



For me or for others? The better-than-average effect and negative feelings toward average others during the COVID-19 pandemic

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Abstract

During the first outbreak of the coronavirus disease 2019 (COVID-19), many people expressed hatred toward others whom they believed were responsible for the situation. Such increase in negative affect could be resultant of the better-than-average effect (BTAE), which refers to the phenomenon of believing that one is superior to average others. This study investigated the relationship between the BTAE and emotional valence toward others and tested whether the relationship was moderated by allocentric goals (i.e., concerned with the interests of others rather than themselves) and culture. Participants from the U.S. ($N=210$) and South Korea ($N=214$) were asked about their perceptions on whether they were better than others at preventing the COVID-19 infection, how they felt about others regarding COVID-19, and for whom they were preventing COVID-19. The results indicated that people showing more BTAE in relation to preventing the COVID-19 infection reported more negative emotional valence toward others, but the relationship was moderated by allocentric goals. In particular, the U.S. participants with higher allocentric goals reported less negatively valenced emotions, while the same was not found in Korean participants. The findings suggest the power of allocentric goals in diminishing the BTAE in some cultures, which may possibly explain the negative emotions some people experience when following social distancing rules.

Keywords Better than average effect · Self-enhancement · Allocentric goals · Cultural differences

Introduction

The first outbreak of the coronavirus disease 2019 (COVID-19) caused not only significant health adversities among people, some even resulting in death, but also affected diverse areas of their daily lives, including social and emotional aspects (Holmes et al., 2020). During the COVID-19 pandemic, many people have been at risk of experiencing severe emotional distress, depression, and anger (Huang & Zhao, 2020; Montemurro, 2020). Among such negative emotions, one prominent social phenomenon is increased anger and hatred toward people in specific groups who some people believe are responsible for the spread of COVID-19 (Xu et al., 2021). The media has reported discrimination and verbal abuse targeting groups such as Asians and migrant

workers across the United States (U.S.) and European countries during COVID-19 (e.g., Gottlieb & LeBas, 2020). For instance, in the U.S. in March 2021, a 21-year-old man killed eight people, including six Asian-American women, in Atlanta, which was concluded to be a hate crime targeting this population. Further, people have expressed negative feelings not only toward specific group members but also toward unspecified, ungrouped others during the COVID-19 pandemic (Strohlic, 2020). Why do people experience negative emotions toward others in this life-threatening situation? To address this question, the current study explored the better-than-average effect (BTAE), which forms the basis of cognitions related to one's superiority over others (Zell et al., 2020) and further engenders feelings of supremacy (Hage, 2012). The impact of individuals' allocentric and egocentric goals was also assessed.

The Better-Than-Average Effect and Self-Enhancement

The BTAE is a social comparative bias in which people evaluate their performance or abilities more favorably than they

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do those of average others (Alicke et al., 1997). For example, most people overestimate their grammatical ability (Kruger & Dunning, 1999) and morality (Tappin & McKay, 2017), and underestimate their personal risk of disease (Rothman et al., 1996). However, since not all individuals are better than average, the BTAE shows that most people are biased toward optimistic self-perceptions (Taylor & Brown, 1988).

Research suggests that the BTAE operates under the mechanisms of self-enhancement (Alicke, 1985; Brown, 1986; Sedikides & Strube, 1997). With the assumption that concern for the self is the most fundamental human motivation (Broad, 1949), it has been suggested that people are motivated to perceive and evaluate themselves favorably to maintain a positive self-perception (Alicke & Govorun, 2005). Among self-enhancement mechanisms, researchers have suggested two by which self-enhancement may be maintained: cognitive and situational.¹

According to the cognitive perspective, people selectively perceive information or attend to comparison targets that confirm a positive self-image. Research suggests that people who have such biases retrieve favorable information about themselves from memory (Sedikides & Gregg, 2008). Further, researchers have found that people tend to focus on themselves rather than on average others (i.e., focalism), weigh highly their own desirable behaviors or characteristics (i.e., egocentrism), and evaluate others in a way that promotes favorable self-perceptions (Alicke et al., 1997). Such cognitive strategies lead people to believe they are superior to others.

Based on the cognitive approach to understanding self-enhancement mechanisms, the BTAE provides a possible explanation for emotions toward groups during COVID-19. From this perspective, people would selectively perceive positive information about their own COVID-19 preventive behaviors to feel good about themselves (e.g., Swann Jr & Brooks, 2012). People may have a better recollection of times when they follow COVID-19 prevention rules than when they violate such rules. In contrast, people may be more likely to perceive when others violate the rules than when others follow the rules. Consequently, people may tend to believe that they follow COVID-19 prevention rules more strictly than average others. Accordingly, it was hypothesized that people who believed that they were better at preventing the COVID-19 infection (e.g., practicing good hygiene and social/physical distancing) would express more negative affect toward others who did not engage in the COVID-19 prevention measures well (Hypothesis 1).

The situational perspective suggests that some aspects of situations lead people to boost or diminish the BTAE for

the sake of self-enhancement. Consistent with the situational perspective, the magnitude of the BTAE varies according to context. For example, if people perceive that the context is abstract or vague, they exhibit a greater BTAE (Dunning et al., 1989; Logg et al., 2018; Van Lange & Sedikides, 1998). In addition, people exhibit a greater BTAE if they perceive that the context references controllable positive traits or personally and culturally important entities (Alicke, 1985; Brown, 2012; Sedikides et al., 2003). These findings suggest that context plays a major role in promoting a superior self-perspective (Zell et al., 2020).

From the situational perspective, people would exhibit the BTAE if situations are personally and culturally important (e.g., Brown, 2012; Sedikides et al., 2003), especially when it is not controllable (Alicke, 1985; Dunning et al., 1989), such as with the COVID-19 pandemic or the threat of war. As people are likely to exhibit a high BTAE during the COVID-19 pandemic, they would attribute positive outcomes to themselves and epidemic spread to others (Bradley, 1978; Zuckerman, 1979), which could cause negative feelings toward others or outgroups.

The current study investigated the situational factors underlying behavioral goals. People often exhibit a self-serving bias and behave in egocentric ways; however, most people also have concern for others and can behave in allocentric ways (Crocker et al., 2017). Evolutionary psychology posits that altruistic behaviors are not truly altruistic; rather, behaviors such as helping or caring for one's offspring or kin are ultimately initiated by self-centered goals (e.g., Murray et al., 2006; Neel et al., 2016). In contrast, researchers in the field of social motivation have suggested that, as a component of human nature, people have innate, genuine motives for prosocial, allocentric goals (Mikulincer & Shaver, 2010; Shaver et al., 2010). People can engage in prosocial behavior with the aim of benefiting the well-being of others (Mikulincer & Shaver, 2010) or even of humankind (Sprecher & Fehr, 2005). Such behaviors are observed among both adults and children (Li et al., 2013).

Given that people have motives not only concerning themselves (i.e., egocentric goals) but also with respect to others (i.e., allocentric goals), the BTAE can be moderated by conflict between one's primary and secondary goals. In a review of literature on prosocial motives, Mikulincer and Shaver (2010) suggested that allocentric goals are minimized or intensified by the extent to which an individual holds selfish attitudes and values. Such a moderation effect, in turn, can affect people's emotions toward average others. Studies suggest that allocentric goals, which are also termed "otherishness" (Crocker et al., 2017; Grant, 2014), relate to more positive emotions, greater life satisfaction, and lower depression compared to self-focused goals (Aknin et al., 2013; Dunn et al., 2008; Wiwad & Aknin, 2017). However,

¹ This is also referred to as a motivational approach (Zell et al., 2020).

egocentric goals, such as collective narcissism, reflect hostile intentions toward outgroups (Golec de Zavala et al., 2019).

An integrative framework that includes both the cognitive and situational approaches to the BTAE might facilitate a more profound understanding of the social issue of hatred toward others during the COVID-19 pandemic. Specifically, it was hypothesized that the predominant goal would subtly alter the impact of the BTAE on negative feelings toward average others (Hypothesis 2). Although individuals in general may think they perform better than others at preventing COVID-19 infection in daily life (e.g., practicing good hygiene and social/physical distancing), if the underlying motivation is allocentric rather than egocentric, such individuals would express relatively less negative emotion toward others who they consider to be performing poorly at preventing the COVID-19 infection.

Culture and Allocentric Goals

The concept of allocentric goals could differ across cultures. Specifically, whether allocentric goals would have the same effects in individualistic and collectivistic cultures is another topic of interest. People in individualistic cultures tend to separate the self from the social context and emphasize autonomy and independence, which is called independent self-construal (Markus & Kitayama, 1991). However, people in collectivistic cultures tend to interpret the self as part of the social context and consider themselves to be reflections of the characteristics of their society, which is called interdependent self-construal. In this sense, there is likely to be a distinct boundary between the self and others (or between the in-group and outgroup) in individualistic cultures because of independent self-construal, whereas in collectivistic cultures, this boundary is likely to be ambiguous or overlapping because of interdependent self-construal (Fiske et al., 1998). Thus, relative to those with interdependent self-construal, people with independent self-construal may more clearly separate their own interests from those of others.

Self-construal theory suggests that altruism or allocentric goals can be more salient for independent rather than interdependent individuals. From the altruistic perspective, researchers have suggested that independent individuals are primarily concerned with what is beneficial to them (De Cremer & van Lange, 2001); however, this does not necessarily mean they are selfish. Interdependent individuals may believe that what benefits others will eventually benefit them as well (Finkelstein, 2010). The lack of a clear distinction between self-interests and the interests of others may lead interdependent individuals to perceive allocentric goals as being more conventional, rather than salient, behavioral goals. If that is the case, setting allocentric goals would have

less effect on the behavior of individuals with interdependent self-construal than on those with independent self-construal.

Therefore, it was hypothesized that the moderating effect of altruism on the relationship between the BTAE and the predominance of allocentric goals would differ across cultures. Specifically, the predominance of allocentric goals would be less likely to affect the relationship between the BTAE and negative emotions toward others in cultures with interdependent self-construal than in those with independent self-construal (Hypothesis 3).

Overall, this study had three objectives: a) to study the influence of the BTAE on negative emotion generation; b) to analyze the moderating role of egocentric/allocentric goals in this relationship; and c) to compare this relationship and its effects between cultures.

Methods

Participants

A priori power analyses using G*power (Faul et al., 2009) indicated that the sample size needed to detect an effect size of $d = .15$ with 95% power was 146 individuals in each group. To sufficiently detect the hypothesized effect size, 210 participants were recruited from the U.S. ($M_{\text{age}} = 36.47$, $SD_{\text{age}} = 10.68$; 34.8% female) via Amazon's Mechanical Turk (www.MTurk.com). Participants were born in or had resided for more than 20 years in the U.S. ($M_{\text{years}} = 33.75$, $SD_{\text{years}} = 11.95$). All participants received monetary compensation (\$1.00) upon completion of the survey. Additionally, 214 participants were recruited ($M_{\text{age}} = 25.24$, $SD_{\text{age}} = 8.80$; 69.3% female) online in Korea. Participants were compensated by course credit or a monetary reward of 1000 Korean won for their participation.

Procedures

The survey was conducted online and introduced as a study of the COVID-19 pandemic and associated changes in daily life. Participants who volunteered for the survey approved the online consent form and completed the survey, including items on the BTAE, behavioral goals, and emotional valence toward others. The survey also included questions on demographic information and duration (in months) since the COVID-19 outbreak in the respondent's local community to be used as control variable in the analysis. For the two language versions, all items were translated by a bilingual person, and another bilingual person reviewed and approved the translation via a forward- and back-translation process. An ethics committee for human research approved the study protocols.

Table 1 Summary of means, standard deviations, and correlations in the U.S. and Korean samples

Sample	Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5
U.S.	1. Gender ^a	1.35	0.48	–				
	2. Age	36.47	1.48	.08	–			
	3. Months of COVID-19 ^b	2.53	0.83	.11	.02	–		
	4. BTAE ^c	0.64	2.42	.08	.01	.25**	–	
	5. Predominance of allocentric goals	37.81	27.73	.11	–.07	–.04	–.07	–
	6. Emotional valence toward others	2.87	5.56	.08	.03	–.15*	–.41**	–.08
Korea	1. Gender ^a	1.74	0.49	–				
	2. Age	25.24	8.81	–.02	–			
	3. Months of COVID-19 ^b	3.64	0.68	.05	.02	–		
	4. BTAE ^c	1.75	2.16	.04	–.07	.03	–	
	5. Predominance of allocentric goals	28.24	36.46	.07	.20**	.04	–.19**	–
	6. Emotional valence toward others	–5.00	3.98	–.08	.16*	.07	–.29**	.09

^aCoded as male = 1 and female = 2; ^bCoded as less than 1 month = 1, 1 to 3 months = 2, 3 to 6 months = 3, longer than 6 months = 4; ^c = the better than average effect; ** $p < .01$. * $p < .05$

Measures

The Better-than-Average Effect BTAE was assessed using two questions concerning participants' self-evaluation and evaluation of others. In particular, participants were asked to indicate the degree to which they follow the hygiene and social/physical distancing rules and the degree to which they feel *others* follow the rules, using a scale ranging from 0 (never) to 10 (follow all the time). The BTAE score was calculated by subtracting the rating of the evaluation of others from the self-evaluation rating. Participants with BTAE scores above 0 were considered to exhibit the BTAE.

Predominance of Allocentric Goals Participants were asked their motives behind following hygiene and social distancing rules. To assess the relative importance across dissimilar behavioral goals of participants, they were asked to assign a percentage to five categories: "For my own health," "For the health of my family," "For the local community," "For the survival and health of all humanity," and "other reasons." Participants were instructed that the total must sum to 100. The item "For my own health" represented egocentric goals and "For the health of my family," "For the local community," and "For the survival and health of all humanity" represented allocentric goals, respectively. To assess the predominance of allocentric goals, the score for the item measuring egocentric goals was subtracted from that for the items measuring allocentric goals.

Emotional Valence toward Others Participants were asked to indicate the degree to which they felt emotions regarding individuals who do not follow social/physical distancing, using a scale from –10 (negative emotions), through 0 (neutral), to 10 (positive emotions).

Months since COVID-19 Outbreak Participants were asked to indicate the duration that their personal life had been affected by COVID-19 on a scale from 1 (less than 1 month) to 4 (longer than 6 months).

Analysis

It was predicted that the level of the BTAE would be associated with negative feelings toward others in related domains (Hypothesis 1). To test this hypothesis, correlation analysis was used. It was further tested if the association between the BTAE and negative emotions toward others was moderated by the predominance of allocentric goals (Hypothesis 2) across cultural groups (Hypothesis 3). To test these hypotheses, moderation analysis was used, via the SPSS PROCESS macro created by Preacher and Hayes (2004) with centered variables. The analysis adjusted for three covariates: age (calculated by subtracting birth year from 2020), gender (male = 1, female = 2), and the duration of COVID-19 impact (less than 1 month = 1, 1 to 3 months = 2, 3 to 6 months = 3, longer than 6 months = 4).

Results

Relationship between the BTAE and Valence of Emotions toward Others

BTAE ratings above 0 were present for 51.4% of the U.S. sample and 66.4% of the Korean sample. Descriptive statistics and correlations are summarized in Table 1. The results of the correlation analysis revealed that the higher the BTAE, the more negative emotions toward others in both

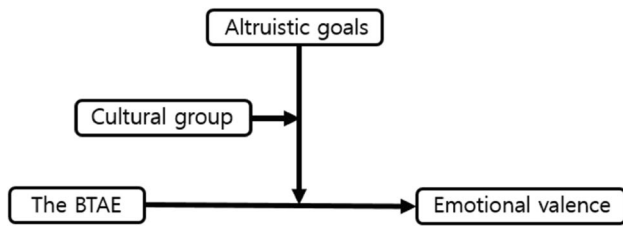


Fig. 1 A conceptual model of the two moderators described in Hypothesis 3

$p = .004$), while in the Korean sample, the effect was not significant ($\beta = -.00, p = .870$; Table 3). Figure 2 illustrates details of the variation of the moderation effect between cultural groups. In the U.S. sample, among individuals with low predominance of allocentric goals ($-1 SD$), as they perceived that they performed better than others (higher BTAE), their emotions toward others changed from positive to considerably negative. Among individuals with high predominance of allocentric goals ($+1 SD$), as they perceived that they performed worse or similar to others (lower BTAE), their emotions toward others changed from

Table 2 Results of moderation analyses of emotional valence toward others by cultural group

Predictors	Coeff.	SE	T	p	95% CI	
					Low	High
$R^2 = .499, F(9, 412) = 41.042, p < .001$						
BTAE	-.506	.147	-3.455	.001	-.795	-.218
Goals ^a	.003	.008	.404	.687	-.013	.020
BTAE × Goals	-.001	.004	-.164	.870	-.007	.006
Group	6262	.625	10.022	<.001	5.034	7.490
BTAE × Group	-.557	.202	-2.765	.006	-.953	-.161
Goals × Group	.005	.014	.364	.716	-.022	.033
BTAE × Goals × Group	.012	.005	2.307	.022	.002	.023
Gender	-.724	.456	-1.589	.113	-1.619	.172
Age	.041	.022	1.835	.067	-.003	.085
Months of COVID-19	-.003	.292	-.010	.992	-.577	.572

^aGoals = the predominance of allocentric goals

the U.S. ($r = -.41, p < .001$) and Korean ($r = -.29, p < .001$) samples, which supports Hypothesis 1.

Predominance of Allocentric Goals Moderating the Association between the BTAE and Negative Emotions

Two possible moderators of the association between the BTAE and negative emotions toward others were tested using Model 3 of the PROCESS macro (Fig. 1). In the model, the predominance of allocentric goals (i.e., egocentric goals subtracted from allocentric goals) and cultural sample (i.e., U.S. and Korean samples) were entered as two moderators, BTAE as a predictor, emotional valence as an outcome, and age, gender, and months of COVID-19 as covariates. The results of the moderation model are summarized in Table 2. In the total sample, the moderating effect of the predominance of allocentric goals on the association between the BTAE and emotional valence was not significant ($\beta = -.001, p = .870$); thus, Hypothesis 2 was not supported.

However, the significance of the predominance of allocentric goals as a moderator depended on the sample ($\beta = .01, p = .022$). In the U.S. sample, the moderating effect of behavioral goals was significant ($\beta = .01,$

Table 3 Test of conditional BTAE × Goals interaction by cultural group

Group	Effect	F	df1	df2	p
U.S. sample	.012	9.307	1	414	.004
Korean sample	-.001	0.027	1	394	.870

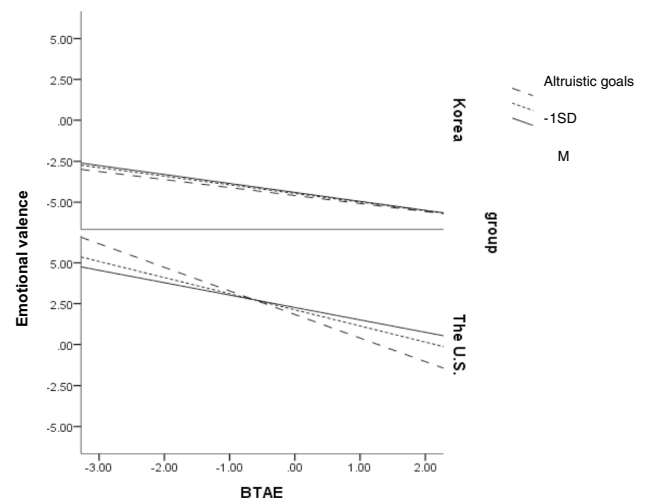


Fig. 2 The moderation model of the study between cultural samples

positive to slightly negative; the slope of the relationship was shallower among people with high predominance of allocentric goals versus those with less altruistic goals. In the Korean sample, as individuals perceived that they performed better than others (higher BTAE), their emotions toward others changed from positive to considerably negative, but the slope did not vary according to the level of altruistic goals. Overall, the results support Hypothesis 3.

Discussion

Since the COVID-19 pandemic began to affect daily life, a global wave of negatively valenced emotions became evident, the target of which was others to whom epidemic spread was attributed (Xu et al., 2021). The current study tested if a cognitive bias, namely the BTAE and related behavioral goals, could explain people's negative emotions expressed toward others. Pervasive negative emotions toward others that emerged during the COVID-19 pandemic could possibly be explained by various psychological mechanisms, such as attribution bias or in-group versus outgroup bias, among which the present research investigated the BTAE on negative feelings toward others in an out-of-laboratory situation.

In this study, the BTAE accounted for negative feelings toward others. In addition, this association was moderated by the predominance of allocentric behavioral goals, depending on the cultural group. Specifically, low predominance of allocentric goals intensified the BTAE on expressing negative feelings toward others, while high predominance of allocentric goals reduced the BTAE in the U.S. sample. The finding is consistent with previous literature on the interaction between egocentric motives and altruistic behavior (e.g., Mikulincer & Shaver, 2010).

The findings imply that allocentric goals can sometimes affect psychological processes underlying self-enhancement. Self-enhancement has been considered an unalterable primary motive for all human behavior (Dufner et al., 2019; Hepper et al., 2013; Sedikides & Alicke, 2019). Consistent with research on prosocial behavior, however, findings of this study suggest that people have motives not only concerning themselves but also with respect to others. In this study, the impact of such a motive appeared to be reduced among individuals with allocentric behavioral goals rather than egocentric goals in the U.S. sample. Specifically, even during a life-threatening experience, such as the COVID-19 pandemic, people can exhibit low BTAE and behave in allocentric ways if they have concern for others (e.g., Crocker et al., 2017). A classic model of goal-directed behavior (Ajzen & Madden, 1986) also supports this idea in that allocentric goal setting can result in displays of prosocial

behavior over and above self-enhancement motives (e.g., Aknin et al., 2019; Wentzel et al., 2004).

The findings provide a plausible explanation for the behavior of people during the COVID-19 pandemic. The experts investigating impacts of the pandemic suggest allocentric behavior as a key to promote voluntary self-isolation or social withdrawal, which in turn could result in the prevention of mutation spread and the eventual end of the pandemic (Bouayed et al., 2021; Jordan et al., 2020). However, the psychological mechanisms underlying the suggested process remains unexplored. The present research contributed to fill the gap in the literature with experimental data; the study demonstrates that people with higher allocentric motive tend to experience less negatively-valenced emotions towards others, even when they believe that they follow social distancing rules more than others. Such emotional responses from people with high allocentric motives may help them better adhere to voluntary self-isolation and measures for the prevention of virus spread. Thus, depending on the culture, allocentric motives can serve to prevent the spread of the virus and gradually end the pandemic.

Interestingly, such a moderation effect was not found in the Korean sample in this study. Thus, it may be an over-generalization to conclude that allocentric goals could universally contribute to ending the pandemic via engaging in voluntary self-isolation and virus spread preventive measures. This finding does not necessarily suggest that Koreans do not have self-enhancement motives. As suggested by cultural psychologists, motives could operate in different ways between Eastern and Western cultures (e.g., Bai et al., 2017). It is possible that behaviors based on allocentric goals are not valued or helpful for self-enhancement in collectivistic cultures (e.g., South Korea), where competitive advantages are considered a virtue in interpersonal relationships (Liu et al., 2019). In addition, self-construal theory suggests that the separation of self and others is ambiguous in collectivistic culture (Fiske et al., 1998; Markus & Kitayama, 1991); therefore, the concept or meaning of allocentric goals can function differently in independent cultural contexts. As highlighting allocentric motives may not be helpful to curtail the pandemic in some cultures, further research is necessary to investigate the specific motives or goals that guide people's helping behaviors to end the pandemic across various cultures. Practical implications of this study also include providing information regarding ways to approach people who are experiencing negative feelings toward others. For instance, this study could help identify those expressing negative feelings toward Asians due to beliefs that this group is responsible for the spread of COVID-19. According to the findings of this study, the BTAE and negative feelings are stronger among people who pursue relatively less allocentric goals compared to egocentric goals. One of the preliminary ways to intervene against negative feelings toward others

in society during the COVID-19 pandemic could be via understanding people's cognitive biases, such as the BTAE, and their allocentric goals. Ultimately, the practical implications from this study could be applied to the development of programs to address bias caused by the BTAE and related negative attitudes at the community level.

One of the limitations of this study pertains to a measurement issue. Single items were used when assessing main variables, such as emotional valence toward average others, because the study was designed to detect overall negative feelings when people were thinking of others. However, with single items, potential measurement equivalence across samples cannot be tested. In future studies, multiple items should be presented to enable the assessment of measurement equivalence across cultural samples. Further, in the current study, participants were asked how negatively they felt toward individuals. However, negative feelings are a broad construct comprised of discrete emotions, such as anger, sadness, depression, and hatred (Russell & Barrett, 1999). Further research using multiple items to assess negative feelings could reveal which negative emotions are related to the BTAE during COVID-19.

Future studies will benefit from considering comprehensive sampling. Two samples were recruited in this study: one from the U.S. and one from Korea. As the U.S. sample was from a Western culture while the Korean sample was from an Eastern culture, this study represents preliminary research that could help inform future cultural studies. Studies of various cultures are required to enable generalization of the present findings.

Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of Interest The authors declared no conflicts of interest with respect to the authorship or the publication of this article.

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