The Pennsylvania State University

The Graduate School

“I’VE BEEN THERE TOO”:
ADVERSITY-BASED
IDENTITIES & PROSOCIAL
PAROCHIALISM

A Thesis in
Psychology

by

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ABSTRACT

Social psychologists and moral philosophers have shunned parochial empathy as a biased process that hurts intergroup relations. We integrate the communal coping model and the common ingroup identity model literatures to examine whether people exhibit beneficial parochial empathy for others who are considered fellow sufferers. Study 1 presented a political outgroup suffering either from a shared or non-shared adversity compared to the one that participants reflected on. Study 2 followed the same structure but removed the intergroup component to study the parochial empathy effect in isolation. Participants responded with high levels of compassion and felt similarity across the shared and non-shared adversity conditions (Study 1) and differed significantly only from the pure control condition that had no adversity content (Study 2), indicating that prosociality was felt in response to adversity more broadly, as opposed to shared adversity specifically. The reported severity of participants’ own adversity moderated the effect of condition on felt similarity with suffering target (Study 2), suggesting that adverse experiences promote commonality at higher levels of impact. Potential implications as well as future directions are discussed.
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Introduction
“The healing power of even the most microscopic exchange with someone who knows in a flash precisely what you're talking about, because she experienced that thing too, cannot be overestimated.”
— Cheryl Strayed in Tiny Beautiful Things: Advice on Love and Life from Dear Sugar (2012)

After Molly MacDonald was diagnosed with breast cancer in 2005, in addition to going through lumpectomy and radiation treatment, she went through such financial hardship due to her inability to work, that she had to stand in line at the food bank to feed her family. A year later, she created Pink Fund, an organization that provides financial support to those battling breast cancer. Deborah Hale, being laid off after getting diagnosed with two kinds of breast cancer and going through treatment, was one of many women who got her utilities and car payments paid through Pink Fund, which has helped more than 2,600 survivors across 50 states pay their bills ever since its inception (McKenzie, 2017). Molly MacDonald engaged in what psychologists have termed parochial empathy – the distribution of empathy privileging in-group members over out-group members (Bruneau, Cikara, & Saxe, 2015).

The term was born out of studying contexts with sociopolitical or other group conflict, and has been popularized by recent theorists arguing against its myopic nature – empathy is parochial when it is prone to selective experience-sharing and concern for those who are most like us, and thus create a “spotlight feature” that blinds us to the needs of the rest of the world (Bloom, 2017; Prinz, 2011a; Prinz 2011b) – examples that are often used to make this argument are value-laden – we should care about others equally, regardless of how similar they are to us. Because of the destructive processes that parochial empathy has correlated with when it comes to outgroups (reduced altruism, passive harm, outgroup derogation, see Bruneau, Cikara, & Saxe, 2017), the term “parochial empathy” has come to be associated solely with negative outcomes.
within the social psychology literature, and thus to be generally considered a one-dimensional psychological process. However, as the story of Molly MacDonald exemplifies, there are three important reasons as to why we might need to re-think the definition and conceptualization of parochial empathy.

First, the field has primarily focused on the effects of parochial empathy on intergroup, rather than *intragroup* outcomes – in other words, it is possible that we have been studying how parochial empathy can hurt the outgroup disproportionally more compared to how it can *benefit the ingroup* (Brewer, 1999). Only few recent attempts have focused on studying ingroup favoritism as a separate process (Everett, Faber, & Crockett, 2015), and even less empirical work emphasized the prosocial nature of such ingroup favoritism, although some examples do exist. For example, Simpson (2006) finds that ingroup favoritism in the context of social dilemmas stems from genuine valuation of ingroup members’ welfare, as opposed to expectations for reciprocal action from ingroup members, and other work replicates this finding (De Dreu, Shalvi, Greer, Van Kleef, & Handgraaf, 2012).

Second, research on parochial empathy has primarily been conducted in – and thus intimately tied to – contexts with violent conflict or intergroup mistrust (Cikara, Bruneau, & Saxe, 2011; Bruneau, Cikara, & Saxe, 2017). This, unsurprisingly, has led to the definition of parochial empathy necessitating or amplifying the existence of a competitive or threatening outgroup (Parker, & Janoff-Bulman, 2013) even though work in intergroup relations suggests that this need not to be the case (Voci, 2006). Third, the group usually exists in the form of a membership that is fixed (e.g., Americans vs. Arabs Bruneau, Cikara, & Saxe, 2017) or created in an ad-hoc fashion (Eagles vs. the Rattlers, Cikara, Bruneau, Van Bavel, & Saxe, 2014) rather than acquired through a meaningful experience. There is work, however, that has inadvertently
been focusing on this same process – parochial empathy – without explicitly labelling it as such, and in a way that re-conceptualizes parochiality on all three aforementioned grounds. Like our opening example hints at, this work focuses on empathy born out of life adversity.

**Life Adversity and The Argument for Beneficial Parochial Empathy**

A variety of research has supported the idea that those who are impacted the most by an adversity are the most likely to respond prosocially to another’s plight, as evidenced by self-reported severity of adversity predicting compassionate responding across different approaches, including behaviorally-immersive confederate studies (Lim & DeSteno, 2016), and correlational evidence from those who have experienced severe childhood trauma (Greenberg, Baron-Cohen, Rosenberg, Fonagy, & Rentfrow, 2018). While the concept of prosocial post-traumatic growth is not new (Frankl, 1985; Tedeschi, Park, & Calhoun, 1998) the past decade has seen a boost in research examining the relationship between traumatic experience and prosocial behavior, with an array of evidence collected in support of this argument (for some examples see Frazier, Greer, Gabrielsen, Tennen, Park, & Tomich, 2013 and Dunlop, Walker, & Wiens, 2015). Importantly, people who experience trauma often question or re-assess a shattered worldview (Park, & Calhoun, 1998), leading them to associate and identify their adversity experiences as a source of meaning-making (Park, 2010; Ryff, Keyes, & Hughes, 2003; Nugent, Sumner, & Amstadter, 2014; Altundağ & Bulut, 2014).

While hardship generally makes people more compassionate regardless of the kind of suffering they perceive in others (Staub & Vollhard, 2008; Lim & DeSteno, 2016), research across psychological disciplines has revealed that when the hardship is similar to that of another, parochiality effects emerge. Studies have shown that women who had given birth and currently pregnant women exhibited greater concern for mothers-to-be compared to women who had never
been pregnant (Hodges, Kiel, Kramer, Veach, & Villanueva, 2010), and previously depressed individuals showed increased empathy for currently depressed individuals (Mohr, Kross, & Preston, 2016). This experience-based empathy holds true for both painful events controlled in the lab such as administering mild electric shocks, pressure pain, or thermal pain, (Batson, Sympson, Hindman, Decruz, Todd, Weeks, Jennings, Burris, 1996; Preis, & Kroener-Herwig, 2012; Coll, Budell, Rainville, Decety, & Jackson, 2012) and real negative life experiences such as having experienced severe acne or a romantic rejection (Batson et al., 1996).

The variety of sources of adversity-based parochialism suggests that the phenomenon may occur across levels of intensity or severity of adverse experience. For example, parochial empathy has been documented in pre-schoolers failing at a board game (Barnett, 1984), to people who have fear of the dark, or have lost a pet (Eklund, Andersson-Sträberg, & Hansen, 2009), to people who have been raped (Barnett, Tetreault, & Masbad, 1987). Even individuals with autism, a population traditionally found to lack certain aspects of empathy, show increased empathy for other autistic individuals in neuroimaging studies, compared to empathy towards non-autistic adults (Komeda, Kosaka, Saito, Mano, Jung, Fujii,, Yanaka, Munesue, Ishitobi, Sato, Okazawa, 2014).

While critics of the parochial aspect of empathy (Bloom, 2017; Prinz, 2011a; Prinz, 2011b) would deem such effects as human shortcomings, adversity-based parochialism accounts for a non-negligible share of prosociality in the world (Staub & Vollhardt, 2008; Vollhardt, 2009). Evidence across human suffering indicates that the story of Molly MacDonald, while inspiring, is not unique – individuals facing or having faced adversity have returned compassion to those similarly affected in a variety of contexts, with much work documenting this phenomenon through interviews with survivors of interpersonal violence (Shakespeare-Finch, &
Copping, 2006), childhood sexual abuse (Grossman, Sorsoli, & Kia-Keating, 2006), stroke (Gillen, 2005), and HIV (Reeves, Merriam, & Courtenay, 1999).

In addition to this research, the anecdotal list of adversity-born prosociality that is aimed at helping fellow sufferers is endless, whether you focus on adversity faced by individuals surviving sexual assault (Gaug, 2020), drug addiction (Lee, 2019), a mass shooting (Collins, 2019), or even a family having lost a loved one to a rare syndrome or disease (Snibbe, 2016), drunk driving (Lerner, 2016), Alzheimer’s (Conn, 2015), or suicide (Halpert, 2020). Such non-profit and charitable organizations, awareness and advocacy groups, and attempts at reforming public policy that come from survivors, are concrete, tangible examples of parochial empathy accounting for a massive scope of prosociality in the world.

**Suffering as a Superordinate Identity**

An intriguing question forms about the implication that such adversity-bound memberships can have for intergroup tensions. If people are often divided based on who they are (insert racial, ethnic, religious, political identity), can people re-group into parochial prosocial communities based on what they experience (insert adversity)? We think this can reflect a form of parochial prosociality that directs one’s attention and resources towards an adversely-affected outgroup, bypassing other potentially divisive identities. This idea bridges two fundamental models from communications and psychology in an interdisciplinary way. The first is the Communal Coping Model (Lyons, Mickelson, Sullivan, & Coyne, 1998) which emphasizes coping with adversity as a communal appraisal of a stressor that is endemic to social integration and interdependence. The second is the Common Ingroup Identity model (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993) which states that adhering to superordinate identities captures sub-identities that often divide groups. The two literatures have been adjacent for
decades, yet the connection between the two – the idea that adversity can be conceptualized at
the communal level as an ingroup identity that confers prosocial advantages – although intuitive,
has been lying dormant.

The Communal Coping Model (CCM) states that individuals dealing with a stressor
engage in coping that involves close others construing the stressor as “our” rather than “my”
problem, a process that has important implications on the mitigation and successful managing of
the adversity itself – this often includes the cognitive re-appraisal of stressor and the provision of
physical and psychological support (Mickelson, Lyons, Sullivan & Coyne, 2001). The
“communal” aspect of communal coping in such research has traditionally included only close
others - most often the family unit (Afifi, Hutchinson, & Krouse, 2006; Afifi & McManus,
2006), and romantic partners (Monnier & Hobfoll, 1997; Lewis, McBride, Pollak, Puleo,
Butterfield, & Emmons, 2006; Rentscher, Soriano, Rohrbaugh, Shoham, & Mehl, 2015) coming
together to support a relative’s battle with adversity through conceptions of “we-ness”. In a few
instances, communal coping has been studied in the contexts of groups, specifically in field
samples of communities experiencing acute stressors in natural disasters. Afifi and colleagues
(2012) found a positive association between communal coping behaviors and reduction in
uncertainty in a community of wildfire survivors, and interviews with survivors of Hurricane Ike
revealed themes of constructing a community narrative and identity that were linked to problem-
solving after the disaster (Richardson & Maninger, 2016).

Other than the handful of correlational and interview-based studies mentioned here,
examining communal coping in previously unrelated groups has been comparatively
understudied. However, the “communal” aspect in the model can be expanded to refer to
adversity-specific fellow-sufferers – people that are going through the same plight or adverse
situation – through the same construal of “we-ness” that the model has traditionally been studying within the context of close others (Afifi, Hutchinson, & Krouse, 2006; Rohrbaugh, Shoham, & Mehl, 2015). This new perspective can incorporate how one comes to view an alternative community – fellow sufferers or survivors – as a new unit that they can belong to, and meaningfully and prosocially contribute towards. One benefit stemming from this perspective, is the prosocial intergroup outcomes that may come from a common ingroup identity that’s based on one’s lived adversity.

The Common Ingroup Identity Model was originally developed as a theoretical attempt to address racial divides through a social recategorization of identities, shifting from the perspective of “Us” and “Them”, to a common “We” (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). At heart, the model argues for the creation of cognitive representations of group membership that are attained through increasing the salience of existing superordinate memberships (e.g., Americans) or by introducing common goals that are perceived to be shared across groups (Gaertner & Dovidio, 2005). The prosocial effects of the model have been well-documented both when it comes to reduction in intergroup bias (Stone & Crisp, 2007; Andrighetto, Mari, Volpato, & Behluli, 2012) and the provision of help (Nadler, Harpaz-Gorodeisky, & Ben-David, 2009) among adversarial groups, as well as in prosocial outcomes that are independent of group conflict (Schultz & Fielding, 2014). However, to our knowledge, there has been no empirical work or attempt to use life adversity, the catalyst that triggers the process of communal coping, as a common superordinate identity. The bridging of the two literatures potentially informs a more comprehensive conceptualization of the prosocial effects of parochial empathy and has potential implications for such effects on intergroup relations as well.
Bridging the Communal Coping and Common Ingroup Identity Models – Implications for Intergroup Relations

The idea that people can use their adversity as a common ingroup identity is compelling for a few reasons. First, because adversity experiences convey meaning in life (Park, 2010; Ryff, Keyes, & Hughes, 2003; Nugent, Sumner, & Amstadter, 2014; Altundağ & Bulut, 2014), it is reasonable to expect that identities stemming from it are qualitatively different than other central identities such as one’s nationality or religion. Given that all potential identities stemming from adversity are experience-based, individuals could potentially feel more agentic (Gray, Gray & Wegner, 2007) over the initiation of an adversity-based identity, compared to other identities that people find themselves in by chance (e.g. born into a specific nationality or religion). Of course, that is not to say that the latter are not meaningful or important. Nevertheless, adversity experiences unintentionally (and unfortunately) offer identity membership that is malleable, as people enter such identities when adversity strikes. This kind of flexibility is rare; unlike other identities, adversity does not hinge on, or necessitate any fixed group characteristic being present (Turner, & Reynolds, 2010) – theoretically, anyone who has suffered can be a member (however, see General Discussion for commentary on when adversity identities are inextricably linked to, or caused by membership in other identities).

Second, many of the common ingroup identity manipulations traditionally used in social psychology research have often utilized the minimal groups paradigm, which entails randomly assigning individuals to arbitrary, ad-hoc created groups (e.g. blue shirts vs. red shirts – see Dovidio et al. 1997 and Levy et al., 2017 for examples). Even when topically-relevant identities are used as superordinate identities (e.g. “Americans” – see Transue, 2007; Banfield & Dovidio, 2013) those do not come without costs or shortcomings. For example, when Black and White
participants identify as “Americans” over their respective racial identities, it can undermine intentions to participate in collective action from those who are disadvantaged by the status quo (Ufkes, Calcagno, Glasford, & Dovidio, 2016).

Unlike general superordinate identities that are imposed experimentally or are only salient in certain contexts (e.g. “Americans”), however, people struggle with their adversities continually or on a daily basis, and thus their stressors are likely to contextually dominate (Devine, 1992; Shih, Pittinsky, & Ambady, 1999; Yopyk, & Prentice, 2005) and even spark activism and collective action (Hernandez, 2001; Hernandez, 2002; Borshuk, 2004; Unger, 2000), a theme recently recognized in popular culture discourse (Clendaniel, 2018). What’s more, the side effects of a superordinate identity based on adversity are theoretically reduced – for example, identifying with cancer survivors should not imply immediate rivalry for any other group, but identifying as Americans might imply rivalries for other nationalities because of the danger of glorifying, as opposed to attaching to the ingroup (Leidner, Castano, Zaiser, & Giner-Sorolla, 2010) – see also example of schadenfreude, the feeling of pleasure at an outgroup’s plight (Cikara, Bruneau, & Saxe, 2011; Cikara & Fiske, 2013; Cikara, Bruneau, Van Bavel, & Saxe, 2014).

While victims sometimes do compete for victimhood status (Noor, Shnabel, Halabi, & Nadler, 2012), this has again been found in contexts of violent ethnic conflict where groups are in direct opposition to each other, and where shared resources are immediately at stake. However, even within those contexts, there is evidence that victim-based common identities (e.g. “we are all victims of the Middle-East conflict”) are more successful in decreasing moral defensiveness and competitive victimhood (which in turn led to increased forgiveness) compared to regional-based common identities (“we are all Middle-Eastern”) (Shnabel, Halabi, & Noor,
2013). This directly supports the perspective that a common ingroup identity that is specifically based on adversity goes above and beyond any other common groupings in reducing the motivation to protect a threatened moral image (“moral defensiveness”; Sullivan, Landau, Branscombe, & Rothschild, 2012) and thus should be expected to result in the most prosocial outcomes towards outgroups.

Some research has suggested that competitive victimhood could also manifest itself in contexts where groups are not directly in competition or conflict with each other, such as between racial and sexual minorities (Craig & Richeson, 2014). However, this comes with an important caveat, as perceived group discrimination and perceived personal discrimination have differential impacts on racial minority group members’ attitudes toward sexual minorities. What Craig and Richeson (2014) found to positively predict anti-gay bias was perceived group discrimination (through threatening the ingroup via reminders of racism) – perceived personal discrimination (reported personal experiences with racism), on the other hand, was negatively correlated with anti-gay bias, further supporting the notion that one’s individual adversity is positively related to prosocial outcomes for other stigmatized or victimized groups (Craig, & Richeson, 2016).

In sum, adversity memberships should provide advantages similar, if not greater, to the ones found when traditional superordinate identities have been used, and such adversity-related groupings would result in useful forms of parochialism that would prompt collective action aimed at reducing adversity-eliciting phenomena (e.g. cancer survivors funding cancer research and related charities, sexual assault survivors protesting sexual abuse, etc.). Adversity-based parochiality can thus not only potentially give victimized individuals and groups a platform to
regain a lost sense of agency (Gray, Gray & Wegner, 2007) but, under the right circumstances, it might also facilitate harmonious intergroup relations.

**Prior Findings and the Present Study**

The only prior study, to our knowledge, that has assessed how adversity may create a shared common identity that can bypass intergroup motivations was correlational, and was conducted by Vollhardt and Staub (2011). The authors asked American participants to report traumatic events that they have experienced in their lives through the Traumatic Stress Schedule (Norris, 1990), and subsequently presented them with a newspaper article about the 2004 tsunami that struck Southeast Asia.

Those who reported more personal adversity were more likely to think that the US government should *equally* help American tourist victims and Southeast Asian victims of the tsunami, and this reduction in ingroup bias, along with expressed empathy towards victims coded from open-ended responses, were significant mediators of the relationship between adversity and prosocial attitudes towards Southeast Asian victims. Particularly pertaining to our common ingroup identity hypothesis, the study further suggested an adversity-based ingroup identification; among the three measured categories of adversity, having lived through a natural disaster was the strongest predictor of overall prosocial attitudes towards Southeast Asian victims.

While this study provides some initial support for the hypothesized relationships between lived adversity, common ingroup identity, and prosocial behavior, the construct of perceived similarity to victims was not directly measured, nor was a standardized measure of empathy towards the suffering target used (aside from what was captured through the coding of qualitative responses). Thus, the study remains limited in its conclusions about the extent to which people
did feel more similar or saw themselves as belonging to the same group of survivors, and whether the common ingroup identity was the mechanism through which intergroup bias was reduced. Therefore, given the correlational nature of these results, our research sought to 1) experimentally manipulate the sharing of adversity, 2) explicitly assess similarity felt with suffering target and 3) use a standardized measure of empathic concern. In Study 1 we examine whether the sharing of adversity leads to increased felt similarity (indication of a common ingroup identity perception), compassion, and prosocial intentions towards an outgroup target (resulting from a common ingroup identity perception). Study 2 assessed the same outcomes in the absence of intergroup bias.

**Study 1**

Study 1 attempted to more clearly test the hypothesized relationships by directly manipulating the extent to which participants engaged with an adversity that was shared, and additionally assessing perceived similarity with a suffering victim, two elements that were both missing from prior studies. We decided to focus on medical adversity, specifically cancer, for two main reasons. First, cancer is the second leading cause of death in the United States and thus highly prevalent, but it is also severe – in 2020, roughly 1.8 million people will be diagnosed in the United States with an estimated 606,520 dying of the disease (National Cancer Institute [NCI], 2019). Therefore, invoking cancer-related experiences should allow for a wide opportunity of identification with people who have had experiences with the illness. Second, because of their severity, cancer experiences have been widely studied in psychology as a source of post-traumatic growth and meaning-making (Collins, Taylor, & Skokan, 1990; Cordova, Cunningham, Carlson, & Andrykowski, 2001a; Cordova, Cunningham, Carlson, & Andrykowski, 2001b). We decided to target political affiliation as the intergroup divisive identity, following recent research indicating it to be one of the strongest causes of polarization.
in recent years (Pew Research Center, 2014), and one that people have less reservations expressing hostile stereotypes about, with some work finding that political stereotypes can result in discrimination that is quantitatively greater than racial discrimination (Iyengar & Westwood, 2015).

**Method**

We recruited $N = 265$ participants on Amazon Mechanical Turk (MTurk) who resided in the United States and had 95% approval rating on the site, participation was otherwise not restricted. Participants were compensated $1.50 for their time. After removing participants who dropped out of the study before finishing the survey ($N=65$), we applied additional exclusions for participants who did not complete any of the dependent variables in full, or gave incomplete or nonsense responses to any of the open-ended prompts (e.g. irrelevant/ not responding appropriately to the question, unintelligible, or copied from elsewhere) ($N=48$), obtaining a final sample of $N = 152$. A post-hoc power analysis using G*Power software (Erdfelder, Faul, & Buchner, 1996) indicated that the sample size was enough to detect a moderate effect size ($d=.50$) with 86% power for a test between two independent means ($N=78$ and $N=74$). From the final sample size, 77 of participants identified as male, 74 as female, and 1 as other, and the mean age of the sample was $M_{age} = 35.30$ ($SD = 9.95$).

Upon entering the study, participants provided demographic information and were asked “Which of the following political parties do you most identify with? (If you don’t identify with either, please pick the one that is closest to your political preferences)”, choosing between a Democrat or a Republican affiliation. A participant identifying as Democrat was directed to read about a Republican target, and a participant identifying as a Republican was directed to read about a Democrat target, in order to introduce the divisive intergroup factor.
Upon party choice, participants were then assigned to, either the Shared, or the Non-shared adversity condition in a between-subjects design. Participants in the Shared adversity condition (N=78) were asked to reflect on any experiences they may have had in their life as they relate to cancer. In order to match reflection on an adverse experience, participants in the Non-shared adversity condition (N=74) were asked to reflect on experiences related to financial difficulty, which was thought to be a broad enough adversity category for participants to identify with, to serve as a reasonable active control.

Given that the communal coping literature focuses on relational aspects of facing adversity alongside one’s close circle (Afifi, Hutchinson, & Krouse, 2006; Afifi & McManus, 2006; Monnier & Hobfoll, 1997; Lewis, McBride, Pollak, Puleo, Butterfield, & Emmons, 2006; Rentscher, Soriano, Rohrbaugh, Shoham, & Mehl, 2015), as well as the anecdotal array of evidence of prosocial behaviors exhibited by family and others close to the individual impacted by the adversity (see examples in introduction), we included close others’ experiences in the list of those the participant could reflect on. Thus, participants saw one of two possible prompts:

*Please take a few minutes to reflect on any specific experiences you have had in your life as they relate to cancer/financial difficulty. This can be an experience that you yourself have gone through, or it can be one of an immediate or extended family member, friend, or acquaintance. Please identify the experience that is closest to you, and reflect on what it was like, the feelings it caused, and overall what it means to you.*

*Please take the next 3 minutes to write about the experience.*

After writing about their experience, participants in both conditions reported the valence of their affective state in the moment (“How negative/positive do you currently feel?”) on a scale from 1- Negative to 9- Positive. This was asked in order to rule out the possibility of any potential effects being due to significant differences in felt negativity between the two conditions. Subsequently, participants read the story of Abigail, which was created for the purposes of this study.
Participants read about Abigail being a Republican if they identified in the beginning of the study as Democrat, and those identifying as Republicans saw Abigail’s affiliation as Democrat:

\[
\text{Abigail is a 33-year old woman who has been registered as loyal Republican/Democrat voter for the last 15 years, and has consistently been voting along party lines. She has also been going through chemotherapy after a cancer diagnosis, with some promising results.}
\]

**Dependent variables**

**Similarity**

Participants filled out a 2-item measure adapted from Preis & Kroener-Herwig (2012) assessing perceived similarity (example item: “I feel similar to Abigail”) on a scale ranging from 1 – *Absolutely Disagree* to 10-*Absolutely Agree* to tap into perceptions of a common ingroup identity with Abigail.

**Compassion**

In order to assess prosocial outcomes stemming from perceptions of a common ingroup (e.g. Nadler, Harpaz-Gorodeisky, & Ben-David, 2009), participants also filled out a 9-item measure of compassion adapted from Cameron & Payne (2011) (example item: “How compassionate do you feel toward Abigail?”) on a scale ranging from 1- *Not at all* to 7-*Extremely*.

**Willingness to Interact**

In a similar vein, participants reported their willingness to interact with Abigail (“How willing would you be to interact with Abigail?”) on a scale ranging from 1- *Not at all* to 7-*Extremely*.

**Supportive Message**

Additionally, participants were prompted to write an open-ended supportive message that they would send to Abigail, (“Use the space below to write a supportive message that you would send to Abigail”).
**Donation**

As an additional behavioral measure, participants were asked to report the amount of dollars they would be willing to donate to a list of different charities which included the American Cancer Society, with no restriction of amount of dollars or number of charities to donate to (see full list of charities in Appendix). As an exploratory measure, we also included the Republican and Democrat National Committees (RNC, DNC) in the list of organizations participants could donate to (donation was hypothetical, not actual).

**Personal Experience with Cancer**

Participants were also asked whether they had personal experiences with cancer through two separate items, one for experiencing cancer themselves (item 1) and another for anyone close to them (item 2) (“Have you, yourself (item 1) / anyone in your immediate family or other close family member or friend (item 2) ever been diagnosed with cancer? (Yes/No)”).

**Party Identification**

Lastly, participants reported their identification with each political party in a 3-item measure (Van Bavel & Cunningham, 2012) on a scale from 1 – *Strongly disagree* to 5 – *Strongly agree* (example item: “I feel a bond with other members of the Democratic/Republican Party”). Our hypotheses were as follows:

**H1**: Participants in the shared adversity condition will perceive Abigail to be more similar to them, compared to the participants assigned to the control condition.

**H2**: Participants in the shared adversity condition will report higher compassion for Abigail, greater willingness to interact with Abigail, will write significantly longer messages to Abigail, and will also be willing to donate significantly more to the American Cancer Society, compared to the participants assigned to the control condition.
**H3:** Prior experiences with cancer will moderate the effect of condition on all outcome measures, such that participants who have reported prior experiences with cancer and were assigned to the shared adversity condition will have the highest reported similarity, compassion, willingness to interact with Abigail, length of message written to Abigail, and donation to the American Cancer Society.

Additionally, given our choice to include political affiliation as the intergroup competition variable in the study, and based on an array of research emphasizing extremity of political identification as a predictor of felt superiority over and derogation towards political outgroups (Toner, Leary, Asher, & Jongman-Sereno, 2013; Van Prooijen, Krouwel, Boiten, & Eendebak, 2015), we added the following exploratory hypothesis:

**H4:** Party identification with political group will moderate the effect of condition on all outcome measures, such that as participants identify more with the Democratic party over the Republican party and vice-versa (operationalized as the difference score between Democrat and Republican bond), the effect of condition on all prosocial outcome measures towards Abigail will become weaker.

**Results**

**Preliminary analyses**

An independent-samples *t*-test confirmed that the two conditions did not differ in the emotional state they elicited post-manipulation, with participants who wrote about experiences with cancer reporting the same level of positive/negative mood ($M=4.01$, $SD=2.14$) as those who wrote about experiences with financial difficulty ($M=4.54$, $SD=2.32$), $t(150)=1.46$, $M_{\text{diff}}=.53$, $SE=.36$, $p=.15$, $d=0.24$, 95% CI [-.19, 1.24], both conditions elicited a roughly neutral state. The scale items for the relevant outcome variables showed excellent reliability.
(compassion $\alpha = .93$, similarity = .95) and therefore they were combined into scales of compassion, and similarity. The three continuous dependent variables (compassion, similarity, willingness to interact) were normally distributed, \textit{compassion} skewness = -.86, \textit{SE} = .20, kurtosis = .93, \textit{SE} = .39, \textit{similarity} skewness = .490, \textit{SE} = .20, kurtosis = -.88, \textit{SE} = .39, \textit{willingness} skewness = -1.16, \textit{SE} = .19, kurtosis = .69, \textit{SE} = .39).

In terms of the donation to American Cancer Society (ACS), the measure we included was open-ended as opposed to a standardized scale with a fixed minimum and maximum amount, and more than half of the participants in the sample (52.6%) entered $0$ as their donation response. Because of this, the data on this measure were highly skewed (skewness = 5.40, \textit{SE} = .20, kurtosis = 31.65, \textit{SE} = .39) which led to the decision to transform it into a binary variable, indicating whether a participant reported a donation amount (=1) or not (=0). In addition, because one of the other organizations on the list for donation was St. Jude’s, which is associated with childhood cancer, we decided to additionally transform it for the purposes of exploratory analysis. The majority of outcome variables showed significant positive correlations with each other ranging from moderate to strong levels (see Table 1).
Table 1

Means, Standard Deviations, and Pearson's correlations between outcome variables for Study 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>M (SD) or %</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compassion</td>
<td>5.38 (1.22)</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Similarity</td>
<td>4.46 (2.82)</td>
<td>.39**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Willingness to interact</td>
<td>5.45 (1.71)</td>
<td>.69**</td>
<td>.43**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Length of message</td>
<td>26.51 (18.17)</td>
<td>.34**</td>
<td>.08</td>
<td>.24**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Donation to ACS</td>
<td>47.4 %</td>
<td>.31**</td>
<td>.20*</td>
<td>.17*</td>
<td>.06</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>6. Donation to St. Jude</td>
<td>51.3%</td>
<td>.24**</td>
<td>.13</td>
<td>.21*</td>
<td>.09</td>
<td>.69**</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. * p<.05, ** p<.01. Donation variables (5 and 6) indicate the percentage of participants who entered any donation amount (1=yes) as their answer.

Before conducting all relevant analyses, we wanted to check whether gender differences would exist on any of the outcome measures, following research finding women exhibit higher levels of prosocial emotions, including compassion, compared to men (Mercadillo, Díaz, Pasaye, & Barrios, 2011), and they also engage more in support provision compared to men (MacGeorge, Gillihan, Samter, & Clark, 2003). We conducted four independent samples t-tests with gender (female vs. male) as the grouping variable on each of the continuous dependent variables (compassion, similarity, willingness to interact with Abigail, length of message written to Abigail). Results showed that females in the sample ($M_{female} = 5.37, SD = 1.38$) did not significantly differ from males ($M_{male} = 5.39, SD = 1.05$) in their reported compassion for Abigail, $t(149) = -.13, M_{diff} = -.03, SE = .20, p = .90, d = -.02, 95\% CI [-.42, .37]$, and they also did not differ in how similar they felt to Abigail ($M_{female} = 4.62, SD = 2.94$), compared to males ($M_{male} = 4.33, SD = 2.72$), $t(149) = .65, M_{diff} = .30, SE = .46, p = .52, d = .010, 95\% CI [-.61, 1.21]$,
or in how willing they would be to interact with Abigail ($M_{female} = 5.55, SD = 1.76$), compared to males ($M_{male} = 5.38, SD = 1.68$), $t(149) = .63, M_{diff} = .18, SE = .28, p = .53, d = 0.10, 95\% CI [-.38, .73]$. The messages to Abigail written by female participants ($M_{female} = 29.03, SD = 19.53$) were not significantly longer compared to those written from male participants ($M_{male} = 23.80, SD = 16.42$), but they were trending in the expected direction, $t(149) = 1.78, M_{diff} = 5.22, SE = 2.93, p = .08, d = 0.29, 95\% CI [-.57, 11.02]$. Donation to the American Cancer Society did not differ by gender, $\chi^2 (1, N = 152) = 1.53, p = .26$, neither did donation to St Jude, $\chi^2 (1, N = 152) = .06, p = .87$. Upon finding no gender differences in our dependent variables, we proceeded to test our first hypothesis (H1).

**Similarity**

To test whether participants in the Shared adversity condition reported higher felt similarity with Abigail, compared to the participants in the Non-shared condition, we conducted an independent samples $t$-test with adversity condition (shared vs. not) as the grouping variable. Those in the Shared adversity condition ($M_{shared} = 4.54, SD = 2.86$) did not differ from those in the Non-shared adversity condition ($M_{control} = 4.37, SD = 2.79$) on reported felt similarity with Abigail, $t(150) = .38, M_{diff} = .17, SE = .46, p = .71, d = 0.06, 95\% CI [-.73, 1.08]$. Therefore, H1 was not supported.

**Compassion**

Overall, on a 7-point scale, participants reported high levels of compassion towards Abigail ($M=5.38, SD=1.22$). As with similarity, those in the Shared adversity condition ($M_{shared} = 5.36, SD = 1.17$) did not significantly differ from those in the Non-shared adversity condition ($M_{control} = 5.41, SD = 1.28$) in their reported compassion for Abigail, $t(150) = -.27, M_{diff} = -.05, SE = .20, p = .79, d = -0.04, 95\% CI [-.45, .34]$. 
Willingness to Interact

Overall, on a 7-point scale, participants reported high levels of willingness to interact with Abigail ($M=5.45$, $SD=1.71$). Results on the 1 item of willingness to interact with Abigail were also not significantly different between those in the Shared adversity condition ($M_{\text{shared}} = 5.45$, $SD = 1.70$) and those in the Non-shared adversity condition ($M_{\text{control}} = 5.46$, $SD = 1.74$), $t(150)= -.04$, $M_{\text{diff}} = -.01$, $SE = .28$, $p = .97$, $d= -0.01$, 95% CI [-.56, .54].

Supportive Message

We additionally tested whether participants in the Shared adversity condition wrote messages to Abigail that were more supportive, compared to the participants in the Non-shared adversity condition, as measured by length of message (word count). This operationalization has been used to gauge effort put into comforting or consoling a suffering target in other relevant studies (see Nook, Ong, Morelli, Mitchell, & Zaki, 2016). An independent samples $t$-test, with word count as the dependent variable, showed that those in the Shared adversity condition ($M_{\text{shared}} = 24.15$, $SD = 16.29$) did not significantly differ from those in the Non-shared adversity condition ($M_{\text{control}} = 29.00$, $SD = 19.78$) in how lengthy their support messages were to Abigail, $t(150)= -1.65$, $M_{\text{diff}} = -4.85$, $SE = 2.93$, $p = .10$, $d= -0.27$, 95% CI [-10.64, .95].

Donation

In terms of willingness to donate to the American Cancer Society and St. Jude’s, a chi-square test of independence showed that the proportion of participants who reported willingness to donate did not differ by condition for the American Cancer Society (shared adversity – 52.6% donated, non-shared – 41.9 % donated), $\chi^2 (1, N = 152) = 1.74$, $p = .20$ $d = .22$, or for donation to St. Jude’s (shared adversity – 51.8 %, non-shared – 52.7 %), $\chi^2 (1, N = 152) = 0.11$, $p = .75$ $d = -.05$. The second hypothesis (H2) was, therefore, not supported.
**Main Effect of Personal Experience with Cancer**

Only about 3% ($N=5$) of our sample reported having directly experienced cancer themselves (item 1), by contrast 78% ($N=118$) of our sample reported indirect experiences with cancer through someone in their immediate or close family, or circle of close friends who has been diagnosed (item 2). After the reported exclusions, no participants exclusively reported having been diagnosed themselves but not knowing anyone who had been diagnosed, we therefore chose to use the second item as the moderator in our model given it provided a much larger sample size and included both immediate and indirect experiences with cancer. Before entering personal experience as a moderator, we checked whether there would be differences across all outcome measures between those who reported having close experiences with cancer and those who did not, and found no significant differences between the two groups for similarity ($p=.29$), compassion ($p=.18$), willingness to interact ($p=.37$), or length of message ($p=.81$).

The only outcome variables that significantly correlated with personal experience with cancer was donation to the American Cancer Society ($r=.19$, $p=.02$) as well as donation to St. Jude ($r=.27$, $p=.001$). A chi square test of independence showed that only about a third of those who did not report experiences with cancer reported willingness to donate to the American Cancer Society, whereas among those who reported experiences with cancer, half of them reported willingness to donate (personal experience – 52.5% donated, no personal experience – 29.4% donated), $\chi^2 (1, N = 152) = 5.66, p = .02, d = 0.39$, and this was also the case for donation to St. Jude’s (personal experience – 58.5% donated, no personal experience – 26.5% donated), $\chi^2 (1, N = 152) = 10.82, p = .002, d = 0.55$. It is important to note that inferring differences on the donation outcome is restricted by the transformed nature of the variable (binary, donate vs. not),
given that participants were not asked whether to donate or not, but instead were given an open-ended space to enter any hypothetical donation amount.

In sum and in relation to H1 and H2, we did not find main effects of condition or main effects of personal experience with cancer on similarity or the majority of outcome measures. However, it is possible that the interaction between the two – having personal experiences with cancer and being assigned to the Shared adversity condition – significantly predicts prosocial responses to Abigail by allowing participants to share the adversity through capitalizing on their existing lived experience.

**Moderation by Personal Experience with Cancer**

We moved on to test whether prior personal experiences with cancer moderate the effect of condition on all prosocial measures (H3) using the PROCESS macro (Hayes, 2017). The interaction between adversity condition (shared vs. not), and personal experience with cancer (yes or no) did not significantly predict felt similarity with Abigail, $b = -.64$, $t(148) = .57$, $p = .57, 95\% \text{ CI } [-1.59, 2.88]$ (Figure 1). The same was true for the interaction predicting compassion for Abigail, $b = -.27$, $t(148) = -.55$, $p = .58, 95\% \text{ CI } [-1.23, .69]$ (Figure 2), as well as willingness to interact with Abigail, $b = -.27$, $t(148) = -.40$, $p = .69, 95\% \text{ CI } [-1.63, 1.08]$ (Figure 3). Similarly, a logistic regression model testing the interaction between adversity condition and personal experience did not significantly predict length of supportive message towards Abigail, $b = -8.70$, $t(148) = -1.21$, $p = .23, 95\% \text{ CI } [-22.95, 5.53]$, nor did it predict donation to American Cancer Society, Wald $\chi^2 (1, N = 152) = 0.11, p = .74$, or to St. Jude’s Wald $\chi^2 (1, N = 152) = 0.79, p = .37$. Therefore, H3 was not supported.
Figure 1. Means of reported felt similarity with political opponent Abigail by personal experience and adversity condition in Study 1.

Figure 2. Means of reported compassion for political opponent Abigail by personal experience and adversity condition in Study 1.
Figure 3. Means of reported willingness to interact with political opponent Abigail by personal experience and adversity condition in Study 1.

Moderation by Party Identification

Lastly, we assessed H4 concerning extremity of identification with each political party. Among participants in the sample, 67.8% chose the Democrat affiliation, and 32.2% the Republican affiliation, which is consistent with MTurk’s demographic make-up (Levay, Freese, & Druckman, 2016). We first created a difference score for each participant by subtracting each participant’s identification score with the Democratic party from their identification score with the Republican party. A participant who does not affiliate more with one political party over the other would have a party identification score of 0. Subsequently we took the absolute value of that variable as an indicator of the extent of identification (Scheffer, Cameron, McKee, Hadjiandreou, & Scherer, 2020), such that people who identify more with any party over the other had higher absolute scores.
A one-sample $t$-test assessing the difference of the absolute identification score against 0 indicated that participants identified more with their political ingroup than their political outgroup, $M_{\text{diff}} = 1.82$, $SD_{\text{diff}} = 1.32$, $t(151) = 17.02$, $p < .001$). Given that Abigail was always presented as a political opponent, we expected this variable to correlate negatively with all positive outcome measures. Although we did see a significant negative correlation between political identification and felt similarity with Abigail ($r = -.16$, $p = .048$), the extremity measure did not correlate significantly with compassion for and willingness to interact with Abigail, or with length of message and willingness of donation to the two relevant charities ($ps > .41$).

Party identification did not significantly interact with condition in predicting similarity for Abigail, $b = -.03$, $t(148) = -0.08$, $p = .94$, 95% CI [-.72, .66], or compassion for Abigail, $b = -.02$, $t(148) = -0.10$, $p = .92$, 95% CI [-.32, .29], and this was also the case for predicting willingness to interact with Abigail, $b = .20$, $t(148) = 0.92$, $p = .36$, 95% CI [-.23, .62], length of message towards Abigail, $b = 2.00$, $t(148) = .86$, $p = .38$, 95% CI [-2.46, 6.45], as well as donation to American Cancer Society, Wald $\chi^2 (1, N = 152) = .15$, $p = .70$, and St. Jude, Wald $\chi^2 (1, N = 152) = 1.26$, $p = .26$.

We also ran exploratory moderation models, this time with personal experience as the independent variable interacting with extent of party identification. Moderation results were not significant for any of the dependent variables ($ps > .37$). Party identification did correlate positively with willingness to donate to the Democratic National Committee (DNC) ($r = .18$, $p = .02$) but not with willingness to donate to the Republican National Committee (RNC) ($r = .02$, $p = .84$), which could be driven by the sample leaning more liberal than conservative. Donation to the DNC and RNC did not otherwise differ by condition or personal experience ($ps > .36$). Thus, H4 was not supported.
Discussion

In Study 1, we directly manipulated whether participants reflected on an adversity that was shared between them and a hypothetical political opponent, hypothesizing that those participants who reflected on a shared adversity and have had direct experiences with the adversity in their lives, would perceive an adversity-based common ingroup identity and, by extension, would have had the most prosocial responses to a political opponent. Study 1 did not support our hypotheses, as the shared and non-shared adversity conditions did not significantly differ from each other on felt similarity with target and, as such, we did not see any meaningful effect of condition on the outcome measures, nor did we see moderation by personal experiences with cancer. However, the means were consistently higher for those who reported personal experiences with cancer compared to those who did not.

Those who had personal experiences with cancer significantly differed from those who did not in their willingness to donate to American Cancer Society and St. Jude, the two cancer-related charities in the list of organizations participants saw (although responses on this measure should be interpreted with caution). Party identification did correlate significantly ($p = .048$) with felt similarity in a negative direction, suggesting that as participants identified more with their political party they felt less similar to political opponent Abigail, which is consistent with the general prediction of H4.

There are a number of possible reasons of why the hypothesized relationships were not detected. First, there may be differences in having lived through the adverse life experience versus reflecting on it, and the null effect of condition on similarity suggests that reflection did not do much in the service of facilitating a “we” perspective on the adversity, at least in the context of this study. It might be that having lived through the adverse experience is enough in
its own right, and even though these results should be interpreted with caution given the unevenness of sample sizes in each cell, it is possible that with a higher sample size and a more even distribution across levels of experience with adversity, we might find that personal experiences with a specific adversity do create a common ingroup identity and predict prosocial responses to outgroups, if a significant difference in felt similarity successfully occurs.

Second, it is possible that the Non-shared adversity condition in Study 1, which included reflecting on financial hardship, might have substantially overlapped with the medical adversity we used. It is not unreasonable to suspect that people who struggle with a medical adversity such as cancer are also facing economic difficulties due to high healthcare related bills coupled with their inability to work and maintain a stable income. Unfortunately, our study did not include any measures assessing income or self-reported socioeconomic status, but given that the sample was comprised of MTurk participants, a population who is generally found to earn lower income compared to other representative population samples (Levay, Freese, & Druckman, 2016), it is possible that financial adversity was particularly salient across the sample, and thus any differences between the two conditions could have been muted. Relatedly, the extent to which participants identified with Abigail’s adversity regardless of whether they reflected on an exactly-matched experience (cancer), or a possibly-related one (financial difficulty) may depend on how they define “suffering” in the first place, which implicates levels of construal that might differ on an individual basis (Vollhardt, 2009).

We should note that in our data, personal experiences with cancer was not a completely clean measure of experience with adversity, because of the lack of variability in first-hand experiences with cancer, and thus having to additionally use the responses of those who reported being close to someone else’s experiences (close family or friends) to conduct the moderation
analysis. This might have complicated things as people may have been reporting on others who they have different levels of closeness with, which made it difficult to disentangle which of those experiences might be more or less personal to participants, and therefore have an effect on their responses. Therefore, a reasonable next step following this limitation would be to directly recruit participants from adversity-specific populations or environments in an attempt to eliminate any possibility that participants do not have a first-hand experience with adversity.

Relatedly, variation in one’s own experience with adversity may have also affected how someone with a shared experience is perceived and responded to, which was something that was not measured in Study 1. As mentioned before, a variety of research has supported the idea that a particular aspect of an adverse experience – its severity of impact – can positively predict prosocial behavior at high levels (Lim & DeSteno, 2016) and on the flip side, negatively at low levels (Ruttan, McDonnell, & Nordgren, 2015). Together, these two findings suggest that different aspects of one’s lived adversity, primarily its severity, may be important moderators of any effects the conditions could produce on the prosocial outcome measures, and thus may need to be considered in next steps.

Finally, another reason of why our data might not have been in line with our hypotheses, is that we assumed that there will be political partisanship in responses people gave, such that Democratic participants would automatically feel rivalry towards a Republican target, and vice-versa. We therefore did not present participants with someone from the same political party, which would have been a helpful reference point to have, as a way of obtaining baseline prosocial responses in the absence of intergroup competition, and an indication of the amount of difference between prosocial responses to shared adversity between an ingroup and an outgroup member.
While we did find that participants identified significantly more with their political ingroup over the outgroup (which significantly predicted felt similarity in a negative direction), we did not see any associations of party identification with any of the prosocial outcomes, nor the hypothesized moderation. Thus, an even more conservative approach would first solely focus on an assumed ingroup, or at least first test for the parochiality effect that may exist based on shared adversity independent from intergroup rivalries. This would mirror most what the Communal Coping Model (Lyons, Mickelson, Sullivan, & Coyne, 1998) traditionally suggests for communal appraisals of adversity, which does not assume competition between adversely affected members of a group or community (Afifi, Felix, & Afifi, 2012; Richardson & Maninger, 2016) the way the Common Ingroup Identity model does (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). Study 2 made this latter adjustment along with a number of other modifications to the design and measures in an attempt to address the prior constraints and weaknesses mentioned here.

**Study 2**

Study 2 differed from Study 1 in six important ways. First, in Study 2, participants were recruited using the medical conditions filter on TurkPrime (Litman, Robinson, & Abberbock, 2017) to ensure that they all had personal experience with medical adversity. Second, the intergroup bias factor was eliminated in an attempt to establish the ingroup favoritism effect based on adversity, in isolation. Third, in contrast to the non-shared adversity condition in Study 1 which revolved around financial difficulties, the non-shared adversity condition in Study 2 related to interpersonal difficulties, specifically dealing with family problems, in order to dissociate the two kind of adversities as much as possible. Fourth, a pure control condition within which no adversity was mentioned was also added in order to compare the two adversities (shared vs. non-shared) to a baseline control. Fifth, while in Study 1 the adversity was
manipulated at the level of the participant with the target vignette remaining the same across conditions, Study 2 had the adversity manipulated at the level of the presented target. Finally, in Study 2, we included two questions assessing the severity and frequency of the participants’ own reported medical adversity, for the purposes of conducting additional exploratory moderation analyses following the Lim and DeSteno (2016) as well as the Ruttan, McDonnell, & Nordgren (2015) work, and two questions assessing the perceived severity and frequency of the target’s adversity, to use as manipulation checks for the intended effect of the vignettes.

**Method**

We recruited $N = 380$ Amazon Mechanical Turk workers (through TurkPrime; Litman, Robinson, & Abberbock, 2017) who resided in the United States, had a minimum 95% approval rating on the site, and had indicated that they had a medical condition from the list provided through TurkPrime filters (see list of medical issues included in the filter in Table 2). Participation to the study was otherwise not restricted. Participants were compensated $1.50 for their time. After removing participants who dropped out of the study before finishing the survey ($N = 87$), we applied additional exclusions for participants who did not complete any of the dependent variables in full, or gave incomplete or nonsense responses to any of the open-ended prompts (e.g. irrelevant/not responding appropriately to the question, unintelligible, or copied from elsewhere). Because of a programming error in the survey on the two items assessing the similarity variable, participants were able to select more than one scale point and thus, we additionally excluded those who selected more than one scale point on either of the two similarity items (total exclusions after attrition $N = 22$). After all exclusions, we obtained a final $N = 271$, a post-hoc power analysis indicated that the sample size was enough to detect a moderate effect size ($d = .50$) with 96% power for an omnibus test between three means. From the final
sample size, 119 of participants identified as male, 150 as female, and 2 as other, and the mean age of the sample was $M_{age} = 40.95$ ($SD = 13.02$).

Table 2

*Medical conditions included in the TurkPrime filter for Study 2*

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension (high blood pressure)</td>
</tr>
<tr>
<td>Heart Attack</td>
</tr>
<tr>
<td>High Cholesterol</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Heart Disease</td>
</tr>
<tr>
<td>Asthma</td>
</tr>
<tr>
<td>Bronchitis or emphysema</td>
</tr>
<tr>
<td>Depression</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
<tr>
<td>Eating disorders (anorexia, bulimia, or other related condition)</td>
</tr>
<tr>
<td>Attention Deficit Disorder (ADHD)</td>
</tr>
<tr>
<td>Reflux (GERD)</td>
</tr>
<tr>
<td>Irritable Bowel Syndrome (IBS)</td>
</tr>
<tr>
<td>Ulcers</td>
</tr>
<tr>
<td>Rheumatoid Arthritis (RA)</td>
</tr>
<tr>
<td>Insomnia (trouble falling asleep or staying asleep)</td>
</tr>
<tr>
<td>Cancer</td>
</tr>
<tr>
<td>Allergies</td>
</tr>
<tr>
<td>Psoriasis</td>
</tr>
<tr>
<td>Neurological illness or injury</td>
</tr>
<tr>
<td>Permanent physical disability</td>
</tr>
</tbody>
</table>

After consenting to take part in the survey, participants read a cover story informing them that the study is being done to understand story-sharing initiatives such as Humans of New York, the Strangers Project, and StoryCrops. Participants were told that as part of the study, they will be asked to share a story of their lived experiences, and that they would additionally be asked to read and respond to one or more anonymous stories we have already collected from others. After reading these instructions, participants were subsequently asked to identify a difficult time in their lives as it relates to medical issues, and write about the experience in detail, along with the emotions and feelings it produced.
Subsequently, participants were assigned to one of three possible conditions, in a between-subjects design. In the Shared adversity condition, participants read a vignette about a target facing a medical adversity (matched), whereas participants in the Non-shared adversity condition read a vignette about a target facing interpersonal adversity (not matched), and participants in the pure Control condition read a vignette consisting of description of daily activities (no adversity content). The vignettes presented were written from the perspective of the target as opposed to a third-person description which was the case in Study 1, in an attempt to a) make the narrative more personal and relatable, and b) to eliminate any possible demographic bias inherent in perceiving the gender and age of the person in the vignette (e.g. Abigail, 34). Participants in the Shared adversity condition (N=90) read the following vignette, which referenced a medical adversity that was not specified in order for participants to broadly relate to the narrative:

*Lately things haven’t been super great, health-wise...it has been so stressful. Which I feel kinda bad saying, because I know it's not just me who struggles with medical problems. I can’t do much because all my time is spent either visiting the hospital or going to the doctor. Then on top of that, I had an acute episode a couple weeks back while I was at work and I couldn't get to the hospital right away because I’d already missed weeks of work so I basically had to stay there until I had to clock out. I feel like there isn’t enough time in the day for me to handle all of that. I barely sleep because I am so anxious about all the things I need to do the next day. It is all so overwhelming but I can’t afford to stop.*

Participants in the Non-shared adversity condition (N=90) read the following vignette, which referenced an adversity of interpersonal nature:

*Lately things haven’t been super great, family-wise...it has been so stressful. Which I feel kinda bad saying, because I know it's not just me who struggles with family issues. My dad lost his job and my mom still works full-time and she keeps nagging him all the time about it. Last time I went home they had this really big fight and kept shouting at each other in front of my little brother too. Part of me feels like I should get involved and try to help, but it causes me a lot of stress because I don’t know how. I feel like there isn’t enough time in the day for me to juggle work and trying to fix my family falling apart too. It is all so overwhelming but I need to figure out a way to make it work.*
Finally, participants in the control condition \((N=91)\) read the following vignette, which did not reference an adversity but instead mentioned things relevant to everyday activities:

*Lately I have been waking up and getting a quick breakfast before 9am, and then getting ready and getting on the bus. Unless the bus is crowded I can usually get to work on time, and then I’m done usually by 4pm, except Mondays and Wednesdays. If it’s a Tuesday or Thursday I end up coming back home late because I’m picking up my niece, so those days I usually just grab something quick to eat afterwards. I usually prefer Fridays because I can just ease into the weekend and take it chill. Saturday I don’t really do much other than watch TV and hang around, but Sunday is usually time to start prepping for the week again so I mostly do chores and think about what else I need to do.*

After being exposed to the appropriate vignette, all participants proceeded to fill out the same set of dependent variables.

**Dependent variables**

**Severity and Frequency of Adversity’s Impact**

After writing about their own experience with medical adversity, participants answered two items assessing the perceived severity (“How much did this experience affect you?” on a scale of None (1), Barely (2), A little (3), Moderately (4) and Severely (5)) and frequency (“How frequently do you think of this experience?” on a scale of less than once a month (1), once a month (2), once in a few weeks (3), once a week (4), twice a week (5), almost every day (6) and every day (7)) of the experience’s impact, which were adapted from Lim & DeSteno’s (2016) full life adversity measure. After reading about the target’s experience in the Shared, Non-shared, and Control conditions, participants answered the same two items from the perspective of the target (severity – “How much do you think the experience described in the story has affected the person?”, frequency – “How frequently do you think the person thinks about this experience?”).

**Similarity**
Participants filled out two items assessing felt similarity with target, the first one, “How similar do you feel to the person in the story you've read?”, assessing felt similarity with the individual person in the vignette, and the second one “How similar do you feel to people that have similar stories to the one you've read?” tapping into felt similarity with a common adversity-based ingroup identity (both items on a scale ranging from 1 – Not at all similar to 10-Extremely similar).

**Compassion**

Participants filled out the same 9-item measure of compassion that was used in Study 1 from Cameron & Payne (2011), this time referencing the person in the vignette they just read (example item: “How compassionate do you feel toward the person?”) on a scale ranging from 1- Not at all to 7-Extremely.

**Willingness to Write Message**

Similar to Study 1, participants were additionally asked whether they would like to write an open-ended anonymous supportive message that they would send to the person whose vignette they read. In contrast to Study 1 where the essay box was immediately available for people to write the message, we opted to initially ask the question of whether the participant wanted to write the anonymous message (Yes/No) first, so as to have a more direct way of measuring willingness, and as a way to bypass length of message as the operationalization on this variable, given some concerns about length of message being an insufficient predictor of communicated support to a target in need (Burleson, 2009).

Our hypotheses were as follows:
**H1:** Participants in the Shared adversity condition will perceive the target to be more similar to them compared to participants assigned to the Non-shared adversity, and Control conditions.

**H2:** Participants in the Shared adversity condition will report higher compassion for, and greater willingness to write a supportive message to the target, compared to participants assigned to the Non-shared adversity, and Control conditions.

Given we did not assess how severity of adversity might affect prosocial outcomes in Study 1, and as per our prior discussion (see Lim & DeSteno, 2016 and Ruttan, McDonnell, & Nordgren, 2015), we wanted to test the following exploratory hypothesis:

**H3:** The perceived severity of one’s own experience will moderate the effect of condition on perceived similarity with, compassion for, and willingness to write a supportive message to the target, such that as perceived severity increases, participants in the Shared adversity condition will have significantly higher levels of similarity, compassion, and willingness to write a supportive message to the target compared to the Control and Non-shared adversity conditions.

**Results**

**Preliminary analyses**

The scale items for the relevant outcome variables showed excellent reliability (compassion \(\alpha = .94\), similarity = .84) and therefore they were combined into scales of compassion, and similarity. The two continuous dependent variables were normally distributed, \(compassion\) skewness = -.57, SE = .15, kurtosis = -.28, SE = .30, \(similarity\) skewness = .20, SE = .15, kurtosis = -.63, SE = .30. The three outcome variables showed significant positive correlations with each other (see first three variables in Table 3). Importantly, all outcome
measures correlated significantly with the perceived severity and frequency of the target’s adversity, suggesting that participants’ prosocial responses to the target were related to how much suffering they perceived the target going through.

Table 3

Means, Standard Deviations, and Pearson’s correlations between relevant variables for Study 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>M (SD) or %</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compassion</td>
<td>4.94 (1.40)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Similarity</td>
<td>5.28 (2.58)</td>
<td>.35**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Yes to message</td>
<td>22.9%</td>
<td>.37**</td>
<td>.18**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Target’s severity</td>
<td>3.94 (1.18)</td>
<td>.66**</td>
<td>.17**</td>
<td>.22**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Target’s frequency</td>
<td>5.45 (1.96)</td>
<td>.50**</td>
<td>.15*</td>
<td>.23**</td>
<td>.76**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Own severity</td>
<td>4.52 (.65)</td>
<td>.03</td>
<td>.05</td>
<td>.06</td>
<td>.08</td>
<td>.13*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Own frequency</td>
<td>3.89 (2.27)</td>
<td>.06</td>
<td>.11</td>
<td>.11</td>
<td>.07</td>
<td>.13*</td>
<td>.29**</td>
<td></td>
</tr>
</tbody>
</table>

Note. * p<.05, ** p<.01. Yes to message (variable 3) indicates the percentage of participants who said yes (=1) to writing a supportive message to target.

Severity & Frequency of Target’s Suffering

We first wanted to conduct a one-way ANOVA for perceived severity and frequency of target’s adversity across the three conditions as a manipulation check, to ensure that the narrative in the adversity conditions was perceived as more severe and more frequent than the non-adversity control condition. We also wanted to make sure that any potential differences between the two adversity conditions across our main dependent variables was not due to one of them being perceived as impacting the target significantly more severely or frequently.
In terms of severity of adversity, there was a significant difference across conditions, $F(2,268)= 142.44, p < .001, \eta^2 = .52$, with post-hoc Bonferroni analyses showing the expected difference between the Control ($M_{control} = 2.76, SD = 1.07$) and both the Shared adversity ($M_{shared} = 4.63, SD = .64, M_{diff} = -1.88, SE = .12, p < .001, 95\% CI [-2.17, -1.58]$) and Non-shared adversity ($M_{non-shared} = 4.44, SD = .69, M_{diff} = -1.69, SE = .12, p < .001, 95\% CI [-1.98, -1.39]$) conditions. The two adversity conditions (shared and non-shared) did not differ significantly from each other ($M_{diff} = .19, SE = .12, p = .38, 95\% CI [-.11, .48]$).

The same pattern was observed for perceived frequency of the adversity’s impact on the target. There was a significant difference, $F(2,268)= 71.25, p < .001, \eta^2 = .35$, with post-hoc Bonferroni analyses showing the expected difference in perceived frequency between the Control ($M_{control} = 3.85, SD = 2.16$) and both the Shared adversity ($M_{shared} = 6.46, SD = 1.08, M_{diff} = -2.61, SE = .24, p < .001, 95\% CI [-3.18, -2.04]$) and Non-shared adversity ($M_{non-shared} = 6.07, SD = 1.31, M_{diff} = -2.22, SE = .24, p < .001, 95\% CI [-2.79, -1.65]$) conditions – the two adversity conditions (shared and non-shared) did not differ significantly from each other ($M_{diff} = .39, SE = .24, p = .31, 95\% CI [-.18, .96]$).

The manipulation check results suggest that participants appropriately perceived the narrative in the control condition to be much less severe and frequent compared to the two adversity narratives, and they additionally show that participants did not perceive the target in medical adversity being impacted more severely than the target in interpersonal adversity. We therefore moved forward to test H1.

**Similarity**

A one-way ANOVA assessing differences in felt similarity with target between the three conditions showed significant differences, $F(2,268)= 8.30, p < .001, \eta^2 = .06$. Bonferroni post hoc
analyses revealed that reported felt similarity for the target in the Control condition ($M_{control} = 4.55, SD = 2.67$) significantly differed from the Shared adversity ($M_{shared} = 6.10, SD = 2.47$) condition ($M_{diff} = -1.52, SE = .37, p < .001, 95\% CI [-2.42, -.62]$) but not the Non-shared adversity condition ($M_{non\-shared} = 5.23, SD = 2.38$) condition ($M_{diff} = -.68, SE = .37, p = .21, 95\% CI [-1.58, .22]$). The two adversity conditions did not differ significantly from each other but the means were in the expected direction, with a trending effect ($M_{diff} = .84, SE = .37, p = .08, 95\% CI [-.06, 1.74]$), (Figure 4). H1 was not supported.

**Similarity with target**

![Graph showing similarity with target by condition for Study 2.](image)

**Figure 4.** Means of reported similarity with target by condition for Study 2.

**Compassion**

As with the similarity analysis, a one-way ANOVA assessing differences in compassion for target between the three conditions showed significant differences, $F(2,268)= 109.06, p < .001, \eta^2 = .45$. Bonferroni post hoc analyses revealed a similar pattern, whereby the reported compassion for the target in the control condition ($M_{control} = 3.63, SD = 1.13$) significantly differed from the shared adversity ($M_{shared} = 5.73, SD = .91$) condition ($M_{diff} = -2.10, SE = .16, p < .001, 95\% CI [-2.48, -1.73]$) but also from the non-shared adversity ($M_{non\-shared} = 5.47, SD = \ldots$)
1.09) condition ($M_{\text{diff}} = -1.84, SE = .16, p < .001, 95\% \text{ CI } [-2.21, -1.47]$), but the two adversity conditions did not differ significantly from each other ($M_{\text{diff}} = .26, SE = .16, p = .27, 95\% \text{ CI } [-.11, .64]$) (Figure 5).

**Figure 5.** Means of reported compassion for target by condition for Study 2.

**Supportive Message**

Across the $N=271$ participants in the sample, $N=209$ of participants said No to writing a supportive message, and $N=62$ said Yes. A binary logistic regression was conducted with dummy-coded conditions (Shared adversity condition served as the comparison point against the Non-shared and Control conditions), entered as two independent variables into a regression model. The logistic regression showed significant differences across the three conditions for willingness to write a supportive message to the target of the vignette $\chi^2 (2, N = 271) = 14.08, p = .001$. An analysis of standardized residuals with a Bonferroni correction assessing equal distribution of yeses across conditions revealed that out of the 62 participants who said yes to writing a supportive message, only 12.9\% of those were in the Control condition which was
significantly lower compared to the 46.8% in the Shared adversity condition, Wald $\chi^2 (1, N = 271) = 13.55, p < .001$, but the 40.3% who were in the Non-shared adversity condition, did not significantly differ from the Shared adversity condition Wald $\chi^2 (1, N = 271) = .42, p = .52$ in willingness to write a supportive message (Figure 6). Thus, H2 was not supported.

**Figure 6.** Percentage of the N=62 participants who said yes to writing a supportive message to the target by condition for Study 2.

**Severity & Frequency of Participant’s Suffering**

Before testing whether one’s own severity of medical adversity moderates the effect of condition on relevant outcomes, we wanted to ensure that participants reported comparable levels of severity and frequency of their own medical adversity across the three conditions as an extra cautionary step in addition to the random assignment of participants to conditions. A one-way ANOVA assessing differences in reported severity across the three conditions showed no significant differences across the three severity means, $F(2,268)= 1.04, p = .36, \eta^2=.01$, and the same was true for reported frequency across the three conditions, $F(2,268)= .03, p = .97, \eta^2=.00$. We therefore moved ahead with testing exploratory H3.
First, we tested whether reported severity of one’s own adversity moderates the effect of condition on felt similarity with the target. The conditions were dummy-coded through PROCESS’ (Hayes, 2017) multicategorical variable function, such that the Shared adversity condition served as the comparison point against the Non-shared and Control conditions. Severity moderated the effect of condition on felt similarity with target when comparing the Shared adversity condition with the Control condition, \( b = -1.34, t(265) = -2.48, p = .01, 95\% \text{ CI } [-2.41, -2.28] \), but not when comparing the Shared adversity condition with the Non-shared adversity condition, \( b = -0.45, t(265) = -0.76, p = .45, 95\% \text{ CI } [-1.62, .72] \). Specifically, participants in the Shared adversity condition reported higher felt similarity with the target compared to those in the Control condition both at mean levels of severity, \( b = -1.57, t(265) = -4.24, p < .001, 95\% \text{ CI } [-2.31, -0.84] \), and at high levels (+1SD) of severity \( b = -2.21, t(265) = -4.81, p < .001, 95\% \text{ CI } [-3.12, -1.31] \), but there was no difference at low levels of reported severity \( b = -0.70, t(265) = -1.39, p = .17, 95\% \text{ CI } [-1.69, .29] \) (Figure 7).

**Figure 7.** The interaction between severity and condition predicting similarity in Study 2.
We proceeded to test the interaction with compassion for target as the dependent variable. Severity did not moderate the effect of condition on compassion when comparing the Shared adversity condition with the Control condition, \( b = .10, t(265) = -.44, p = .66, 95\% \text{ CI} [-.35, .55] \), or when comparing the Shared adversity condition with the Non-shared adversity condition, \( b = -.22, t(265) = -.86, p = .39, 95\% \text{ CI} [-.71, .28] \). Lastly, we repeated the interaction with willingness to write supportive message as the dependent variable. A logistic regression revealed that severity did not moderate the effect of condition on willingness to write supportive message when comparing the Shared adversity condition with the Control condition, Wald \( \chi^2 (1, N = 271) = 1.45, p = .23 \), or when comparing the Shared adversity condition with the Non-shared adversity condition, Wald \( \chi^2 (1, N = 271) = .30, p = .58 \). Because the interactions were not significant, no further analyses were conducted in regards to severity moderating the effect of condition on the dependent variables of compassion and willingness to write message.

Discussion

Study 2 attempted to simplify the design used in Study 1 by eliminating the intergroup factor and instead aiming to first establish a baseline parochiality effect among a sample reporting adversity spanning across a number of medical problems. We saw consistent differences between the control condition and the two adversity conditions in the Study 2 sample on all manipulation checks, including how severe and frequent the experience of the target was perceived to be, which confirmed that participants were discerning between an adverse and a non-adverse experience, and responding accordingly in a prosocial manner.

While in Study 1, the description of the target’s adversity was done from a third-person perspective, in Study 2 we opted for a first-person narrative that inextricably mirrors a disclosure event. Because of this, it is important to discuss whether there is a meaningful difference
between the effect of shared adversity, and the potential effect of sheer disclosure of personal information on prosocial responses and felt similarity with a given target. One could argue that within Study 2, the reason we see stark differences between the control and the two adversity conditions is because there is disclosure present in the first two but not in the latter, which only includes mundane daily activities in the pure control condition.

Nevertheless, if one is to scan the disclosure literature (Smyth, Hockemeyer, Heron, Wonderlich, & Pennebaker, 2008), particularly literature on the effects of disclosure on reducing intergroup bias (Ensari & Miller, 2002), one would not be able to find disclosure-relevant behaviors that are independent of adversity. In other words, disclosure-typical behaviors have been defined as fundamentally adversity-borne, with the exception of positive disclosure which, given the confound of valence, would not be an appropriate comparison stimulus for eliciting prosocial concern. It is therefore exceedingly challenging, if not theoretically futile, to identify an appropriate disclosure-type narrative that would not include adversity and would serve as a reasonable control.

The differences between the Shared and Non-Shared adversity conditions were less stark, suggesting that participants were mostly distinguishing between the presence and the absence of an adversity more so than the content of the adversity. Although trained research assistants constructed the three vignettes in a way that tried to minimize other perceived differences between them, it is possible that some unintended, mundane details in the vignettes could have influenced perceived similarity with the three targets. Notably, the target in the non-shared adversity condition was described to have a little brother, which could have cued participants into the target’s young age, potentially creating a confound for felt similarity, especially given the relatively young make-up of the MTurk population (Levay, Freese, & Druckman, 2016).
Nevertheless, we did see a trending effect on similarity between the two adversity conditions in the expected direction ($p = .077$), suggesting that participants may have perceived a common ingroup identity between themselves and the target describing a medical adversity than the target describing an interpersonal adversity, which is consistent with our first hypothesis. However, given the trending nature of the result, as well as the fact that we did not see any differences in the positive outcomes traditionally stemming from the presence of a common ingroup identity (e.g. Nadler, Harpaz-Gorodeisky, & Ben-David, 2009) (in this study, reported compassion or willingness to write a supportive message) across the two adversity conditions, additional work is needed to determine whether this is replicable or would reach significance in future studies.

Interestingly, similarity also seemed to be affected by an interaction between the condition and the reported severity of one’s own medical adversity, in a manner partially consistent with what we predicted in our third exploratory hypothesis. Specifically, participants who reported having been significantly impacted by their adversity perceived the target to be more similar to them in the shared adversity condition compared to the control condition, but not in the non-shared adversity condition. Although severity did not moderate the relationship between condition and compassion, or willingness to write a supportive message, these preliminary results are an important follow-up to Lim and DeSteno’s (2016), as well as Ruttan, McDonnell, and Nordgren’s (2015) work, because they suggest that people might at least see themselves as belonging to the same adversity common ingroup as those with shared experiences, the more those adversity experiences have impacted them.

**General Discussion**
Adversity breeds prosociality (Staub & Vollhardt, 2008; Lim & DeSteno, 2016), and this can be especially true for those sharing the same struggles in life (Vollhardt & Staub, 2011). While a number of scholars have recently shunned parochial effects of empathy because they fall short of ensuring, above all, an egalitarian society (Bloom, 2017; Prinz, 2011a; Prinz 2011b), our approach sought to emphasize the prosocial intragroup and intergroup benefits of such parochialism. Specifically, in two studies, we attempted to merge two previously distinct models in the fields of communications and social psychology -- the Communal Coping Model (Lyons, Mickelson, Sullivan, & Coyne, 1998), stating that in the face of adversity, people in close intimate relationships come together to overcome struggles, and the Common Ingroup Identity model (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993), stating that superordinate identities can facilitate harmonious intergroup relations.

In Study 1, we attempted to show that after reflecting on a specific adversity (cancer), people feel similar, and have prosocial intentions towards a target described to face the same experience, in ways that may eliminate motivations that people have to otherwise remain divided (political animosity). Our data, however, remained restricted by the make-up of the sample’s experiences with cancer, which could be the reason why we did not find the hypothesized moderation between direct life experiences with the adversity, and the effect of reflection on prosocial outcomes. Study 2 sought to directly recruit from a sample affected by different kinds of medical adversity in order to remove variability in extent of identification with adversity, and additionally eliminated the intergroup factor in an attempt to cleanly map the parochiality effect.

The results of Study 2 were mixed and pointed to the need for further testing and replication, as the three conditions had means in the expected direction across outcome variables, but in many cases significant differences were only obtained between the shared adversity
condition and the control condition. Participants did not seem to distinguish between the two kinds of adversity; rather, both seemed to be important for downstream prosocial emotions and intentions. The trending effect for the difference between the shared and non-shared adversity conditions on felt similarity warrants further attention. While participants in the shared adversity condition could have felt more similar to the target, compared to the other two conditions, the lack of differences across the rest of the prosocial measures casts doubt on whether sharing an adversity (as opposed to perceiving any kind of suffering in a target) made a substantial difference on how compassionate participants felt, and their willingness to communicate support to the target.

There are a few possible reasons for the lack of differences across the adversity conditions on both Studies 1 and 2. One is that even though participants were asked to reflect on the feelings that their own experience with adversity has elicited, participants were not explicitly asked to experience-share or perspective-take with the suffering of the target in the vignettes. Nevertheless, in both studies, the average level of compassion was above the mid-point scale across conditions, which complicates the ability to find meaningful differences given the limited capacity to move responses upward an already high baseline. While it can be assumed, based on these results, that some form of empathizing has taken place, it is also possible that the high levels of reported compassion were due to social desirability pressures. In order to gain a better insight about the extent to which participants emotionally engage with an adversely-affected other in a genuine way, instructions to specifically empathize, that have typically elicited differences in classic empathy studies, (Batson, Polycarpou, Harmon-Jones, Imhoff, Mitchener, Bednar, Klein, & Hightberger, 1997) could be a reasonable modification for an immediate future replication of Studies 1 and 2.
Another possible reason the shared and non-shared adversity conditions did not differ from each other, is that we did not explicitly check whether people had impactful experiences with the adversity used in the non-shared adversity/active control condition (financial adversity in Study 1 and interpersonal adversity in Study 2). Even though we used random assignment of participants to conditions, it is possible that participants’ experiences with financial difficulties (Study 1) and relational struggles (Study 2) across the sample could have contributed to their elevated levels of concern for the target in the non-shared adversity condition, which is a potential confound that would need to be assessed in future replication attempts.

The results of Study 2 suggest that the severity of participants’ adversity (how much they were impacted by it) played an important role in how similar they perceived themselves to those in both interpersonal and medical adversity conditions, which nicely complements prior work on the link between severity and prosociality (Lim & DeSteno, 2016; Greenberg, Baron-Cohen, Rosenberg, Fonagy, & Rentfrow, 2018). This exploratory finding suggests that perhaps, even before survivors behave prosocially towards suffering others, they first and foremost perceive them as similar the more they have suffered themselves. This could imply an effect of uniqueness - it is possible that more severe adversities are experienced as more unique, and an experience feels more shared at higher levels of impact.

Relatedly, the level at which someone construes their adversity could impact how they respond to adversely-affected others – while some might see different adversity experiences as unrelated, others might perceive interpersonal adversity as intimately tied to medical or financial issues (Vollhardt, 2009). This implies that a potential future direction would be to also check for the level at which individuals construe their suffering, and examine it as a potential moderator of the effect of shared adversity on felt similarity and prosocial intentions. Importantly, it would be
critical to also examine the extent to which a suffering target is being responded to compassionately *only* in relation to their adversity experience, or whether a general preference or favoritism towards them is formed after an adversity-based ingroup identity is created. While our studies did not attempt to de-couple these two possibilities, future work should aim to theoretically and methodologically test for any meaningful distinction between the two outcomes.

Further, future work should discern when, how, and to whom adversity identities are important. Methodologically, our studies assumed that adversity contextually dominates and thus is easily brought to the forefront of people’s minds, echoing work on stereotype threat activation (Devine, 1992; Shih, Pittinsky, & Ambady, 1999; Yopyk, & Prentice, 2005). It is important, however, to explore the boundary conditions of this assumption, particularly following calls for classic work on identity salience and centrality (Stryker, 1968) to acknowledge the importance of contextual nuances (Thoits, 2020). For example, there are findings to support both the idea that identities based on adversity are maintained after the adversity has been overcome (Reeves, Merriam, & Courtenay, 1999; Gillen, 2005; Shakespeare-Finch, & Copping, 2006; Grossman, Sorsoli, & Kia-Keating, 2006), and, on the other hand, that they become less salient as the adversity’s impact wanes (Ruttan, McDonnell & Nordgren, 2015). Empirically testing such questions would require experimental manipulation of relevant variables such as length, type, and target of adversity, and would help establish boundary conditions for when an adversity gives the clearest signal to form an identity and when, in turn, adversity identities have maximal, sustainable, prosocial impact.

The challenges presented by experimentally manipulating adversity in a successful way are many –there are ethical implications of directly inducing adversity (DiMenichi & Richmond,
2015), which in order to be avoided one would need to refrain from inducing any sort of deeply traumatic or upsetting experience. However, given that severity of adversity has been found to be an important predictor of prosociality following adverse events (Lim & DeSteno, 2016), as well as a significant moderator in our own data in Study 2 when it comes to felt similarity with those who suffer in a similar way, it is unlikely that any superficial adversity that would be introduced in a lab setting would result in an appropriately severe and life-changing effect.

Although Study 2 used TurkPrime filters to identify workers with reported medical issues on their profile, a more conservative approach could use a quasi-experimental design comparing a field population directly recruited from an adversity-relevant setting, such as a hospital or rehabilitation center, with a population unaffected or unrelated with such adversity. The practical challenges of easily obtaining a sample in a cost-effective and time-effective way would mean that online venues could also provide a good solution to participant recruitment. Specifically, people turn to online support groups quite frequently (Wright, 2000) and especially during the COVID-19 pandemic (Ellis, 2020), making them an attractive option for the purposes of our research, although questions about potential confounds of self-selecting into such groups would need to be considered.

**Implications for Intergroup Relations & Future Directions**

Our approach and findings extend the literature on communal coping and common ingroup identity in important ways. First, our study was the first theoretical and empirical attempt at bridging the two models, proposing that construal of communal facing of stressors need not to be a process constrained within the family or relationship unit (Afifi, Hutchinson, & Krouse, 2006; Rohrbaugh, Shoham, & Mehl, 2015). Instead, based on a wealth of literature spanning across disciplines, we suggested that survivors of adverse life events may construe a
new superordinate identity that not only can provide meaning in one’s life (Park, 2010; Ryff, Keyes, & Hughes, 2003), but can result in beneficial parochial attention that may heal intergroup divides. While we did not see evidence for shared adversity effects on intragroup or intergroup outcomes, our argument is consistent with prior correlational work associating traumatic experiences to trauma-specific prosociality and reduction in intergroup bias (Vollhardt & Staub, 2011).

Some theoretical limitations and considerations as they relate to the effects of adversity-based parochial empathy on reduction of intergroup bias are also important to discuss. While Study 2 did not introduce an intergroup factor into the design in order to isolate the parochiality effect in the absence of intergroup motivations, much how the Communal Coping Model describes communal appraisals of adversity (Lyons, Mickelson, Sullivan, & Coyne, 1998), Study 1 used political affiliation as the divisive identity upon which we could see potential improvements in bias when adversity is shared. There are three important considerations when conducting follow-up studies to detect such reduction in intergroup bias –The first is that Study 1 did not include an explicit measure for assessing bias, and the increase in compassion, felt similarity, and prosocial intentions when adversity is shared was an indirect way of measuring such reduction. However, future steps should include a more direct way of measuring bias, in order to confidently assume the presence of bias reduction.

The second is that if an individual differs from another in any capacity, then there is ground for an ingroup-outgroup categorization. With that in mind, an individual with an adversity that is different from one’s own could still be considered an outgroup, and on those grounds some could argue that Study 2 did include an outgroup factor by introducing a non-shared adversity condition. Nevertheless, the extent to which a shared common ingroup identity
is meaningful in indicating reduction in bias is the extent that the outgroup is a competitive one – this harkens back to the point we made earlier about a high baseline of compassion. The benefits of a shared common ingroup identity based on adversity would be evident in two individuals with no motivations to be competitive, but the benefits would be especially apparent in the same two individuals, if there are motivations that keep them in direct conflict. In other words, the benefits of a common ingroup identity based on adversity are not negated if there is no intergroup bias (Study 2), but they should be accentuated if there is (what we hypothesized for Study 1) because of a greater ability to move upwards on measures of prosociality.

Third, the nature of the intergroup identity needs to be carefully selected, and the adversity itself might determine which identities are more or less relevant or appropriate to introduce, to test whether adversity-based parochialism reduces intergroup bias. This is because identity and experience are two constructs that are intimately connected. For example, adversity identities that are rooted in group discrimination are inextricably linked with disadvantaged minority identities and it would be both methodologically as well as ethically questionable to attempt to understand membership to such identities as independent of other relevant group characteristics (e.g. in the case of Black and White participants, adversity can be classified in a domain other than racial disparity). For this reason, future work should attempt to create a potential continuum or taxonomy of how independent certain adversity identities are to the identity that causes the adversity in the first place, and decisions on what can be used methodologically should be an informed choice made with caution.

An example of this can be found in Study 1. Qualitative responses from the open-ended message written to the suffering target Abigail who was presented as a political opponent suffering from cancer, suggest that the adversity was not seen as unrelated to the political
affiliation, as people made comments invoking political stances on healthcare rights. Further complicating a choice of political ideology as an intergroup factor, work on stereotypes about compassion across the ideological spectrum (Scheffer, Cameron, McKee, Hadjiandreou & Scherer, 2020) would also suggest that political identities are not independent from ideas of suffering and victimhood (e.g. certain groups are viewed as “cold-hearted”, “bleeding-hearts”, or “snowflakes”). While an adversity-based membership is likely to be seen as an additional identity, and therefore would be similarly held alongside of other important identities that one holds for the self (Ufkes, Calcagno, Glasford, & Dovidio, 2016), more work is needed to identify when and how adversity experiences amplify or reduce intergroup bias, when the two are closely or even loosely connected.

The complexities of adversity-based identities overlapping with competing intergroup motivations may point to new directions for theoretical and methodological development of this framework, in addition to what the Common Ingroup Identity Model already suggests. For example, a neighboring model, the Realistic Group Conflict Theory (RGCT) model (Jackson, 1993) acknowledges that it might be inevitable that groups will sometimes compete, but that groups will also come together when sufficient common goals are activated, and shared outcomes are communally desired. If an identity is in conflict or competition against an adversity-based identity, the RGCT would suggest that the extent to which prosociality and collective action in service of the affected community are seen as shared goals (e.g. advocating for legislative action to protect civil rights), a cost-benefit analysis might determine the likelihood of cooperation and harmonious interaction, which might also involve considerations of moral obligation to the outgroup (Warner, Wohl, & Branscombe, 2014).
Future directions would also need to take into account considerations of individual variation in the extent to which someone would want to identify as a survivor in the first place – while some people might gain strength, agency, and a sense of purpose through common ingroup identities that are based on adversity, others might find such an experience to be traumatic, or might experience re-victimization (Layne, Warren, Saltzman, Fulton, Steinberg, & Pynoos, 2006). A future avenue for assessing such individual differences and the extent to which they predict willingness of adopting adversity-based identities could incorporate work and measures from mind attribution theory (Waytz, Gray, Epley, & Wegner, 2010) and self-dehumanization (Bastian & Crimston, 2014). These could assess the degree to which people perceive themselves at different spectrums of agency and patiency (Gray & Wegner, 2012) after adopting relevant adversity-based identities, and how that relates to prosocial emotions and behavior for fellow survivors.

A Note About Adversity Groups & COVID-19

Lastly, the COVID-19 pandemic might impact how future data relevant to adversity, particularly medical adversity, is collected and interpreted. While research on this area is still new, people’s perceptions of COVID-19 as an adversity-based common ingroup identity may very well challenge how we have conceptualized such identities in this work, given the pandemic’s scale and impact (Center for Disease Control [CDC], 2020). For example, it could be the case that the number of people affected by COVID-19 is so large, that it’s rendering an ingroup identity an irrelevant or ineffective category, because of the lack of uniqueness in the suffering experience. On the other hand, the relationship between COVID-19 and the formation of an ingroup identity could be moderated by whether the effect of the pandemic on a particular group has been medical, economic, or interpersonal, or a combination of the three.
Conclusion

Our work provided mixed results on the hypothesized links between shared adversity, common ingroup identity, and prosocial parochiality. While our results are limited, they do warrant attention – the argument and hypothesis for adversity-based parochiality leading to improved intergroup outcomes should be investigated in future work, aiming to recruit populations from adversity-specific environments, while carefully considering the complexities that life adversity may imply for intergroup relations.
References


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Appendix: Measures for Studies 1 and 2

Compassion Scale (1 - Not at all to 7 - Extremely)

Study 1/Study 2
1. How sympathetic do you feel toward Abigail/the person?
2. How warm do you feel toward Abigail/the person?
3. How compassionate do you feel toward Abigail/the person?
4. How touched were you by Abigail/the person?
5. How urgent do the needs of Abigail seem/the person?
6. To what extent do you feel that it is appropriate to give money to aid Abigail/the person?
7. How much do you value the welfare of Abigail/the person?
8. How important is it to you that Abigail/the person be happy?
9. How important is it to you that Abigail/the person not suffer?

Similarity Scale

Study 1 (1 – I Absolutely Disagree to 10 – I Absolutely Agree)
1. I feel similar to Abigail.
2. I have a lot in common with Abigail.

Study 2 (1 – Not at all similar to 10 – Extremely similar)
1. How similar do you feel to the person in the story you've read?
2. How similar do you feel to people that have similar stories to the one you've read?

Supportive Message

Study 1
1. Use the space below to write a supportive message that you would send to Abigail.

Study 2
1. Would you like to write a message to the person?

Willingness to interact (1 - Not at all to 7 - Extremely)

Study 1
1. How willing would you be to interact with Abigail?
**Donation (open-ended)**

**Study 1**

1. Below, there is a list of charities and causes. If you would be willing to donate to any of these, please type the amount next to the charity or cause:

   - American Red Cross
   - Republican National Committee (RNC)
   - Habitat for Humanity
   - United Way
   - American Cancer Society
   - The Salvation Army
   - Greenpeace
   - St. Jude
   - Democratic National Committee (DNC)
   - World Wide Fund (WWF)

**Personal Experience**

**Study 1**

1. Have you ever been diagnosed with cancer?
2. Has anyone in your immediate family or other close family member or friend ever been diagnosed with cancer?

**Identification with political party**

**Study 1**

1. I feel a bond with other members of the Democratic/Republican Party.
2. I am committed to the Democratic/Republican Party.
3. Supporting the Democratic/Republican Party is an important part of my identity.

**Frequency and Severity**

**Study 2**

1. How much did this experience affect you? (self)
2. How frequently do you think about this experience? (self)

1. How much do you think the experience described in the story has affected the person? (target)
2. How frequently do you think the person thinks about this experience? (target)