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#Fighteverycrisis: A psychological perspective on motivators of the support of mitigation measures in the climate crisis and the COVID-19 pandemic

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**Abstract**

Both crises, the climate crisis and the COVID-19 pandemic need collective mitigation support. In the context of COVID-19, the support of mitigation strategies has found its way to the forefront of debates. Our aim was to contribute empirical evidence to this debate by investigating mitigation behaviors across both crises and discussing similarities and differences. To this end, we drew on the Norm Activation Model and the concept of Social Identity to understand individuals’ support of mitigation strategies in the climate crisis and their support of governmental strategies to mitigate the spread of the virus. Data were gathered within a Germany-wide survey (N = 3092) carried out in June and July 2020. Three predictors significantly explained the support of mitigation strategies in both crises: (1) The awareness that the entire society is affected by the pandemic emerged as the strongest predictor for support of COVID-19 mitigation strategies, whereas (2) social identification with others making efforts to mitigate the climate crisis was the strongest predictor for support of climate crisis mitigation strategies. (3) Efficacy expectations that together with others one can make a substantial contribution to mitigate the respective crisis predicted support of mitigation strategies in the COVID-19 pandemic and the climate crisis to similar proportions. The results point to the need for targeting the communication of mitigation strategies in a pandemic on raising awareness for the collective nature of the problem whereas strengthening efficacy expectations and feelings of belonging, e.g., through participation processes, could generally strengthen the support of mitigation strategies in both crises.

1. Introduction

Since the rise of the COVID-19 pandemic, many discussions have drawn links between this new crisis to the omnipresent climate crisis. The climate crisis and the COVID-19 pandemic both have severe health, social, ecological, and economic consequences (e.g., Le Quéré et al., 2020). They are unstable and dangerous periods that can be described as a “crisis” (Hulme et al., 2020), indicating moments that decide between life and death (e.g., Kesselleck & Richter, 2006). Both crises are experienced by the entire world and can only be mitigated through collective human action. Trends in social media such as #fighteverycrisis (Fridays for Future DE, 2020) depict the urgency to fight both crises simultaneously and collectively.

Colleagues pointed out valuable insights psychology can offer to understand human behavior in such large-scale crises, i.e., on the role of awareness of the threat/problem, individual and collective interests, science communication and the importance of social contexts for individual crisis behaviors (e.g. Van Bavel et al., 2020). Our aim was to contribute to the question of what motivates individuals to help mitigate both the climate crisis as well as the COVID-19 pandemic. To this end, we designed a study that was carried in June and July 2020. This study focuses on individuals’ motivation to tackle the crises in the public sphere via behaviors such as supporting or calling for mitigation strategies (Stern, 2000; Nielsen et al., 2020). We will first review literature on differences and similarities between the climate crisis and the COVID-19 pandemic, with a focus on the shared characteristic of both representing a common good dilemma situation. We then introduce our three potential predictor variables of the support of mitigation strategies.
in the two crises: problem awareness that the entire society is affected, social identification, and collective efficacy.

1.1. Discussing differences and similarities between the climate crisis and the COVID-19 pandemic within the mental framework of the common good dilemma

The climate crisis and the COVID-19 pandemic have in common that both represent common good dilemmas – but with different emphases. Both crises can be characterized as trade-offs between immediate benefits for the individual and, sometimes time-delayed, benefits for the collective, such as resource consumption in case of global climate, or gathering with a group of people and risking higher infection rates in case of COVID-19 vs. the sustainment of a healthy climate or the containment of COVID-19. These trade-offs are clear characteristics of social dilemmas. In social dilemmas, all individuals are better off if all cooperate than if all defect (Dawes, 1980, p.169). However, each individual would receive a higher individual payoff when making a socially defecting decision than when making a cooperative decision (Dawes, 1980, p.169). Common good dilemmas, a subcategory of social dilemmas (Ernst, 1997), deal with the provision of common goods (De Cremer & Van Yugt, 1999). Individuals have to decide whether or not to contribute to a common good (i.e., a healthy climate in the climate crisis and public health in the COVID-19 pandemic), knowing that even the ones not contributing can enjoy it, and that if no one contributes, there will be no common good.

Still, the two crises differ in several regards. Since consequences of the climate crisis and in turn preventive behaviors are perceived to affect more distant times and people, the common good dilemma of supporting climate change mitigation strategies seems even greater than the common good dilemma of supporting restrictive COVID-19 strategies. The climate crises’ impacts are slower and causal interferences not as clear (Heyd, 2021) compared to the impacts of COVID-19, and climate change is perceived as more relevant for distant times and people than for oneself (Brügger, 2020). In the COVID-19 pandemic, negative consequences, such as increasing morbidity and fatality rates, of the pandemic and positive consequences of containing the pandemic unfold more rapidly and benefits or positive side effects are more direct and greater, e.g., for those who contain the virus or receive the vaccine against the coronavirus, which was developed about six months after our survey study.

One the other hand, the two common good dilemmas share many similarities. They both affect large collectives, probably all of humanity (Reese et al., 2020). In turn both require international cooperation and drastic measures to be overcome. Different nations and social groups are affected differently and to different extents by the two crises. Vulnerable groups are being hit the hardest in the climate crisis (Manning & Clayton, 2018) as well as in the pandemic (Manzanedo & Manning, 2020; Reese et al., 2020), e.g., with people living in the global south being more impacted by consequences of the climate crisis and receiving smaller amounts of vaccine doses against COVID-19 compared to the global north. Additionally, both crises are characterized by high momentum trends, or exponential growth dynamics, that are difficult to grasp (Manzanedo & Manning, 2020).

Results from survey studies deliver empirical evidence on perceived similarities between the crises. In June 2020, a study (Geiger et al., 2021) in the US showed similarities in individuals’ responses across the crises in perception (harmful to public health, politically polarizing, impact on the entire world, available solutions) and emotional reactions (hope and despair). Another study (Bostrom et al., 2020, p. 1) assessing risk perception among US citizens found that both crises were perceived as “highly threatening, inequitably distributed, and not particularly controllable”. Moreover, a more recent study found that a higher subjective attribution of infectious disease outbreaks to climate change and humans’ interference in the environment was positively related to climate change mitigation behavioral intentions and policy support (Thaker & Cook, 2021).

To sum up, both crises with their differences and similarities put at risk common goods, and require individual sacrifices to be overcome (see, e.g., Johnson et al., 2020; Ling & Ho, 2020). We therefore drew on theories explaining collective mitigation strategies in social dilemma situations and crises. Reflecting particularly the reported similarities, it seems to be key as how serious people perceive the common good to be threatened, i.e., to what extent people perceive the crisis to affect the entire world and as a problem. Moreover, we drew from the theoretical reflections and results that the feelings of being connected to larger collectives plays a role for peoples’ reactions to crises (e.g., Reese et al., 2020) as well as the how capable people feel to reach the goal to mitigate the crisis (e.g., Bostrom et al., 2020), particular in a collective setting.

1.2. Awareness that the entire society is affected as predictor of support of mitigation strategies

A promising way to explain individuals’ perceptions of and responses to threats to common goods (e.g., the climate crisis) is the Norm Activation Model (NAM; Schwartz, 1977; Schwartz & Howard, 1981). According to the NAM, in order for prosocial and pro environmental behaviors to occur, an individual’s personal norm needs to be activated, in the form of feeling a moral obligation to perform or refrain from specific actions. One promising way to activate these personal norms is by addressing an individual’s awareness of the problem, i.e., the potential negative consequences when one does not behave prosocially/pro-environmentally. The NAM thus explicitly addresses the consideration of expected behavioral outcomes as a motivator for pro-social and pro-environmental behaviors (De Groot & Steg, 2009). Multiple studies supported problem awareness as a relevant predictor for the support of climate crisis mitigation strategies (e.g., the support of energy policies and transport pricing policy; De Groot & Steg, 2009; Dietz et al., 2007). Beyond the NAM, recent studies have also demonstrated the relevance of how people perceive the general problem of the COVID-19 pandemic for their response to the pandemic (Dryhurst et al., 2020; Sobkow et al., 2020).

It thus seems indispensable that individuals are aware of the problem and its extent in order for them to show crisis mitigation behaviors. In our study, we therefore examined whether people who are more aware that the entire society is affected by the respective crisis (climate crisis or COVID-19 pandemic) are more willing to support respective crisis mitigation strategies. In line with theoretical assumptions from the NAM, we predicted:

Awareness that the climate crisis (H1) / the COVID-19 pandemic (H2) affects the entire society predicts the support of strategies to mitigate the respective crisis.

1.3. Social identification with others making efforts to mitigate the crisis and efficacy expectations as predictors of support of mitigation strategies

When collectives are threatened, e.g., by a global pandemic, not only motivators inherent in the individual, but also in the collective play a role in motivating pro-social and pro-environmental decisions. In large-scale crises social identification with a group of people that act
prosocially or pro-environmentally is a key predictor of prosocial and pro-environmental behavior (see, e.g., Social Identity Model of Pro-Environmental Action; SIMPEA, Fritsche et al., 2018). This prediction is rooted in the Social Identity Theory (SIT; Tajfel & Turner, 1979), which states that people build identities based on their affiliation to certain social groups (e.g., students, group of environmentalists, etc.). Social identities become stronger in situations where the collective or group is salient, following to Self-Categorization Theory (SCT; Turner et al., 1987), and are in turn more relevant for behavioral choices. This understanding of social identification does not only focus on social identities based on the membership in groups such as family, fellow students, or community members, but allows for social identities to result from a shared goal as well (Masson & Fritsche, 2021). This is important, as it lets us assume that identification may have a greater effect on collective action if people perceive the referred others to share their goals (e.g., climate protection, Masson & Fritsche, 2021; Schmitt et al., 2019).

Meta-analyses and systematic reviews show that social identification with a group dedicated to protecting the environment is a relevant predictor for climate crisis mitigation behaviors (see, e.g., Fielding & Hornsey, 2016; Schulte et al., 2020). The majority of studies suggests that the membership in environmental groups and the strength of identification with these groups are positively related to a range of pro-environmental behaviors as well as the support of mitigation strategies such as the willingness to pay more for environmentally friendly products (Dono et al., 2010; Fielding et al., 2008; see also, e.g., Brick & Lai, 2018; Dunlap & McCright, 2008; Frank et al., 2011; Poortinga et al., 2011). Recent studies suggest that social identities might also play a role in predicting individuals’ behaviors in the pandemic (Vignoles et al., 2021; Wakefield & Khausser, 2021). Vignoles et al. (2021) examined different shared social identities in the form of social identification with family, local community, British people and all of humanity. They investigated how these shared identities affect individuals’ protective behaviors, prosocial actions, and psychological well-being during the pandemic, and found family identification to predict physical distancing and community identification to predict helping others. To our knowledge, no studies were yet conducted investigating the role of a more goal-focused social identity in the COVID-19 pandemic.

From a theoretical perspective, it is questionable whether referring to an established group is good to capture forms of social identification that are only about to develop as it would be the case in the COVID-19 pandemic. According to Bandura (2000), agency and feelings of efficacy are of particular relevance in times of crises. Perceived collective efficacy can be referred to as the belief that “one can make a difference through one’s own contribution to the collective efforts aimed at achieving group goals” (Van Zomeren et al., 2012, p. 619), and “fosters groups’ motivational commitment to their missions, resilience to adversity, and performance accomplishments” (Bandura, 2000, p. 75). Accordingly, VanZomeren et al. (2011) identified perceived collective efficacy alongside social identification and perceived injustice as a key determinant of collective action in situations of social injustice.

In line with these predictions, several studies showed that efficacy expectations predict intentions to participate in groups aiming at climate crisis mitigation (Rees & Bamberg, 2014) or intentions to engage in activism to mitigate the climate crisis (e.g., fighting the climate crisis together with others, signing a petition, Van Zomeren et al., 2010), as well as the support of strategies to protect the climate and the environment (Thomas & Louis, 2014).

There are a range of measures for efficacy expectations with links to collective aspects, such as indirect and direct goal collective efficacy or participatory efficacy (see Hamann & Reese, 2020 for an overview). Since we were interested in individuals’ motivation to pursue the goal of mitigating a crisis, we applied Bandura’s (2000) concept of goal-focused collective efficacy expectations. Some studies measured goal-focused collective efficacy beliefs assuming that an individual perceives itself as a “we”, such as “we as students can promote environmental protection” (e.g., Hamann & Reese, 2020; Thomas et al., 2019). As outlined before, this explicit notion as a “we” might require a certain kind of well-defined social group, such as we as students or we as environmentalists. Instead, we choose to focus more on the notion that people may experience a shared identity based on the shared fate of a crisis (Drury, 2018). We therefore refrained from referring to a specific “we”, and operationalized collective efficacy expectations as the perception of individuals of the contribution they can make together with others to achieve a collective goal, such as mitigating a crisis.

We predicted:

Efficacy expectation on the contribution one can make together with others to the mitigation of the climate crisis (H5)/the COVID-19 pandemic (H6) predicts the support of strategies to mitigate the respective crisis.

2. Methods

2.1. Participants

Data for the present study was collected following the APA guidelines for ethical conduct of research. It was collected as part of a large survey study examining the nexus between the COVID-19 pandemic and sustainability (e.g., the influence of the pandemic on sustainable mobility; Schmidt et al., 2021; sustainable nutrition and well-being, Schmidt et al., 2022). This paper focuses only on the psychological aspects of the climate crisis and the COVID-19 pandemic described in the theory section.

The survey was carried out online by an access panel from June 29th to July 6th, 2020 Germany-wide. 3357 people completed the survey. Out of those, the online access panel provider excluded 156 participants based on answering time and answers to open format questions. We additionally excluded 109 participants based on stricter criteria for answering time (exclusion of participants that finished the survey in less than 10 min), missing values and open format answers. N = 3092 participants formed the final sample. This final sample mirrors the German population with regards to age and gender (Statistisches Bundesamt, 2020a; Statistisches Bundesamt, 2020b; Statistisches Bundesamt, 2020c). Participants’ age ranged from 18 to 69 years (M = 44.86, SD = 14.39), 50.5% of the participants were female. The sample had a slightly higher education level compared to the German population (see Table 1 for details).
Table 1
Sociodemographic features of Survey (N = 3092), compared to the German population (Statistisches Bundesamt, 2020a; Statistisches Bundesamt, 2020b; Statistisches Bundesamt, 2020c).

| Survey 1        | German population |
|-----------------|-------------------|
| Age             | M = 44.86         |
| (SD = 14.39)    | M = 44.40         |
| Gender          |                   |
| Female          | 50.5%             |
| Male            | 49.5%             |
| Highest education level |  |
| Did not complete school | 0.4%              |
| Basic secondary school qualification | 31.5%            |
| Secondary school diploma | 30.8%             |
| Higher education entrance qualification & Graduation of University | 37.2%             |

Notes. M = mean; SD = standard deviation.

With a final sample size of N = 3,092, our study had a statistical test power of 1 – β = 0.99 to detect small effect sizes (f² = 0.02; Cohen, 1988) in a multiple regression analysis with three predictors (see hypotheses) at α = 0.05 (Faul et al., 2007).

2.2. Measures

All items apart from the support of strategies and the sociodemographic variables were measured on a 7-point Likert scale ranging from 1 ("Totally disagree") to 7 ("Totally agree"). Participants could always choose the option "I don’t know", which was then coded as missing value. Results of exploratory Principal Axis Factoring (PAF) indicated that for problem awareness, social identification, and efficacy expectations the three-factor-solution seems plausible (see supplement A).

In the context of the climate crisis, awareness that the entire society is affected was measured with two items: "Climate change is a collective problem." and "Climate change affects the entire society." (rs = 75, p < .001). In the context of the COVID-19 pandemic, we asked participants to indicate their agreement with "The corona crisis is a collective problem." and "The corona crisis affects the entire society." (rs = 0.67, p < .001).

Social identification with others making efforts to mitigate the climate crisis was measured with three items (e.g., Bamberg et al., 2015; Wallis & Loy, 2021): "I am proud to make efforts for environmental and climate protection together with others."; "I feel a strong connection with others who make efforts for environmental and climate protection."; and "I identify with others who make efforts for environmental and climate protection." (McDonald’s omega (ω) = 0.96). Social identification in the COVID-19 pandemic was measured with three items: "I feel proud to make efforts to contain the corona crisis together with others."; "I feel a strong connection to others who make efforts to contain the corona crisis."; and "I identify with others who make efforts to contain the corona crisis." (ω = 0.94).

Efficacy expectations that together with others one can make a contribution to mitigate the climate crisis was measured with three items drawn from Hamann and Reese (2020) with elaborated changes (see theory) in line with Wallis and Loy (2021): "Together with others who make efforts for environmental and climate protection, I can make a substantial contribution for climate and environmental protection."; "I believe that together with others who make efforts for environmental and climate protection, I can make a substantial contribution to overcome climate change."; and "The joint actions of people who make efforts for environmental and climate protection can make a substantial contribution to mitigate climate change." (ω = 0.95). Efficacy expectations in the COVID-19 pandemic was measured with three items: "Together with others who make efforts to contain the corona pandemic, I can make a substantial contribution to contain the corona pandemic."; and "The joint actions as people who make efforts to mitigate the corona pandemic can make a substantial contribution to contain the corona pandemic." (ω = 0.96).

Support of mitigation strategies was measured on a scale ranging from 1 ("Totally agree") to 4 ("Totally disagree"). The items were then reverse coded for the analyses, meaning that higher values indicate higher support of regulations. Support of strategies to mitigate the climate crisis were measured in line with past surveys (German Environment Agency, 2016; Kolb, 2020): “Which of the following calls do you support?”, “General ban on plastic packaging”, “Tax exemption for green electricity, biogas, and other environmentally friendly energies”, “Price increase of meat and dairy products”, “Price increase of flights by at least 50%”, “Implementation of an entry fee for motor vehicles in city centers”, “Speed limit of 130 km/h on the autobahn”, “Closure of the inner cities to car traffic” (ω = 0.77). Support of strategies in the COVID-19 pandemic support was measured with one item: “Do you support the government’s current contact restriction measures to contain the corona pandemic?”.

3. Results

IBM SPSS Statistics was used for the analyses. Missing values in our data set appeared to not miss completely at random (Little test), which means an estimation bias could not be completely ruled out. Therefore, we used multiple imputation, a procedure that can be used when data are not missing at random, with the advantage that the data also retains the sampling variability (Tabachnick & Fidell, 2007; Hanss & Böhm, 2013). We combined estimates of five simulated complete data sets using linear regression to impute missing data values. The imputed data were used for the bivariate correlations and the two regression analyses.

3.1. Descriptive analyses

Descriptive statistics are provided in Table 2. There were strong correlations between the measures of social identification with others to mitigate the climate crisis and efficacy expectations that together with others one can contribute to mitigate the climate crisis (r = 0.68, p < .001). In the context of the COVID-19 pandemic, social identification and efficacy expectations were correlated even higher (r = 0.82, p < .001). We therefore calculated the Variance Inflation Factors (VIF) for the independent variables to ensure that no multicollinearity between was present. Results indicate that the assumption of no multicollinearity was met (all VIF below 3.3).

There were also significant bivariate correlations between the predictors of support of strategies to mitigate the climate crisis and to mitigate the COVID-19 pandemic (Table 2). The awareness that the entire society is affected by the climate crises correlated significantly with the awareness that the entire society is affected by the COVID-19 pandemic (r = 0.53, p < .001).

Moreover, we compared our items for strategy support in the climate crisis to past surveys in Germany (items from German Environment Agency, 2016; Kolb, 2020). In our survey, people seemed to agree on average equally (or slightly more) to strategies to combat climate change (see Table 8, supplement). At the offset of the pandemic, the public support of strategies aimed at containing the pandemic was relatively high in Germany, as a study from April 202 shows: Nearly 93% of the survey’s participants agreed with the contact restriction strategies that were in place at that time (Ehni et al., 2020). In our study which was conducted three months later, 77.9% agreed with a (more general) statement in support of the current contact restriction.

1 Sometimes called congestion tax or city toll.
mediated by social identification and efficacy expectations (Table 3).

Note. Multiple regression on support of strategies to mitigate the climate crisis.

Table 3: Between awareness and mitigation strategy support might partly be the climate crisis was entered as a single predictor and explained 17% of the variance in the support of strategies to mitigate the climate crisis. Together, the three predictors explained 33% of the variance of support of strategies to mitigate the COVID-19 pandemic (η² = 0.33). Problem awareness emerged as the strongest predictor (H2, β = .34, p < .001) followed by the efficacy expectation (H6, β = .21, p < .001) and social identification (H4, β = .15, p < .001).

4. Discussion

Both the climate crisis as well as the COVID-19 pandemic are omnipresent large-scale crises and require a joint societal effort to be overcome. In the present study we exemplified how a psychological perspective can shed light on individuals’ motivation to fight these crises and contribute to crisis mitigation efforts. We successfully applied psychological theories on the support of mitigation strategies in the climate crisis and the COVID-19 pandemic. Since the start of the pandemic, many journalists and researchers have drawn links between the pandemic and the climate crisis and discussed potential similarities and differences (e.g., Geiger et al., 2021; Stöcker, 2020; Vinke et al., 2020).

Our study points out similarities as well as differences between the two crises. In both crises, individuals’ support of mitigation strategies was linked to their problem awareness, efficacy expectations and social identification. Awareness that the respective crisis represents a problem that affects the entire society emerged as the strongest predictor for the support of mitigation strategies in the COVID-19 pandemic. Our results thus go in line with predictions from the NAM on the activating role of problem awareness (Norm Activation Model, NAM; Schwartz, 1977; Schwartz & Howard, 1981). Social identification with others making efforts to mitigate the climate crisis and the COVID-19 pandemic explained an additional 9% of variance (less than in the climate crisis) in roughly equal parts.

3.2. Predicting the support of strategies to mitigate the climate crisis

In a first step, problem awareness that the entire society is affected by the climate crisis was entered as a single predictor and explained 17% of the variance in the support of strategies to mitigate the climate crisis (β = .41, p < .001). In a second step, efficacy expectations that together with others one can make a contribution to mitigate the crisis and social identification with others making efforts to mitigate the climate crisis were included as additional predictors and explained an additional 14% of variance in the criterion. Meanwhile, the influence of awareness was reduced (β = .20, p < .001), hinting towards the link between awareness and mitigation strategy support might partly be mediated by social identification and efficacy expectations (Table 3). Together, the three predictors explained 31% of the variance in the support of strategies to mitigate the climate crisis (η² = 0.31). Social identification emerged as the strongest predictor (H3, β = .29, p < .001). Problem awareness (H1, β = .20, p < .001) and efficacy expectations (H5, β = .18, p < .001) predicted mitigation strategy support in the climate crisis in roughly equal parts.

3.3. Predicting the support of strategies to mitigate the COVID-19 pandemic

In a first step, problem awareness that the entire society is affected by the pandemic was entered as a single predictor into the regression model and explained 24% of variances in the support of strategies to mitigate the COVID-19 pandemic (β = .49, p < .001). In a second step, efficacy expectations that together with others one can make a contribution to mitigate the COVID-19 pandemic and social identification with others mitigating the COVID-19 pandemic explained an additional 9% of variance (less than in the climate crisis) and the influence of the awareness was reduced (β = .34, p < .001), but less strongly than in the climate crisis (Table 4).

Table 2: Means and bivariate correlations.

|                | N   | M   | SD  | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Awareness      | 3023| 5.92| 1.41|     |     |     |     |     |     |     |
| Social         | 2892| 3.69| 1.87| .39 |     |     |     |     |     |     |
| Identification | 2964| 4.83| 1.69| .57 | .68 |     |     |     |     |     |
| COVID-19       | 3054| 6.17| 1.28| .53 | .21 | .33 |     |     |     |     |
| Awareness      | 2945| 4.49| 1.91| .30 | .53 | .46 | .39 |     |     |     |
| COVID-19       | 2923| 4.83| 1.82| .37 | .46 | .52 | .46 | .82 |     |     |
| Efficacy       | 3084| 2.66| .68 | .41 | .49 | .49 | .27 | .32 | .34 |     |
| Support        | 3005| 3.08| .94 | .36 | .21 | .28 | .49 | .45 | .48 | .30 |

Note. Displayed are bivariate correlations (Pearson), multiple imputation was used for missing values (N = 3092). p-values (two-tailed) are all < .001.

Table 3: Multiple regression on support of strategies to mitigate the climate crisis.

|                | b   | SE  | 95% CI |  |  |  |  |  |  |  |  |  |  |  |
|----------------|-----|-----|--------|----|----|----|----|----|----|----|----|----|----|----|
| (intercept)    | 1.52| .05 |        |    |    |    |    |    |    |    |    |    |    |    |
| Awareness      | .19 | .01 | .08    | .21| .41| 25.18| <.001| .17|
| COVID-19       | .09 | .01 | .07    | .11| .20| 10.51| <.001| .31|
| Social         | .10 | .01 | .09    | .12| .29| 13.84| <.001|    |
| Identification | .07 | .01 | .05    | .09|.18| 7.73 | <.001|    |

Note. (N = 3092).
influence of problem awareness on mitigation support was reduced after social identification and efficacy expectation were integrated in the regression model. Over the past three decades, and especially during the past three years, the seriousness of the climate crisis and its extent have been consistently discussed and backed up by scientific evidence. We thus believe that at least in the German context, support of mitigation strategies is no longer primarily a question of being aware of the problem but the political strategies themselves and mechanisms supporting engagement in the climate crisis, such as social identification and collective efficacy expectations gain a stronger relevance for the individual.

Across both crises, efficacy expectations that together with others one can contribute to mitigate the respective crisis emerged as a predictor of the support of mitigation strategies. Moreover, the stronger participants identified with others making efforts to mitigate the respective crisis, the more supportive they were of mitigation strategies (e.g. tax exemption for green electricity) and the more they were in favor of governmental strategies to contain the spread of the virus, but identification seemed slightly more relevant in the climate crisis than in the in the COVID-19 pandemic. This goes in line with previous studies on the importance of social identification for pro-environmental behaviors and collective action (Schulte et al., 2020). It is not surprising that social identification was a more important predictor for climate mitigation behavior than for COVID-19 mitigation behavior, since climate movements and protective behaviors have been around much longer, allowing for a stronger bond between people trying to mitigate the crisis to develop.

By applying NAM variables and the social identity approach, we covered several of the structuring research areas from social and behavioral sciences proposed by colleagues (Reese et al., 2020; Van Bavel et al., 2020) that could potentially help to understand COVID-19 responses. Our study shows that combining theories on norm activation (problem awareness) with theories on social identity offers new opportunities for psychological research on large-scale social and socio-ecological crises.

4.1 Limitations and suggestions for future research

We planned and conducted the present survey in a very short time, since it seemed crucial to investigate psychological mechanisms underlying crisis responses from the beginning and while COVID-19 mitigation strategies were still in place. This comes with theoretical and methodical challenges which we would like to discuss here.

Our study would have gained from having more corresponding items in the “support of mitigation strategies’ scales in the climate crisis and COVID-19 pandemic. However, at the same time we conducted the study in summer 2020, strategies to prevent the spread of the virus were implemented rapidly in Germany, and were frequently adjusted. We therefore refrained from asking about strategies in COVID-19 pandemic in more detail but rather used items for measure support in both crises that have been used similar in prior surveys, which allowed us to compare our sample to those from the past surveys.

Values in our data set appeared to not miss completely at random. The pattern of the missing values hinted towards that those who chose the option “I don’t know” more often for items such as “feeling proud to make efforts to contain the corona crisis together with others” also dismissed the answer more often for “feeling proud to mitigate the climate crisis together with others”. Thus, one could speculate that some people could relate little to some items or wordings or were puzzled by their meaning (e.g., feeling proud) and did not want to answer them. However, a clear explanatory pattern could not be revealed. We used multiple imputation for the missing values, with the advantage that the data also retains the sampling variability (Tabachnick & Fidell, 2007; Hans & Böhm, 2013).

A major limitation that should be considered when interpreting the results is that the study design chosen does not allow for assumptions about causality to be made. As it is always the case, correlations should not be mistaken for causality. Future research should study the directional influence of the studied “predictors” problem awareness, social identification, and efficacy beliefs, on mitigation support, e.g., by using longitudinal data or experimental manipulation.

Moreover, empirical studies that combine concepts from NAM (e.g., pro-environmental problem awareness) with concepts from collective pro-environmental action research (e.g., on social identity Fritsche et al., 2018) are still in their infancy. The present study shows that individuals’ problem awareness, their social identification and feelings of collective efficacy are at some levels related, indicating paths that should be tested in future experiments.

Our measure of problem awareness could have been more precise. By asking whether the COVID-19 pandemic ( and the climate crisis) affects the entire society, we focused on the entity of the society, not on the problem itself, i.e., whether people are aware that the crisis is a serious problem that requires joint effort. However, we suspect that people who perceive a crisis to affect the entire society to be aware of the seriousness of the problem. Nevertheless, future studies could benefit from a more precise measure of problem awareness. With the COVID-19 pandemic being a new phenomenon, we created new measures for social identity and efficacy expectations. Future studies would be needed to investigate how our measures relate to other measures of social identity and collective efficacy.

Our choice of predictor variables negates several factors known to affect health protection motivation, e.g., the perceived susceptibility and perceived severity of the disease (Health Belief Model, Strecher & Rosenstock, 1997). However, we primarily aimed at discussing similarities and differences between predictions of mitigation strategies in both crises and therefore aimed for a relatively similar set of predictors in both regression analyses. Nevertheless, it would be very interesting for future research to find ways to measure personal threat and vulnerability felt in the climate crisis as well and compare this to responses in the COVID-19 pandemic or other health-related crises.

4.2 Reflections and implications

In the COVID-19 pandemic, strengthening the problem awareness that the COVID-19 pandemic affects the entire society seemed to be key for a strong support of mitigation strategies. Several studies have already shown that, in the context of the climate crisis, problem awareness is a relevant predictor for support of mitigation strategies but that other aspects are more relevant for behavior change, such as social norms, and
personal norms (e.g., Klöckner, 2013). These aspects support people to convert their problem awareness into solutions and actions (e.g., changing mobility behavior, or joining a pro-environmental organization). However, only a part of the population has enough resources and motivation to get from an earlier stage of realizing that the climate crisis is a problem to these later stages of action (e.g., Stage models, Bamberg, 2013). The results for the COVID-19 pandemic could teach us that awareness of a problem can play a central role for support of mitigation strategies if only strategies to mitigate the crisis are accessible. In the COVID-19 pandemic, already established political measures such as health protection regulations represented structural conditions in Germany (in April–June 2020) that possibly enabled people to behave in line with their potential awareness. These structural conditions varied greatly between the COVID-19 pandemic and the climate crisis in Germany: In the climate crisis, many political parties are hesitant regarding the establishment of public mitigation strategies. This may consequently rather hinder than enable individuals to behave in line with their awareness and thus also hinder the implementation of mitigation strategies. Given the lack of structural conditions to reduce carbon emissions, it thus seems logical that we found social identification and efficacy expectations to be more relevant than problem awareness in the prediction of climate crisis mitigation support. At least until appropriate strategies to mitigate climate change are in place, people themselves need to organize in collectives that are powerful enough to communicate this need. Much more strategies could be offered here by governments in order to ease collective crisis mitigation.

Moreover, there are already a variety of groups aimed at mitigating the climate crisis. An emphasis should be put on providing more diverse groups and processes, so that individuals, that have so far failed to identify with and feel efficacy within the existing climate mitigation groups are offered the opportunity to participate. Hence, in the climate crisis it could be relevant to further promote feelings of belonging and efficacy and the feeling that own contributions are valued aspects of collective efforts (Van Zomeren et al., 2012). That could be achieved by offering a wider range of participation processes that involve all people as active citizens in developing, adjusting, and evaluating the mitigation strategies (e.g. Van Zomeren et al., 2012 Hamann et al., 2021). In the corona crisis, developing and implementing mitigation strategies in a more participatory manner could also lead to a greater sense of community among otherwise distant groups and strengthen the support for the developed mitigation strategies.

Social identification with others making efforts to mitigate the crisis was predictive for action in both crisis, but stronger for mitigation strategies in the climate crisis. This result could contribute to the understanding of new formed shared social identities and conspiracy theory tendencies. On the one hand, this relationship can account for a positive dynamic of shared identities in general, encouraging people to adhere to and support mitigation strategies. Presumably, this positive dynamic of shared social identities influence the level of action even more at a time when fixed structures and groups form around this identity, such as movements in the climate crisis. So clearly on the other hand, the less participants felt they belong to other people that make efforts to mitigate the respective crisis, the less they supported mitigation strategies. These people might than look for other groups with different ingroup norms that they feel they can belong to. It seems thus indispensable to provide people with a variety of groups making efforts to mitigate the pandemic and other crises to identify with in order to promote mitigation support behavior. Alongside, it seems generally crucial to communicate the actually smaller amount of people that are opposed to the mitigation strategies (e.g., “anti-vaxxers”), and to reduce the misconception that there is a large and more powerful group of people that do not take measures to mitigate the respective crisis.

We are aware that by studying the influence of problem awareness, social identification, and efficacy expectations, we have neglected other important predictors of climate crisis mitigation behaviors. People might also be motivated to be active in climate protection because the engagement itself increases their quality of life via, e.g., a perceived social cohesion (e.g., Schmitt et al., 2018) or because of personal health benefits from pro-environmental engagement (e.g., cycling, eating healthy). This points out a major difference to the COVID-19 pandemic in which the overall goal of the strategies is to contain the virus, not a societal transformation towards sustainability (e.g.: German Advisory Council on Global Change, 2011).

Overall, mitigation behaviors in different crises should not be leveled off against each other (Ecker et al., 2020) such as downplaying the climate crisis in the light of a pandemic or an energy shortage or downplaying the danger of a pandemic because more drastic crises and natural disasters might be ahead of us. Maybe it is time we acknowledge that the climate crisis and the COVID-19 pandemic won’t be the last crises, and that we accept our roles of being political individuals in charge of collectively protecting our common goods. The overarching goal of all new mitigation strategies should be to preserve these common goods, from a functioning health system to life-sustaining natural resources. Our results and the discussed psychological theories and studies indicate that people are able to be aware of global threats and to support ways to mitigate these threats.

5. Conclusion

The results of the present study indicate that climate protection and the containment of the COVID-19 pandemic can, to some extent, go hand in hand, as both require a basic understanding for the extent of global challenges. We believe it to be vital to increase the awareness that global threats as the COVID-19 pandemic and the climate crisis are problems affecting the entire society via communication strategies and educational programs. Yet, our results imply that in the context of the climate crisis, different strategies might be more successful to foster the support of mitigation strategies among the public than in the COVID-19 pandemic. Whereas in the COVID-19 pandemic it seems to be key to shed even more light on the problem and seriousness of the pandemic itself, strengthening the experience of effectiveness and identification seems to be particularly relevant in the climate crisis. Education and communication strategies should therefore focus more on the development and sustainability of supportive social identities and efficacy beliefs for climate protection, since these are crucial in peoples’ support for mitigation strategies and willingness to protect the common good.

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