatively ($B = -1.04$, $SE = .23$, $\beta = -.78$), whereas average levels of ostracizing others were unrelated to need satisfaction ($B = -.04$, $SE = .32$, $\beta = -.02$).

In turn, daily need satisfaction predicted better daily psychological health at Level-1 ($B = .18$, $SE = .06$, $\beta = .13$) and at Level-2 ($B = .31$, $SE = .17$, $\beta = .22$). Covariates at Level-2 showed a link between psychological health at baseline and across the diary ($B = .48$, $SE = .06$, $\beta = .63$), but no relations were observed with gender or the number of diaries completed on psychological health (gender: $B = -.03$, $SE = .06$; number of diaries: $B = .001$, $SE = .03$). The same pattern of results emerged in a model that did not include these covariates.

Indirect effects

In this same model, we tested the hypothesized indirect effects of both being ostracized and ostracizing others on lower psychological health through lower need satisfaction. These were estimated at the within-person (i.e., at the daily level) and between-person (i.e., at the level of averages across the five days) levels, in order to reduce Type-1 error and a potential confounding of the mediation effect (Preacher et al., 2010).

At the daily level, we observed an indirect effect relating being ostracized to lower psychological health through need satisfaction ($B = -.05$, $SE = .02$). Similarly, we observed an indirect effect for ostracizing others: $B = -.05$, $SE = .03$. However, we did not see evidence of indirect effects at Level-2. In sum, the reason that everyday experiences of ostracism predicted lower psychological health on an everyday basis was because it corresponded to lower psychological needs for autonomy and relatedness on that day.

Study 2

Study 1 offered preliminary support for our hypotheses that daily experiences of ostracizing others and being ostracized would both relate to lower daily psychological health through lower need satisfaction. However, this study cannot speak to causality. Thus, in Study 2, we conducted an experimental design, again comparing costs of ostracizing with those of being a target. Further, we were interested in teasing apart different reasons people ostracize, as prior experiments of ostracism typically instruct participants to ostracize, which may be qualitatively different than decisions one intentionally and independently makes to ostracize. To this end, we compared the costs of these different types of ostracism–with and without feeling direct pressure to ostracize–with the well-known costs of being ostracized. We hypothesized that needs in all three ostracism groups would be thwarted relative to a neutral condition. Further, we expected that autonomy would be particularly thwarted in the pressured ostracism group, mimicking results in compliant ostracism studies (Daniels, 2011; Legate et al., 2013; Poulsen & Kashy, 2012), and that relatedness would be particularly thwarted in the target group. Likewise, we expected that all three ostracism groups would show worse mood and less enjoyment when compared to a neutral condition. Finally, we expected that the reason why ostracism, either as target or source, lowers mood and enjoyment would be due to thwarted needs for autonomy and relatedness. Although we had no a priori expectations about SDT's third basic psychological need, competence, we decided to assess it given that, in naturalistic contexts, both ostracism and ostracizing may also thwart one's sense of social competence and personal effectiveness. This study was approved by a University Review Board (#IRB2017-081).

Method

Participants

Participants were 400 adults (181 women, 214 men, 5 preferred not to report their gender) recruited from the online crowdsourcing platform Prolific Academic, a platform that produces higher quality data relative to other crowdsourcing sites (Peer et al., 2017). Participants were 18 or older ($M = 32$ years, $SD = 11.3$) and resided in the United States; 72% were White, 10% Asian, 9% Black, 6% Hispanic/Latino, and 2% other. Using the a priori procedure (Trafimow, 2019), we estimated how closely condition means observed in Study 2 would resemble population means. Selecting our smallest group, the justified ostracizer group ($n = 87$), and the standard 95% confidence, our sample size allows us to be within 0.21 standard deviations of the population mean.

Procedure

Participants were randomly assigned to one of four writing tasks, each timed for 3 min. In the justified ostracism condition, they were asked to "think back to a time WHEN YOU EXCLUDED SOMEONE–for example, by leaving them out of a group activity or by purposefully ignoring them in a conversation–FOR A GOOD REASON." In the pressured ostracism condition, participants received the same instructions except the ostracism happened "BECAUSE SOMEONE TOLD YOU OR PRESSURED YOU TO EXCLUDE." In the ostracized condition, participants were asked to write about a time "WHEN YOU WERE EXCLUDED." Finally, in the neutral condition people wrote about a time "WHEN YOU HAD A MEANINGFUL–significant or impactful–INTERACTION with someone." After reading responses, twenty-three participants (5.7%) were excluded for one of two reasons: if they said that they were unable to think of such a time, or in the case of the justified ostracism condition, if they described excluding someone in order to benefit or protect that person (e.g., excluding someone while planning his/her surprise party; excluding a child from an unsafe situation). The final sample was thus $n = 377$.

Following this, participants completed post-task measures about the experience they wrote about. First, we assessed different circumstances surrounding the experience (time since event, who was involved, closeness to person(s) involved), and two manipulation check items ("I excluded someone" and "I felt excluded").

Next, we used the 12-item Need Thwarting scale (Chen et al. 2015) to assess thwarted autonomy (sample item: "I felt pushed to behave in certain ways"; $\alpha = .85$), competence (sample item: "I felt incompetent"; $\alpha = .87$), and relatedness (sample item: "I felt the person(s) involved disliked me"; $\alpha = .85$) "during that experience" participants wrote about, on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Next, the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) assessed mood "during that experience." The 20 items (e.g., "upset," "proud") were rated on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*). Positive affect and negative affect items were combined into two separate scales (positive affect $\alpha = .92$; negative affect $\alpha = .89$). Finally, two items assessed enjoyment of the event ("I enjoyed it" and "it was a bad experience," reverse-coded) ($\alpha = .88$). We report all manipulations and exclusions here, and for data and measures, including those outside of the scope of the current study, see https://osf.io/fjq7h/.

Results

Analytic strategy

Correlations among dependent variables are presented in Table 2.

We compared conditions on dependent variables using two approaches. The first assumes that data in each condition for each dependent variable are normally distributed and uses means and standard deviations. The second approach accounts for possible skew in each condition's distribution for each dependent variable. Using means, standard deviations and skew estimates, we calculated locations and scales for each condition on each dependent variable following recommendations from Trafimow et al. (2019). Both normal and skew normal statistics for conditions across dependent variables are presented in Table 3. We used a minimum effect size of interest of Cohen's $d = .20$ for comparing conditions using both normal and skew normal statistics.

Manipulation checks

There was a large mean difference across conditions in reported excluding, with justified ostracizers

Table 2. Means, standard deviations, and correlations for outcome variables, Study 2.

	M	*SD*	1	2	3	4	5
1. Thwarted autonomy	2.83	1.18					
2. Thwarted competence	2.44	1.17	.64				
3. Thwarted relatedness	2.54	1.23	.53	.72			
4. Positive affect	2.29	0.98	−.34	−.40	−.38		
5. Negative affect	2.23	0.89	.48	.57	.37	−.18	
6. Enjoyed experience	2.47	1.30	−.55	−.52	−.51	.52	−.43

Note. Correlations based on $N = 377$; *M* and *SD* are used to represent mean and standard deviation, respectively.

($M = 4.52$, $SD = .76$) and pressured ostracizers ($M = 4.49$, $SD = .81$) reported excluding at similarly high rates ($d = .04$) as compared to those who were ostracized ($M = 1.42$, $SD = 1.01$) and in the neutral group ($M = 1.44$, $SD = .89$), who did not differ from each other ($d = .02$). Similarly, there were large mean differences across groups for feeling excluded, with the ostracized group reported the highest feelings of exclusion ($M = 4.59$, $SD = .94$). Interestingly, the pressured ostracizer group ($M = 1.99$, $SD = 1.06$) felt more excluded than the neutral group ($M = 1.56$, $SD = 1.10$), and the justified exclusion group fell in-between ($M = 1.74$, $SD = 1.07$), ds $> .20$. Skew normal statistics showed a similar pattern of results.

Hypothesis tests predicting outcomes

As shown in Table 3, pressured ostracizers reported the highest levels of thwarted autonomy (ds $> .45$) using both normal and skew normal statistics. Interestingly, when using normal statistics, those who were ostracized showed the next highest thwarted autonomy, but when accounting for skew in distributions, justified ostracizers showed the next highest thwarted autonomy. Irrespective of approach, those in the neutral condition had the lowest levels of thwarted autonomy (ds > 1.00), indicating that all forms of ostracism undermined the psychological need for autonomy.

Not surprisingly, those who were ostracized felt the most relatedness thwarting (ds > 1.20), followed by both ostracizer groups. Notably, the two ostracizer groups did not differ meaningfully from one another in this respect ($d_{normal} = .13$ or $d_{skew} = -.10$), but both reported more thwarted relatedness than the neutral group (ds > 1.00). Again, both approaches showed that all forms of ostracism undermined the psychological need for relatedness as compared to the neutral condition.

Though we did not have a priori expectations about competence, it showed a similar pattern regardless of approach. Those who were ostracized reported the highest thwarted competence (ds $> .90$). Pressured ostracizers showed the next highest thwarted competence, followed by justified ostracizers. Importantly, those in the neutral condition reported the lowest thwarted competence as compared to the three ostracism groups (ds $> .35$).

In terms of enjoying the experience participants wrote about, those who were ostracized felt the lowest levels of enjoyment, followed by those who were pressured to ostracize (though using skew normal statistics, these two groups did not meaningfully differ, d

Table 3. Means, standard deviations, locations, and scales of distributions for each ostracism condition on needs and affect, Study 2.

	Justified ostracizer ($n = 87$)					Pressured ostracizer ($n = 95$)					Ostracized ($n = 106$)					Neutral ($n = 89$)				
	M	*SD*	*Loc*	Scale	Shape	*M*	*SD*	*Loc*	Scale	Shape	*M*	*SD*	*Loc*	Scale	Shape	*M*	*SD*	*Loc*	Scale	Shape
Thwarted autonomy	2.78_c	0.94	3.10_b	0.99	−0.43	**3.61_a**	1.03	**4.96_a**	1.70	−13.77	3.17_b	0.94	2.53_c	1.13	0.98	1.78_d	0.99	0.28_d	1.80	27.85
Thwarted relatedness	2.51_b	1.10	1.60_b	1.43	1.33	2.39_b	0.82	1.72_b	1.06	1.30	**3.75_a**	0.86	**4.82_a**	1.38	−4.45	1.38_c	0.82	-0.08_c	1.68	27.85
Thwarted competence	2.14_c	1.03	0.87_c	1.64	4.56	2.43_b	0.97	1.72_b	1.20	1.10	**3.36_a**	1.04	**4.46_a**	1.51	−2.24	1.74_d	0.99	0.21_d	1.82	27.85
Positive affect	2.43_b	0.85	1.93_b	0.99	0.83	2.06_c	0.85	1.03_c	1.34	3.67	1.77_d	0.71	0.79_d	1.21	27.85	**3.03_a**	1.06	**3.79_a**	1.30	−1.07
Negative affect	2.17_b	0.84	1.14_b	1.33	3.87	**2.37_a**	0.85	**1.61_a**	1.14	1.52	**2.43_a**	0.89	1.45_b	1.33	2.47	1.96_c	0.90	0.83_c	1.44	4.93
Enjoyment	2.61_b	1.09	1.71_b	1.42	1.33	2.09_c	1.06	0.71_c	1.75	9.20	1.60_d	0.70	0.60_c	1.22	27.85	**3.70_a**	1.33	**5.32_a**	2.10	−3.92

Note. *M* indicates means, *SD* indicates standard deviations, *Loc* indicates locations; Means and locations with different subscripts in a row indicate differences between conditions greater than Cohen's $d = .20$. The highest values among the four conditions have been bolded to facilitate interpretation. To calculate shapes, skewness values greater than 1 were truncated to 0.99.

= .07). The justified ostracizer group reported greater enjoyment than the other two ostracism groups (*d*s > .45) but importantly, less enjoyment than those in the neutral group, $d_{normal} = -.89$, $d_{skew} = -2.10$). Positive affect showed the same pattern as enjoyment across conditions, with those who were ostracized reporting the lowest levels of positive affect (*d*s ranging from −2.08 to −.19), those in the neutral condition reporting the highest levels (*d*s > .60), and the two ostracizer groups in between (with pressured ostracizers having less positive affect than justified ostracizers, $d_{normal} = -.43$, $d_{skew} = -.76$). Expectably, negative affect showed a similar reverse pattern to positive affect. Those who were ostracized and pressured to ostracize showed the highest negative affect (and did not meaningfully differ from each other, $d_{normal} = -.07$, $d_{skew} = .13$), followed by justified ostracizers, and the neutral condition having the lowest negative affect (*d*s > .20).

In sum, across the three needs, results show a clear pattern whereby targets of ostracism and those pressured to ostracize are the most psychologically need thwarted, but notably, those who feel justified in ostracizing others are still experiencing need thwarting relative to those in the neutral condition. With enjoyment and affect, results showed a similar pattern whereby those who were ostracized and those pressured to ostracize tended to show the worst outcomes, but people also suffered even when they felt justified in their ostracism (as compared to the neutral condition). The effect sizes of differences between conditions were generally medium to large according to commonly used benchmarks (Cohen, 1988; Funder & Ozer, 2019), including differences between the justified ostracizer and neutral conditions.

Mediational analyses

Finally, we examined whether need thwarting indirectly explained the effects of ostracizing and being ostracized on outcomes. Because of the high correlations observed across needs (*r*s from .53–.72), and all items loading .57–.83 on the same factor in a factor analysis, we aggregated the three needs in line with prior work (Legate et al., 2013). We used the Hayes (2013) PROCESS macro for multicategorical predictors, whereby the neutral condition was the reference group, and three dummy variables represented the three different ostracism conditions. For each outcome, three models were run specifying one dummy variable (i.e., one condition) as the predictor, with the two other dummy variables (e.g., the other ostracism conditions) as controls. Results (Table 4) suggested that need thwarting explained why all three ostracism experiences related to worse outcomes.

Table 4. Indirect effects of ostracism condition on affect through basic psychological needs, Study 2.

	Justified ostracizer *B (SE)*	Pressured ostracizer *B (SE)*	Ostracized *B (SE)*
Positive affect			
Basic needs	−.18 (.05)	−.25 (.07)	−.37 (.10)
Negative affect			
Basic needs	.49 (.10)	.68 (.10)	1.04 (.12)
Enjoy experience			
Basic needs	−.41 (.09)	−.57 (.10)	−.86 (.15)

Note. *B*s represent the unstandardized regression coefficients of the indirect effects, *SE*s are their standard errors. The three ostracism groups were dummy coded (coded 1) compared to a neutral condition (coded 0), and simultaneously entered into the indirect effects analyses.

Discussion

This work builds on a still nascent and contradictory literature about the impacts of naturally occurring instances of ostracizing, particularly in comparison to the well-documented harmful effects of being ostracized. Results of our studies demonstrated that engagement in any form of ostracism (including ostracizing others even in cases where it feels justified) is related to worse psychological outcomes because of lower psychological need satisfaction. These findings support previous research showing that both ostracizers and targets of ostracism experience costs.

These findings also provide important empirical support for recent but only partially tested assumptions within SDT. Specifically, SDT proposes a dual process model (Vansteenkiste et al., 2020) in which basic needs for autonomy, competence and relatedness are satisfied by volitionally engaging in helpful actions, and frustrated by engaging in harmful behaviors. The dual process model is intended to help explain why humans' generally prosocial propensities are so prevalent and how they are maintained (Ryan & Deci, 2017). Whereas previous findings on the need satisfactions following prosocial actions have been clear, findings on the antisocial side have been, at best, indirect. Examining whether people suffer when they opt to ostracize others, even when feeling it is justified, supplies a purer test of this notion of inherent need frustrations than does prior work in which ostracism has been directed, and therefore confounded with compliance (e.g., Legate et al, 2015). Results from the current research thus support these SDT assumptions of harm-doing, especially for autonomy and relatedness frustrations, suggesting that hurting others is difficult to "own" or feel autonomy with respect to, and also divides a person from others. That is, these data support the view that even when

willingly engaging in harm-doing behaviors, people incur costs to needs and to well-being.

Both studies suggested that the negative effects of ostracizing others generalize to everyday, real-world ostracizing behaviors. Study 1 showed that even small daily acts of ostracizing and being ostracized related to less daily need satisfaction and wellness. Study 2 showed that those pressured to ostracize evidenced comparable costs to those who were ostracized. Those who ostracized "for a good reason" showed lower psychological costs in comparison, but they nonetheless experienced worse outcomes than those in a neutral condition. This is noteworthy and suggests that even when one feels justified to do so, it is harmful to an individual to hurt another, and conversely, that feeling justification ameliorates some (but not all) of the negative effects of hurting others. Indeed, this is in line with, and may help inform, work on more extreme forms of hurting others "for a good reason," such as police officers and combat veterans who develop PTSD from injuring or killing others in the line of duty (Komarovskaya et al., 2011; Maguen et al., 2009). Future work should examine more extreme cases of hurting others, with both strong and weak justifications, to better understand both these main effects and moderating influences.

This work has notable limitations. Most importantly, diary data from Study 1 are correlational and cannot speak to causality, and we could not conduct lagged analyses due to the reduction in statistical power this analysis caused. These shortcomings particularly limit the conclusions that can be drawn from the mediation analyses (see Kline, 2015 for a review). It is plausible that low need satisfaction or poor psychological health drives people to engage in ostracism since we have seen in previous work that being controlled can foster antisocial behaviors (Moller & Deci, 2010). On the other hand, longitudinal work shows that relational aggressors and bullies experience increases in psychological problems over time (Crick et al., 2006; Matthews et al., 2017).

Although the experimental work presented in Study 2 supports our causal model, the alternative causal explanation was not tested– namely, manipulating need satisfaction, and subsequently giving people an opportunity to ostracize. It seems plausible that this may produce reciprocal effects, as experimental work demonstrated that being rejected (in other words, having relatedness needs thwarted) causes future aggression (Wesselmann et al., 2010). Similarly, controlling teacher (e.g., Hein et al., 2015) and parenting styles that thwart autonomy have been associated with increased bullying (Fousiani et al., 2016; Legate et al., 2019), whereas school interventions focused on increasing autonomy support have led to decreases in bullying (e.g., Roth et al., 2011). Multi-wave longitudinal research should examine potential bidirectional effects between ostracism and need thwarting in targets and sources.

Of further note, in Study 2 we used a recall paradigm, which may yield a different experience than a standardized ostracism experience in the laboratory (Zadro & Gonsalkorale, 2014). Although this work was concerned with understanding past real-life experiences of ostracism, future work should examine whether these findings replicate in the lab. Finally, understanding potential gains (versus only examining costs) from ostracizing would be an informative future direction of this work. In particular, measuring changes in perceived likeability or popularity outside of the ostracism experience would be an interesting direction of future research, as recent research suggests both social perils and rewards of antisocial interpersonal behaviors (Ciarrochi et al., 2019). Additionally, examining whether personality constructs such as dispositional autonomy and relatedness predict engagement in ostracism and moderate outcomes of ostracizing (potential gains vs. costs) also represent important questions for future research.

This research has potential implications for both the literatures on dehumanization and intergroup relations. Previous work in SDT has linked more controlled motives with propensities toward dehumanization (e.g., Moller & Deci, 2010) and objectification (e.g., Vansteenkiste et al., 2010). We would speculate that dehumanizing or objectifying others may allow people to more easily engage in ostracism and exclusion, but that this "defensive" work in itself betrays a lack of integration and autonomy (Ryan & Deci, 2017). Although we did not assess dehumanization, examining this and other defense mechanisms such as moral disengagement (Bandura, 2002) and compartmentalization (Ryan & Deci, 2017) in facilitating ostracism is an important agenda future work. Similarly, intergroup research should examine the effects on autonomy and wellness of discriminating against others for different motivations (e.g., Amiot et al., 2012).

The present studies contribute to the growing body of work examining the costs of ostracizing others as well as those of being a target of ostracism. We found graded costs associated with being ostracized, being pressured to ostracize, and ostracizing with a sense of justification. Whether one is a willing or pressured source, ostracism can still result in feeling less

relatedness to others, less sense of congruence and autonomy, lower competence, and worse mood and enjoyment related to the experience. Thwarted need satisfaction may help explain the higher prevalence of psychological health problems found among both sources and targets of relational aggression and bullying (e.g., Matthews et al., 2017).

Finally, this work provides further empirical support for the brighter, kinder side of humanity, revealing costs for acting against it. This fits with an emerging literature suggesting that malevolence is rarely integrated or wellness-enhancing, and often stems from contexts where people feel controlled or need thwarted (McKay, 2016; Ryan & Deci, 2017). Thus, although people can, and often do, act in ways that harm others, this may result from the social context, rather than inherent darker tendencies in human nature.

ORCID

Nicole Legate http://orcid.org/0000-0001-8086-9643
Netta Weinstein http://orcid.org/0000-0003-2200-6617
Richard M. Ryan http://orcid.org/0000-0002-2355-6154

Data availability statement

Data and materials can be accessed here: https://osf.io/fjq7h/

Notes

1. "Greek life" is a common way of referring to fraternity and sorority culture in the US.
2. Neither direct path of ostracizing others ($B = -.09$, $SE = .13$, $\beta = -.03$) or being ostracized ($B = -.13$, $SE = .07$, $\beta = -.07$) predicted psychological health when mediation paths were present.

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