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Self-isolation for the self-centered: Negative framing increases narcissists' willingness to self-isolate during COVID-19 through higher response efficacy

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ABSTRACT

The coronavirus (COVID-19) pandemic has come with various health recommendations restricting personal freedom, such as social distancing and self-isolation. Considering the personal sacrifices involved, not all individuals are equally willing to comply with such recommendations, which might pose a health hazard further down the line. In a high-powered study ($N = 800$), we show that individual differences in narcissism influence the willingness to self-isolate during pandemics, with individuals high (vs. low) in narcissism being less willing to self-isolate. However, this tendency can be offset by tailored message framing. Specifically, individuals high (vs. low) in narcissism are more (vs. less) willing to self-isolate when information is framed negatively (vs. positively); an effect mediated by the perceived response efficiency of social distancing during outbreaks of infectious diseases. Hence, taking individual differences in narcissism into account when developing tailored communication campaigns constitute a promising way to combat the current pandemic.

1. Introduction

SARS-CoV-2 emerged in late 2019 and spread all over the world within months. Experts advised two critical measures to lower the spread of the disease: wearing masks and social distancing. However, Donald Trump initially defied these recommendations, with his presumed narcissism discussed as one of the prime culprits of this noncompliance (Eddy, 2020). In the present research, we examine whether narcissists are indeed more reluctant to follow health guidelines during pandemics and, if so, which strategies can boost their compliance intentions.

Narcissism is a multifaceted construct, but the literature points at two critical characteristics of narcissists—self-indulgence or grandiosity, and treating others as inferior (Emmons, 1987; Miller et al., 2011; Wink, 1991). Narcissism moderates the choice of coping strategies that people adopt when they face stressors such as pandemics (Ng, Cheung, & Tam, 2014). Active/constructive coping strategies focus on solving problems, and are deemed optimal, whereas avoiding/destructive strategies are usually less efficient (Carver, Scheier, & Weintraub, 1989; Jonason, Talbot, Cunningham, & Chonody, 2020). Narcissism correlates negatively with constructive coping in women and positively with destructive coping in men (Jonason et al., 2020). Likewise, during the COVID-19 pandemic, studies have found narcissistic components as negatively related to compliance with health guidelines (Nowak et al., 2020; Zajenkowski, Jonason, Leniarska, & Kozakiewicz, 2020; Zitek & Schlund, 2020).

Recent studies have investigated whether COVID-19-prevention messages may influence compliance with health guidelines as a function of narcissism. For example, Blagov (2020) demonstrated that people high in narcissism were reluctant to rank compassionate public health messages as the most appealing, whereas Zitek and Schlund (2020) found that appeals to one's self-image did not increase compliance among narcissists (Zitek & Schlund, 2020). These findings suggest that the message strategies meant to promote compliance rates should be framed differently for narcissists compared to their less narcissistic counterparts.

Narcissists have been shown to experience higher stress during the pandemic, with this link being mediated by their lower response efficacy (Liu, Lithopoulos, Zhang, Garcia-Barrera, & Rhodes, 2020). Notably, response efficacy predicts the effectiveness of health messages in the

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final stage of the decision-making process (Block & Keller, 1998), and higher response efficacy has been linked to a lower likelihood to reject fear-based appeals (Lewis, Watson, & White, 2010). Consequently, high response efficacy is vital for message framing to work.

Considering that positively framed messages are inefficient among narcissists during the pandemic, we test whether message framing differentially impacts the willingness to self-isolate among people high (vs. low) in narcissism and whether this effect is mediated by response efficacy. Our study scrutinizes factors that can increase compliance with health guidelines among narcissists, who show lower adherence to these recommendations than people low in narcissism. However, our results have implications that go far beyond the narcissists themselves, as recent estimates show that one infected person can infect 5–11 other individuals (Kochańczyk, Grabowski, & Lipniacki, 2020). As such, our findings contribute to the literature on how message framing can reduce the spread of infectious diseases and promote public health if communicated appropriately to the specific target group in question.

2. Method

The study was part of a larger data collection designed to examine effective strategies for public health communication during the COVID-19 pandemic (cf. Otterbring, Festila, & Folwarczny, 2021), which complied with the regulations on the conduct of research involving human subjects. A convenience sample of eight hundred participants, fluent in English, were recruited from the online panel Prolific (51.7% female; $M_{age} = 30.18$ years, $SD = 10.44$). Participants read and accepted an informed consent form before commencing the study. Based on the exclusion criteria described in Otterbring et al. (2021), the final sample comprised 743 participants (51.1% female; $M_{age} = 30.10$ years, $SD = 10.36$), but including the entire sample does not change the nature or significance of the results.

Participants were randomly assigned to either a positive framing condition, which was formulated in terms of gains (people that can be saved), or a negative framing condition, which was formulated in terms of losses (people that can die), with the information provided being objectively identical across conditions. The disease type was also varied across conditions to be either hypothetical (the Asian Disease) or real (COVID-19). After reading the respective scenarios, participants were asked to indicate how willing they would be to self-isolate from others to comply with the respective program's guidelines (1 = not at all willing, 5 = extremely willing; Taylor et al., 2009) and to rate the perceived efficacy of the recommended protective behavior; in this case, social distancing during the outbreak of infectious diseases (1 = completely disagree, 7 = completely agree; Kleczkowski, Maharaj, Rasmussen, Williams, & Cairns, 2015). We further measured narcissism using 11 items from the NPI-16 (Ames, Rose, & Anderson, 2006), where participants are exposed to pairs of statements and are asked to choose the statement that best applies to them. We shortened the scale to 11 items to minimize the burden associated with using longer scales, and excluded items that were deemed to be similar to those we relied on. In each pair, one statement reflected high levels of narcissism, and the other statement low levels of narcissism. The narcissism score was computed as a sum across all items, with narcissistic responses coded as 1 and the absence of such responses coded as 0. Therefore, a higher score reflects a higher level of narcissism. Considering that Cronbach's α is a function of the number of items in a scale (Cortina, 1993), the reliability of our 11 items (α = 0.63) is comparable to the reliability estimates that exist for the entire NPI-16 instrument (cf. Ames et al., 2006), thus supporting the rationale behind our used set of items.

3. Results

To test the moderating role of narcissism into the effect of framing on participants' response efficacy of social distancing and their willingness to self-isolate, respectively, we firstly conducted two simple moderation analyses on each of these variables. Next, we proceeded with a moderated mediation analysis to examine our prediction that the impact of framing on participants' willingness to self-isolate would be mediated by response efficacy and moderated by their narcissism levels.

For the first simple moderation analysis (Model 1; Hayes, 2017), framing (positive = 0; negative = 1) served as the predictor, narcissism (continuous) served as the moderator, and response efficacy (continuous) acted as the outcome variable, with disease type (0 = Asian Disease; 1 = COVID-19) as a covariate. This analysis revealed no significant impact of framing on response efficacy ($b = 0.02$, $t = 0.27$, $p = .78$), but a significant impact of narcissism ($b = -0.04$, $t = -1.94$, $p = .05$), with more narcissistic participants being less inclined to think that social distancing would lessen their chances of developing the given disease. Disease type as a covariate was nonsignificant ($b = 0.05$, $t = 0.55$, $p = .58$). However, the effect of framing was moderated by participants' narcissism levels ($b = 0.10$, $t = 2.43$, $p = .01$). A floodlight analysis (Spiller, Fitzsimons, Lynch Jr, & McClelland, 2013) revealed that the moderator value at which the interaction becomes statistically significant, known as the Johnson-Neyman point, occurs at a mean-centered value of 2.11 on narcissism (corresponding to a sum score of 4.23 on narcissism, $t = 1.96$, $p = .05$). This means that positive (vs. negative) framing significantly decreased perceived response efficacy of social distancing for those 12.65% of participants whose mean-centered value of narcissism was equal to or above 2.11; see Fig. 1.

A similar simple moderation analysis on willingness to self-isolate revealed no significant impact of framing on this variable ($b = 0.03$, $t = 0.48$, $p = .63$), but again a significant impact of narcissism ($b = -0.03$, $t = -2.03$, $p = .04$), with more narcissistic participants being less inclined to self-isolate. Unlike the former analysis, disease type as a covariate was significant ($b = 0.11$, $t = 1.96$, $p = .05$), such that participants were more willing to self-isolate in the case of the real pandemic case (COVID-19) compared to the hypothetical disease (the Asian Disease). Crucially, and consistent with the former analysis, the effect of framing was moderated by participants' narcissism levels ($b = 0.07$, $t = 2.57$, $p = .01$). A floodlight analysis revealed that the Johnson-Neyman point occurs at a mean-centered value of 1.55 on narcissism (corresponding to a sum score of 3.67 on narcissism, $t = 1.96$, $p = .05$). This means that positive (vs. negative) framing significantly decreased participants' willingness to self-isolate for those 22.75% of participants whose mean-centered value of narcissism was equal to or above 1.55; see Fig. 2.

Finally, we conducted a moderated mediation analysis (Model 8, Hayes, 2017) to test our proposed mediation path, whereby the perceived response efficacy of social distancing mediates the effect of framing on participants' willingness to self-isolate, with this pattern being moderated by participants' narcissism levels. Indeed, supporting our theorizing, the results revealed that the index of moderated mediation was statistically significant ($b = 0.02$; 95% CI = [0.003, 0.032]).

4. Discussion

The current study found that positive (vs. negative) message framing decreased the willingness to self-isolate among people high (vs. low) in narcissism, which was mediated by reduced response efficacy. Additionally, people high in narcissism were less willing to self-isolate and less inclined to believe that social distancing could lower their chances of contracting a disease. Thus, our results on response efficacy are consistent with recent related research (Liu et al., 2020; Nowak et al., 2020; Zajenkowski et al., 2020; Zitek & Schlund, 2020). Moreover, when faced with a real disease (i.e., COVID-19), participants were more willing to accept self-isolation than in the case of a hypothetical disease.

Whereas high narcissism may help build resilience against specific stressors (Coleman, Pincus, & Smyth, 2019), our findings indicate that it may also trigger resistance to behaviors aimed at preventing the spread of infectious diseases. Therefore, our results align with earlier findings showing that narcissism appears to facilitate destructive rather than

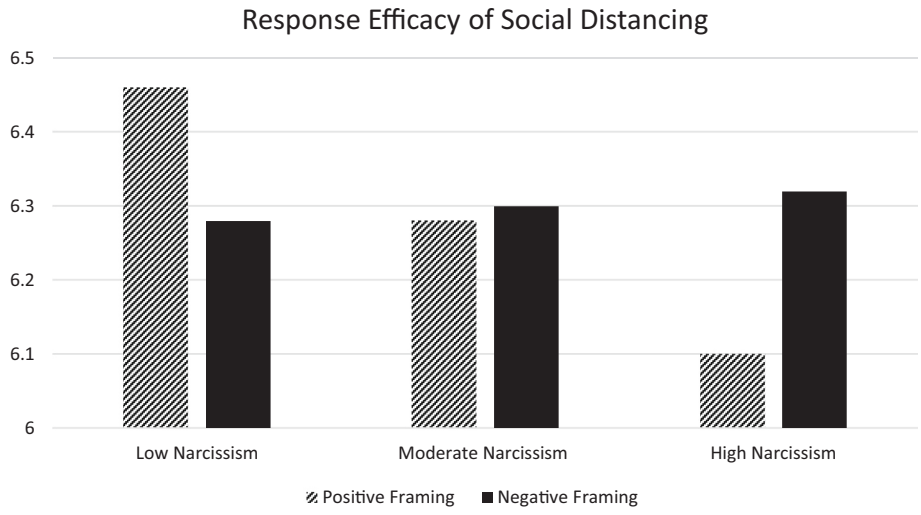

Fig. 1. Framing effects on participants' perceived response efficacy of social distancing during the outbreak of infectious diseases, depending on their narcissism levels.
Note: Low and High = −1 and + 1 *SD* from the narcissism mean; Moderate = mean on narcissism.

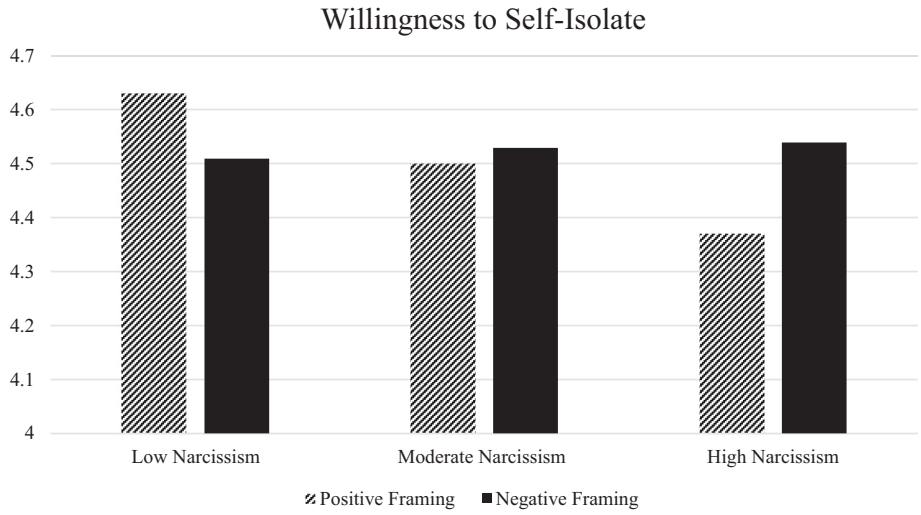

Fig. 2. Framing effects on participants' willingness to self-isolate during infectious diseases depending on their narcissism levels.
Note: Low and High = −1 and + 1 *SD* from the narcissism mean; Moderate = mean on narcissism.

constructive stress coping strategies (Jonason et al., 2020). However, this undesired effect can be reversed when messages are framed negatively, as such messages induce higher response efficacy and compliance intentions than positively framed messages among people scoring high (v. low) in narcissism.

A limitation of our study is the way we measured narcissism. For example, we only used a subset of the NPI-16 items and excluded items we deemed to be similar to those we relied on. Yet, since the reliability of our 11 items parallels published reliability estimates for the entire scale, we do not perceive this methodological decision as particularly problematic. Nevertheless, the NPI-16 captures only one dimension of narcissism (Ames et al., 2006), but grandiose and vulnerable narcissism entail different stress coping strategies (Ng et al., 2014). Additionally, alleviating the consequences of the pandemic requires a collective effort and related work on collective narcissism shows that it functions differently from individual narcissism (De Zavala, Cichocka, Eidelson, & Jayawickreme, 2009; Golec de Zavala & Lantos, 2020). Hence, it is plausible that adhering to health recommendations may also depend on collective narcissism, albeit in a somewhat different way than how narcissism was operationalized in the present study. This potential relationship between message framing, collective narcissism, response efficacy, and compliance with health guidelines warrants further investigation.

Narcissists' tendencies to feel invincible and to show little concern for others may negatively affect their well-being and the well-being of others across a variety of decision domains (Hill, 2017). This becomes distinctly problematic during pandemics, as one individual's misbehavior can set off a chain reaction of infections. Narcissism may, therefore, represent a behavioral health risk during the COVID-19 pandemic.

Using a message framing approach, the current research takes the first step to highlight the importance of tailored COVID-19 communication. Specifically, our research shows that one way to offset narcissists' destructive tendencies during the COVID-19 pandemic is to use loss frames in targeted communications. Whereas positively framed messages may encourage most people to take the necessary preventive measures, narcissists may not benefit from them and seem, instead, to respond better to negatively framed messages. Such tailored communication is becoming popular in medicine through mobile apps (Holmen, Wahl, Småstuen, & Ribu, 2017); hence, a similar solution can help to

combat the current pandemic.

CRediT authorship contribution statement

Tobias Otterbring: Conceptualization, Methodology, Formal analysis, Writing – original draft, Writing – review & editing, Project administration, Funding acquisition. **Alexandra Festila:** Conceptualization, Methodology, Investigation, Data curation, Writing – review & editing. **Michal Folwarczny:** Conceptualization, Writing – original draft, Writing – review & editing.

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