








ORIGINAL ARTICLE OPEN ACCESS

Social Identification in Times of Crisis: How Need to Belong, Perspective Taking, and Cognitive Closure Relate to Changes in Social Identification

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Received: 16 May 2024 | **Revised:** 5 November 2024 | **Accepted:** 18 November 2024

Funding: This research was supported by a research grant by the German Research Foundation awarded to JAH (HA6455/5-2) and RvD (DI 848/15-2).

Keywords: need for cognitive closure | need to belong | perspectivetaking | socialidentification | threat

ABSTRACT

In a world shaped by global crises—from pandemics to international armed conflicts to an escalating climate crisis—research into human reactions to and coping with uncertainty is becoming increasingly important. The fundamental role of identification with social groups in maintaining well-being during times of threat has been emphasized. In this context, the aim of this study was to examine the relationship between interindividual differences—need to belong, perspective taking, need for cognitive closure—and changes in social identification. To test our hypotheses, we conducted a two-wave online study with a sample of 1008 participants during the COVID-19 pandemic. We examined changes in social identification in narrow social groups (i.e., family, friends, neighbors) and broader social categories (i.e., own country, Europe, humanity). We found an overall increase in social identification in times of crises across all groups. The results show that need to belong (at Time 1) was positively related to increases in social identification (at Time 2) for all groups, while the positive association between perspective taking (at Time 1) and increases in social identification (at Time 2) was observed for almost all groups except neighbors. Contrary to our expectations, however, the need for cognitive closure (at Time 1) showed no association with changes in identification with any social group (at Time 2). These findings emphasize the importance of interindividual differences for our understanding of changes in social identification over time.

1 | Introduction

Over the past few years, the world has been confronted with a growing number of global crises. Among these, the COVID-19 pandemic has emerged as a global health crisis, causing worldwide concern (Chakraborty and Maity 2020). To slow the spread of the virus, governments were forced to implement strict measures, such as lockdowns and social distancing (World Health Organization 2020). At the same time, natural disasters

linked to climate change, such as droughts, forest fires, floods, and hurricanes, are becoming more frequent and severe, posing significant threats to individuals' safety and well-being (e.g., Abbass et al. 2022; Banholzer, Kossin, and Donner 2014; Palinkas and Wong 2020). Furthermore, political tensions transcend European borders, as demonstrated by the Russian invasion of Ukraine in February 2022 (e.g., Chaaya et al. 2022). These events, marked by ambivalence and controversy, pose a tremendous threat to individuals and societies

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(Schneider, Dorrough, and Frank 2021). Their impact on individuals' mental and physical well-being is significant, leading to stress and insecurity on a global scale (e.g., Palinkas and Wong 2020; Wang et al. 2020).

Given this context, it is important to understand how humans—as social beings—react to these crises and cope with uncertainty. Stanley Schachter's (1959) experiment provides a striking example: when faced with the threat of electric shocks, participants more often sought the company of others who faced a similar threat, a phenomenon famously dubbed by Schachter as “misery loves company.” This urge for company underlines the need for social support, group identification, and bonding with others when faced with threats (Schachter 1959). Building upon this finding, it has been argued that social connection and belonging are crucial for mental and physical health (Baumeister and Leary 1995; Haslam et al. 2018; Steffens et al. 2017). Numerous studies have shown that humans, as social beings, can maintain their well-being in times of crisis by identifying with social groups (e.g., Drury, Cocking, and Reicher 2009; Hogg 2007). The strengthening of group ties in such situations (van Dick et al. 2023) serves as a crucial mechanism for reducing uncertainty, countering threats, and overcoming individual and collective challenges (Haslam et al. 2009). Although previous research has proposed affiliative reactions to threat (e.g., Drury, Cocking, and Reicher 2009), these social reactions to threat are far from being uniform and show considerable variation between populations and individuals (see Faber and Häusser 2022, and Frisch, Häusser, and Mojzisch 2015, for reviews). While some individuals might identify more strongly with their groups to seek security and belonging, others may feel alienated (Amiot and Aubin 2013). This variation raises the question of whether there are inter-individual differences that are related to changes in social identification in times of crisis.

To answer this question, we conducted an online study with a large sample of German citizens during the COVID-19 pandemic to examine the relationships of change in social identification with three interindividual differences. The selection of these three variables is based on their role in influencing individual responses to stressors: (1) the *need to belong* (i.e., a fundamental need to establish and maintain stable and lasting relationships with others; Baumeister and Leary 1995); (2) *perspective taking* (i.e., a person's motivation and ability to understand and empathize with the views and emotions of others; Galinsky and Moskowitz 2000); and (3) the *need for cognitive closure* (i.e., the need for clear, unambiguous, and structured answers as well as the aversion to uncertainty; Webster and Kruglanski 1994).

Our research contributes to the social identity literature in several ways, providing a better understanding of how inter-individual differences might shape social identification. While most research on social identity has so far focused on the consequences of group membership and identifying with social groups, much less attention has been given to the emergence and development of social identification, and in particular to interindividual differences in these processes. This is a crucial limitation because these interindividual differences could potentially influence the formation and strength of social

identities. Our findings contribute to a broader understanding of how individual characteristics might be related to social identification. Moreover, we advance our understanding of social identity by examining changes in social identification in times of crisis, emphasizing the complex interplay between cognitive processes and needs. Understanding these dynamics is crucial because of the positive consequences associated with social identification, particularly for buffering stress and maintaining well-being (Häusser, Junker, and van Dick 2020; Steffens et al. 2017). Finally, our study contributes to the existing literature by exploring different degrees of exclusivity as foci of identification. This includes the exploration of intimate groups, such as family and friends, as well as broader groups such as Europe and humanity as a whole. Understanding how individuals identify with different social groups can provide valuable insights into the complexities of social identity as highlighted by Frenzel et al. (2022).

1.1 | Theoretical Background

According to the *social identity approach* (consisting of *social identity theory*; Tajfel and Turner 1979, and *self-categorization theory*; Turner et al. 1987), a shared social identity refers to the feeling of belonging to and being part of social groups (for an overview, see Haslam et al. 2018). Being a group member fulfills an individual's need for control and agency, a sense of belonging and social support, self-esteem, reduction of uncertainty, and sense-making (Avanzi et al. 2015; Baumeister and Leary 1995; Brewer 1991; Greenaway et al. 2016; Hogg 2007). A central aspect of the social identity approach to health and well-being is the concept of a “social cure” (Haslam et al. 2009), emphasizing the protective role of social connections and group memberships, particularly in times of crisis. Therefore, a shared social identity is a strong psychological resource for buffering stress and maintaining well-being (see Frenzel et al. 2023; Junker et al. 2019; Steffens et al. 2017 for a meta-analysis; van Dick, Ciampa, and Liang 2018). These positive effects of group membership on well-being and stress reduction are evident not only in small exclusive groups (e.g., Ketturat et al. 2016), but also in large national groups, even when identification is more symbolic (e.g., Khan et al. 2020).

Given the prevailing context of global crises, strengthening social ties plays a crucial role in reducing uncertainty, managing threats, and overcoming challenges through social identity (Haslam et al. 2009). According to the *uncertainty identity theory* (Hogg 2007), based on Tajfel and Turner's (1979) social identity theory, individuals resort to social identity processes, such as group identification and self-categorization (e.g., Turner et al. 1987), to anchor their self-concept in times of uncertainty. These processes can strengthen the ability to cope with crises and lead to increased cooperation (Haslam and Reicher 2006). A central element is the sense of common fate in crisis situations, such as pandemics or natural disasters, which promotes a shared social identity (“we are in this together”). Research has shown that a sense of common fate during a crisis leads to an enhanced experience of unity between communities and enables the development of collective efficacy during stressful times (e.g., Drury, Cocking, and Reicher 2009; Ntontis et al. 2018). Furthermore, uncontrollable events such as natural

disasters or acts of war can increase the sense of group belonging and community among those affected (e.g., Bartolucci and Magni 2017; Drury, Cocking, and Reicher 2009; Drury et al. 2016). This increased social identification has been associated with reduced stress levels, increased resilience, and more effective coping with stressful situations (Haslam et al. 2004, 2005; Haslam and Reicher 2006; Häusser et al. 2012; Ketturat et al. 2016).

As outlined in the previous section, existing research has consistently shown that experiencing crises can increase social identification and a sense of common fate (e.g., Drury, Cocking, and Reicher 2009 Hogg 2007). Given the specific context of the COVID-19 pandemic, we expect that this experience will also lead to a significant increase in social identification with various groups.

1.2 | Interindividual Differences

However, while crises tend to increase social identification overall, these affiliative reactions to threat are not uniform. In fact, responses vary across individuals and populations (e.g., Drury, Cocking, and Reicher 2009; Faber and Häusser 2022; Frisch, Häusser, and Mojzisch 2015). For instance, Drury, Cocking, and Reicher (2009) found that while many individuals exhibited high levels of mutual aid during the London bombings, responses varied significantly among individuals, influenced by factors such as their prior relationships and the specific context of the emergency. This variability highlights the importance of examining interindividual differences in responses to crises. In the following, we introduce the need to belong, perspective taking, and the need for cognitive closure as three interindividual differences that might be particularly predictive of crisis-induced changes in social identification.

1.2.1 | Need to Belong

We expect that the threat-related increase in social identification is more pronounced for individuals with a higher compared to a lower need to belong. The need to belong is a fundamental human need to establish and maintain stable and enduring relationships with others (Baumeister and Leary 1995; Leary and Kelly 2009). It is characterized by the dual requirements of forming positive relationships that are distant from negative influences and perceiving these relationships as lasting, while even superficial interactions with others can fulfill this fundamental human need (Baumeister and Leary 1995). Baumeister and Leary (1995) argued that threatening events might stimulate the need to belong and that external threats can increase the tendency to form strong bonds. Although the need to belong is considered a universal need (Baumeister and Leary 1995), there are interindividual differences in the pursuit of social belonging, as well as in the likelihood and intensity of feelings of social isolation or rejection (Hartung and Renner 2014; Leary et al. 2013).

According to our assumption, individuals with a stronger need to belong may be more likely to seek and provide social support

in times of crisis, potentially strengthening social ties. Prosocial behavior can serve as a social affiliative response that promotes social acceptance by others and satisfies the need to belong while simultaneously increasing the likelihood of being supported in return (Blackhart, Baumeister, and Twenge 2006; see Faber and Häusser 2022 for a discussion). Recent research by Hodge et al. (2023) supports the idea that individuals with a higher need to belong are more likely to show prosocial behavior in public. Moreover, Häusser et al. (2023) showed that social identification not only relates to more social support but also that social support relates to more social identification. Taken together, these studies suggest that individuals with a stronger need to belong are more likely to provide support to others and value the support they receive, which may enhance their social identification, particularly during challenging times such as a pandemic.

In addition, previous studies suggested that the need to belong may be related to an individual's strength of identification with certain groups. For example, Theodorakis et al. (2012) conducted a cross-sectional study which found a positive correlation between the need to belong and the level of identification with a local sports team. However, research on how interindividual differences in the need to belong affect social identification in times of crisis is currently lacking. The present study aims to fill this gap. Building on previous theorizing and empirical research, we hypothesize:

Hypothesis 1. *The need to belong is positively associated with an increase in social identification.*

1.2.2 | Perspective Taking

We also expect that the increase in social identification is similarly more pronounced for individuals with a higher compared to a lower level of perspective taking. This assumption is based on the observation that current global threats, such as the response to the COVID-19 pandemic (Bor, Jørgensen, and Petersen 2023) or the impact of human behavior on climate change (Hulme 2009), generate partisan views and profound controversies. These controversies shape international debates (Salehyan 2008) as well as local communities, causing conflict within families and among peers and friendships (Bor, Jørgensen, and Petersen 2023), and may therefore have the potential to affect social identification within groups. In this context, accepting a perspective different from one's own may be a useful strategy for reducing tensions and managing disagreements in uncertain times (Sklad et al. 2021).

Higher levels of perspective taking, defined as an individual's ability to understand and empathize with the views and emotions of others while maintaining their own perspective (Galinsky, Ku, and Wang 2005) has been shown to be central to fostering harmony and cooperation within groups facing contentious global threats (Hoever et al. 2012). Individuals with more perspective taking tend to show more empathy and have a greater interest in social interactions (Bukowski and Samson 2017). Furthermore, perspective taking goes beyond purely cognitive processes and represents a crucial social competence that positively impacts the quality of interpersonal

relationships (Williams 2011). Exerting perspective taking enhances individuals by increasing social acceptance, self-esteem, and community cohesion (Davis 1983a).

Previous research has shown that perspective taking has positive effects on interpersonal relationships and group harmony. For instance, it can facilitate the establishment and maintenance of relationships, support conflict resolution, and promote the development of empathy (Batson, Early, and Salvarani 1997; Todd and Burgmer 2013; Vescio, Sechrist, and Paolucci 2003). Furthermore, it can help overcome social divisions and promote harmonious coexistence between different groups through group contact (Pettigrew and Tropp 2008). However, further empirical investigation is required to establish a direct link between perspective taking and increased social identification, particularly in times of crisis.

Perspective taking is positively related to social processes because it creates mental overlaps between the self and others, which helps strengthen the bonds between individuals (Davis et al. 1996; Galinsky, Ku, and Wang 2005; Galinsky and Moskowitz 2000). Adopting perspectives emphasizes the perception of commonalities and similarities. Perceiving these commonalities, such as shared interests, helps individuals to identify with the respective social group (Tajfel and Turner 1979). In particular, a higher degree of perspective taking can facilitate and thus strengthen identification with others by fostering a sense of shared experience. In the crisis context, individuals with more perspective taking might furthermore perceive others to be similarly affected by the crisis as themselves, thus strengthening the perception of “being in the same boat.” We thus predict:

Hypothesis 2. *Perspective taking is positively associated with an increase in social identification.*

1.2.3 | Need for Cognitive Closure

We also finally predict that the threat-related increase in social identification is less pronounced for individuals with a higher need for cognitive closure. The need for cognitive closure is a stable cognitive trait that is characterized by a desire for clear and concise answers and an aversion to ambiguity or confusion (Kruglanski et al. 2006; Webster and Kruglanski 1994). During times of crisis, a wide range of opinions and interpretations of global threats can arise, potentially hindering the process of increased social identification when these interpretations produce partisanship within groups. During times of crisis, individuals with a higher need for cognitive closure may struggle more with uncertainties as they find them uncomfortable and aim to reduce them quickly and decisively (Dechesne and Kruglanski 2004; Webster and Kruglanski 1994). In their quest for clarity, they tend to rely on immediately available cues and process information in a more limited way (Webster and Kruglanski 1994; Webster, Richter, and Kruglanski 1996). Once they made up their minds, they tend to stick to their attitudes and views, even if presented with counterevidence (Webster and Kruglanski 1998). Conversely, individuals with a lower need for cognitive closure are more receptive to different views

and think more thoroughly before drawing conclusions (Webster and Kruglanski 1998).

In a social context, research has shown that individuals with a higher need for cognitive closure tend to gravitate towards homogeneous, orderly, and predictable social groups that share their beliefs and identities because such groups provide them with a sense of security and clarity (Dechesne and Kruglanski 2004; Kruglanski et al. 2002). The shared beliefs, norms, and valued social identities within these groups give members a clear understanding of how they should perceive the world and behave in various situations (Kruglanski et al. 2006). Global threats, which are often ambiguous and involve a variety of opinions, might be particularly challenging for individuals with a higher need for cognitive closure who prefer a clear and unambiguous worldview. Given that people expressed divergent attitudes regarding COVID-19 measures and COVID-19 vaccination, even within families (Bor, Jørgensen, and Petersen 2023), global threats might have the potential to disrupt the perceived security and clarity within groups. These diverging opinions could destabilize the homogeneous views within these groups, thus causing individuals with a higher need for cognitive closure to question the value of their group memberships. Hence, we hypothesize:

Hypothesis 3. *The need for cognitive closure is negatively associated with an increase in social identification.*

1.3 | Exploring Identification Across Different Groups of Social Identification

The main aim of the present study was to investigate if inter-individual differences are associated with stronger increases (need to belong, perspective taking) or weaker increases (need for cognitive closure) in threat-related identification with social groups. However, identification with groups differing in exclusivity may develop differently. While all members have direct contact with each other in close groups, such as family or a group of friends, this is not the case in broader groups (Frenzel et al. 2022). Nevertheless, even without physical contact, a symbolic sense of social identity can emerge, increasing well-being and positively influencing the self-concept (Anderson 1991; Khan et al. 2020). Such a collective perspective helps individuals to overcome threatening situations together, perceiving threats as a shared task rather than an individual problem (Greenaway et al. 2016; Haslam et al. 2018). Given recent findings on the importance of both narrow (e.g., family and friends) and broader groups (e.g., nation and Europe) for psychological well-being (Albarelo, Crocetti, and Rubini 2021), we exploratorily test our hypotheses within six different groups (family, friends, neighbors, country, Europe, and humanity). The groups selected for this study were based on their relevance in the context of the COVID-19 pandemic. We categorized groups into narrower groups (family, friends, neighbors) and broader groups (country, Europe, humanity). Narrow groups were chosen because they maintained regular face-to-face contact during the pandemic (in contrast to, e.g., sports groups that were often not available during this time). These group memberships were essential for mental health, and previous studies have examined this dynamic in the COVID-19

context, particularly regarding neighborhood groups (e.g., Gan and Best 2021). Broader groups, such as identification with the country, were chosen for their relevance to collective crisis responses. For instance, Khan et al. (2020) showed that national identification positively affects well-being in stressful situations. Europe was included because of the heightened tensions at the time of the study, particularly the Russian invasion of Ukraine, which exacerbated uncertainty across the continent (Chaaya et al. 2022). Finally, humanity was included as the broadest group membership because global crises require coordinated responses, with identification with humanity promoting empathy and prosocial behavior (Lantos et al. 2022).

2 | Method

2.1 | Sample and Procedure

We recruited a sample from Germany to participate in two consecutive surveys, separated by 4 weeks. The study received approval from the local ethics committee of the fifth author. Inclusion criteria were being over 18 years old and currently living in Germany. To obtain an approximately representative sample of German adults in a short timeframe, participants were recruited through Kantar, an online-panel provider. They were financially compensated for completing the survey. Before starting the online questionnaire, participants gave their informed consent. At the end of the first survey, respondents were asked if they would like to participate in a follow-up survey 4 weeks later. Our aim was to survey a sample of the German adult population with around 1000 individuals in the final data set.

In the first survey (launched on March 29, 2022), a total of 1759 individuals took part in the study, resulting in $N = 1644$ participants at the first measurement point (T1) after excluding those who did not fulfill the inclusion criteria and removing duplicates. Four weeks later (launched on May 3, 2022), these participants were invited to a second survey. Given our planned sample size, the survey was stopped after $N = 1016$ was reached. After excluding one case due to duplicate responses, the sample size for the second online questionnaire (T2) was $N = 1015$. To ensure high data quality and reliability of results, we reviewed response patterns and response times according to established guidelines (Buchanan and Scofield 2018). Participants were excluded if (1) their response patterns showed no variation across different subscales (e.g., constant response of 3 = “neutral”) and (2) their response time was less than 50% of the calculated median of the average response time of the entire sample (for a similar approach, see Frenzel et al. 2022), resulting in a sample size of $N = 1635$ at T1 and $N = 1011$ at T2. A detailed overview of study dropouts and exclusion criteria can be found in Figure 1.

Our analyses were based on individuals who participated at both T1 and T2. After matching the two datasets and checking the data for completeness and consistency, we obtained a final sample of 1008 participants, of whom 54.2% were women, with a mean age of 47.65 years ($SD = 14.06$; range: 18–70 years). Most participants (64.1%) were employed, while the remaining were either retired or unemployed. In addition, 54.3% of participants reported having children, with an average of 0.85 children per participant ($SD = 1.11$). Comparing our final sample's age and gender distribution

with the respective distributions in the German population (see Federal Statistical Office 2023a), we found similarities in age distribution, with a higher proportion in the 40–60 age group (our sample: 46.2%, official statistics: 27.3%). This over-representation of middle-aged individuals may be partly due to the inclusion criteria of our survey, which does not include participants under the age of 18, potentially biasing our sample towards older age groups. Regarding gender distribution, women were slightly overrepresented in our sample (54.2%, official statistics: 50.7%), which reflects the general public data on gender distribution in the German population (see Federal Statistical Office 2023b). The observed differences, particularly in age, led us to include both gender and age as covariates in all our analyses.

2.2 | Measures

This study was part of a larger research project that included additional measures beyond the scope of this paper.¹ In the following, only measures relevant to the present hypotheses will be described. In addition to demographic information, participants completed items and scales measuring constructs relevant to this study. To reduce the risk of common method bias (cf. Podsakoff et al. 2003), we used participants' responses to the need to belong, perspective taking, and the need for closure at T1 and changes in identification compared to the start of the COVID-19 pandemic with different social groups were taken from the T2 survey.²

2.2.1 | Need to Belong

To assess interindividual differences in participants' need to belong, we used the German version of Leary et al.'s (2013) Need to Belong Scale by Hartung and Renner (2014). This 10-item scale assesses the degree to which individuals feel the need to belong using statements such as “I want other people to accept me” and “I don't like being alone”, with four items being reverse-scored. Participants responded on a 4-point Likert scale (1 = *not true*; 4 = *exactly true*), with higher scores indicating more pronounced need to belong. The internal consistency of the scale was Cronbach's $\alpha = 0.75$.

2.2.2 | Perspective Taking

We measured participants' perspective taking using a subscale of the Saarbrücken Personality Inventory (SPF; Paulus 2009), the German version of the Interpersonal Reactivity Index (IRI; Davis 1983b). Tailored to measure cognitive empathy, this scale focuses on the willingness and capability to adopt others' viewpoints, using statements like “I try to understand both sides in a disagreement before I make a decision.” Participants responded on a 5-point Likert scale (1 = *never* to 5 = *always*), with higher scores indicating higher perspective taking. The internal consistency of the scale was Cronbach's $\alpha = 0.84$.

2.2.3 | Need for Cognitive Closure

We assessed participants' tendency towards definitive versus open-ended responses using Schlink and Walther's (2007) Need

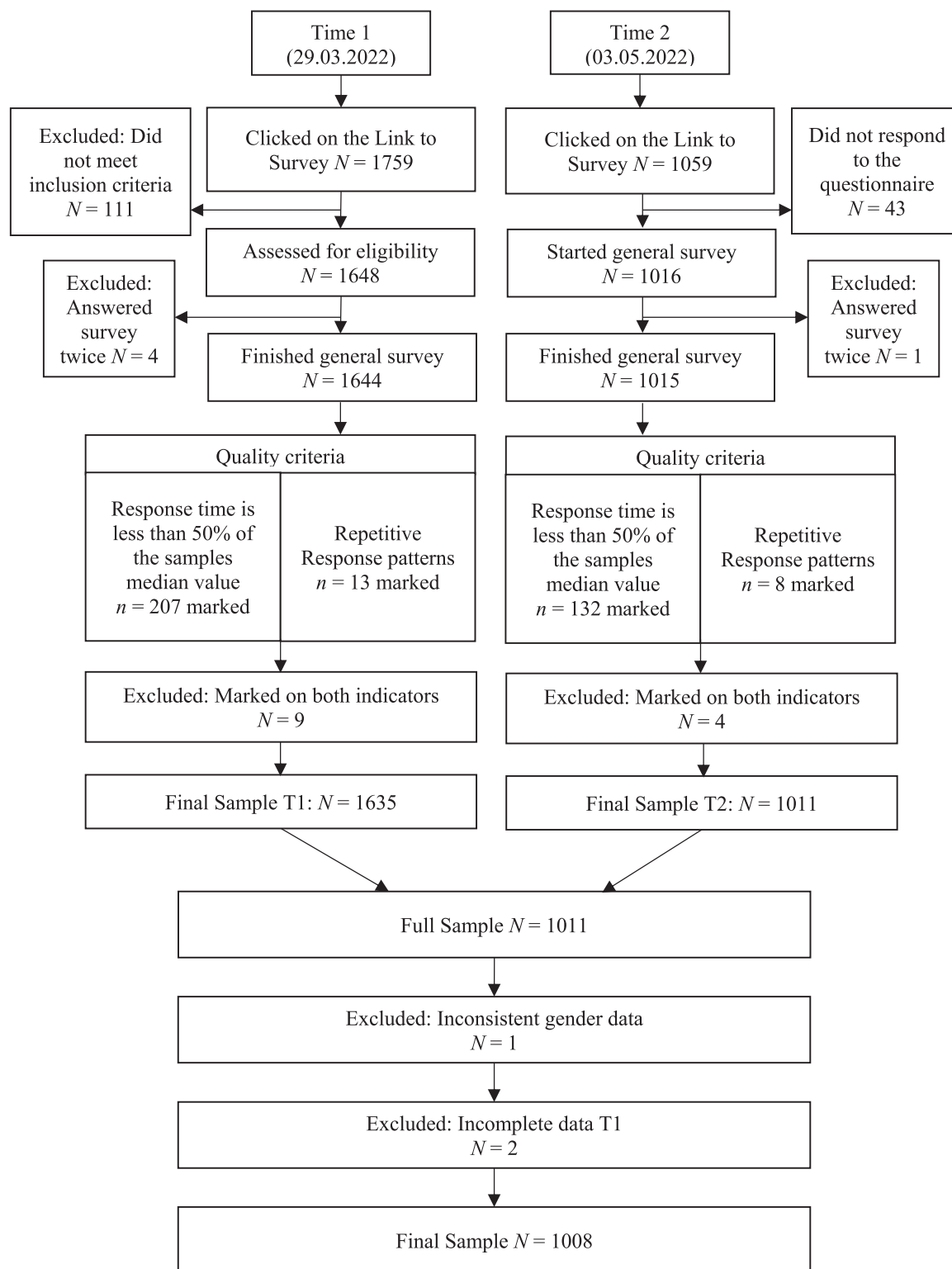


FIGURE 1 | Exclusion criteria and excluded participants.

for Cognitive Closure scale. This 16-item scale measures agreement or disagreement with statements that indicate this need, such as “I do not like it when a person’s statement is ambiguous” or “I prefer activities where it is always clear what needs to be done and how it needs to be done.” Participants responded on a 6-point Likert scale (1 = *strongly disagree*; 6 = *strongly agree*), with three items reverse-scored. Cronbach’s α was 0.77.

2.2.4 | Change in Identification With Different Groups

We measured the perceived change in participants’ identification with different social groups using one item for each of six specific groups: Family, friends, neighbors (narrow groups) and country, Europe, humanity (broader groups). Given the significant events and threats since the start of the COVID-19 pandemic in spring 2020, we used a comparative scale for

assessment. Using different social groups as reference points, participants were asked: “Compared to before the start of the pandemic in spring 2020, how strongly do you identify with your circle of friends today?” They then rated their self-assessed change in identification with each social group on a scale from -10 (*strongly reduced identification*) to 10 (*strongly increased identification*).

2.3 | Statistical Analysis

Data were analyzed using IBM SPSS Statistics (Version 29). Due to the difference in the number of participants from T1 to T2, we conducted *t*-tests and unweighted chi-square tests to compare demographic and main study variables between T1-only participants and those who completed both questionnaires. These tests revealed no significant gender differences (see Supporting Information Table S2) or variations in the main study variables, except for small but statistically detectable differences in age and need to belong (see Supporting Information Table S1). In particular, T1-only participants were found to be significantly younger ($M = 36.16$, $SD = 15.24$) than full-study participants ($M = 47.65$, $SD = 14.06$), $t(1633) = -15.55$, $p < 0.001$. In addition, T1-only participants reported a significantly higher need to belong ($M = 2.55$, $SD = 0.49$) than those who participated in both T1 and T2 ($M = 2.47$, $SD = 0.46$), $t(1633) = 3.59$, $p < 0.001$. With a Cohen's *d* of 0.18 for need to belong, suggesting an effect size slightly below Cohen's (1988) benchmark for a small effect (0.2), its practical significance is limited. Such findings suggest that the observed differences are unlikely to be due to selective sampling and thus increase our confidence in proceeding with hypotheses testing. More detailed results can be found online in the supplementary material.

To test the predicted increase in social identification with different groups in times of crisis, one-sample Wilcoxon signed-rank tests were used to compare participants' self-reported changes in identification with a hypothesized median of zero, indicating no change. We then used multiple linear regression models to examine the associations between the need to belong, perspective taking, and the need for cognitive closure with changes in social identification for each group. The assumptions for conducting the multiple regression analyses following Osborne and Waters (2002) were checked a priori. While some of these assumptions were only partially met, regression is a robust statistical method Field (2017), and therefore the results can still be interpreted with confidence. Within these models, age and gender were included as control variables. To improve the clarity and interpretability of our model, we decided to code gender as a binary variable (0 = female, 1 = male). Consequently, the three individuals who identified as “other” were therefore excluded from the model to simplify the analyses of the data and to ensure statistical robustness.

3 | Results

Descriptive statistics, including mean values and standard deviations, along with Pearson's correlation coefficients to

examine the relationship between the variables are summarized in Table 1. The mean scores for the change in social identification were all above 0 (median means no change), indicating that, on average, participants across all social groups reported an increase in social identification compared to the beginning of the COVID-19 pandemic. Specifically, identification with family showed a notable increase ($z = 18.32$, $p < .001$, $r = .58$), with a median change score of 1, indicating an overall increase. Similar patterns of increased identification were observed with friends ($z = 16.89$, $r = .53$), neighbors ($z = 9.73$, $r = .31$), country ($z = 13.61$, $r = .43$), Europe ($z = 14.42$, $r = .45$) and humanity ($z = 13.58$, $r = .43$), all with *p*-values below 0.001. These results highlight a general trend towards stronger social ties, although the median of the change values for these groups was 0, emphasizing the variability of participants' responses. More detailed results are presented in Table 2.

3.1 | Interindividual Differences and Changes in Social Identification

We conducted six multiple linear regression analyses, one for each social identity focus (i.e., family, friends, neighbors, country, Europe, and humanity) to examine the associations between the need to belong, perspective taking, and the need for cognitive closure at T1, and the threat-related increase in social identification with different groups at T2. We applied a Bonferroni adjusted alpha level of 0.0083 per test (0.05/6) to reduce the risk of type I-error inflation. These analyses revealed significant results for all social identity foci, identification with family, $F(5, 999) = 5.973$, $p < 0.001$, friends, $F(5, 999) = 7.994$, $p < 0.001$, neighbors, $F(5, 999) = 6.602$, $p < 0.001$, country, $F(5, 999) = 9.072$, $p < 0.001$, Europe, $F(5, 999) = 8.864$, $p < 0.001$, and humanity, $F(5, 999) = 9.951$, $p < 0.001$. The detailed results of the regression analyses are summarized in Table 3.

Confirming Hypothesis 1, the results show that the need to belong was positively associated with changes in identification across all groups during times of crisis. Specifically, a higher need to belong was associated with an increase in identification with family ($\beta = 0.094$, $p = 0.004$, 95% CI [0.28, 1.49]), friends ($\beta = 0.098$, $p = 0.003$, 95% CI [0.29, 1.37]), neighbors ($\beta = 0.129$, $p < 0.001$, 95% CI [0.50, 1.49]), country ($\beta = 0.141$, $p < 0.001$, 95% CI [0.64, 1.68]), Europe ($\beta = 0.113$, $p < 0.001$, 95% CI [0.40, 1.43]), and humanity ($\beta = 0.140$, $p < 0.001$, 95% CI [0.58, 1.54]).

Regarding Hypothesis 2, our results similarly revealed a significant positive association between perspective taking and changes in most foci of identification during times of crisis. This indicates that individuals with a stronger subjectively perceived ability to take others' perspectives tend to experience increased changes in identification with family ($\beta = 0.093$, $p = 0.004$, 95% CI [0.19, 0.96]), friends ($\beta = 0.117$, $p < 0.001$, 95% CI [0.30, 0.99]), country ($\beta = 0.104$, $p = 0.001$, 95% CI [0.23, 0.89]), Europe ($\beta = 0.139$, $p < 0.001$, 95% CI [0.41, 1.06]), and humanity ($\beta = 0.111$, $p < 0.001$, 95% CI [0.25, 0.86]). However, the relationship between perspective taking and changes in identification with neighbors did not reach statistical significance after applying the Bonferroni correction ($\beta = 0.077$, $p = 0.015$, 95% CI [0.08, 0.70], adjusted value of $p = 0.008$). Thus, Hypothesis 2 was mostly supported.

TABLE 1 | Means, standard deviations, and Pearson correlation coefficient for study variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Need to belong	2.47	0.46	—										
2. Perspective taking	3.66	0.70	0.14**	—									
3. Cognitive closure	3.77	0.62	0.21**	-0.04	—								
4. Change family	3.12	4.29	0.13**	0.10**	0.08**	—							
5. Change friends	2.48	3.86	0.13**	0.12**	0.05	0.62**	—						
6. Change neighbor	1.09	3.51	0.15**	0.09**	0.08*	0.44**	0.56**	—					
7. Change country	1.75	3.75	0.17**	0.11**	0.04	0.57**	0.59**	0.54**	—				
8. Change Europe	1.84	3.69	0.14**	0.15**	0.02	0.53**	0.56**	0.50**	0.71**	—			
9. Change humanity	1.63	3.46	0.17**	0.12**	0.06	0.58**	0.61**	0.55**	0.68**	0.67**	—		
10. Gender ^a	0.46	0.50	-0.01	0.00	-0.11**	-0.00	-0.01	-0.00	-0.00	0.02	-0.01	—	
11. Age	47.65	14.06	-0.13**	0.11**	-0.04	-0.05	-0.10**	-0.04	-0.09**	-0.07*	-0.10**	0.06	—

Note: $N = 1008$. Significance: * $p < 0.05$ and ** $p < 0.01$. Reference categories: 0 = female, 1 = male; $N = 1005$. Three individuals who identified as "other" were excluded from this analysis to simplify the model and interpretation.

TABLE 2 | One-sample Wilcoxon signed rank test for change in identification with different social groups.

Identification change with	z	p	r
Family	18.32	< 0.001	0.58
Friends	16.89	< 0.001	0.53
Neighbor	9.73	< 0.001	0.31
Country	13.61	< 0.001	0.43
Europe	14.42	< 0.001	0.45
Humanity	13.58	< 0.001	0.43

Note: $N = 1008$. $r =$ Pearson correlation coefficient.

Regarding Hypothesis 3, our analysis did not support the expected negative association between the need for cognitive closure and changes in social identification. The need for cognitive closure was not significantly associated with changes in identification with family ($\beta = 0.066$, $p = 0.040$, 95% CI [0.20, 0.90]), friends ($\beta = 0.030$, $p = 0.341$, 95% CI [-0.20, 0.58]), neighbors ($\beta = 0.052$, $p = 0.104$, 95% CI [-0.06, 0.66]), country ($\beta = 0.013$, $p = 0.684$, 95% CI [-0.30, 0.46]), Europe ($\beta = 0.000$, $p = 1.000$, 95% CI [-0.37, 0.37]), and humanity ($\beta = 0.030$, $p = 0.353$, 95% CI [-0.18, 0.52]). Thus, Hypothesis 3 was rejected.

4 | Discussion

The simultaneous occurrence of several global crises in recent years, such as the COVID-19 pandemic, the war in Europe, and the climate change, has created a context of uncertainty. This study examined the relationship between interindividual differences in the need to belong, perspective taking, and the need for cognitive closure and threat-related changes in social identification. We found an overall increase in social identification with all examined social groups, with the largest increase in identification with family and the smallest increase in identification with neighbors. This general increase in social identification aligns with the social identity approach (Tajfel and Turner, 1979), which posits that shared social identities can serve as buffers against stress during crises (Haslam et al. 2009). A recent review by Rudert et al. (2022) supports this notion, highlighting how social identity processes, such as group identification, play a key role in reducing the psychological impact of the COVID-19 pandemic. Specifically, stronger identification with close social groups, such as family, has been linked to reduced mental strain and increased emotional support during times of crisis (Frenzel et al. 2022). Furthermore, as outlined by uncertainty-identity theory (Hogg 2007), individuals turn to social groups to reduce uncertainty and manage threats.

In line with previous theorizing and empirical research, the need to belong was positively associated with changes in social identification, reflecting that individuals with a higher need to belong reported a more pronounced increase in social identification across all groups, from close circles (e.g., family) to larger collectives (e.g., humanity). Our findings support Baumeister and Leary's (1995) proposition that the need to belong is a universal human need that can have significant implications for

TABLE 3 | Association of change in identification with need to belong, perspective taking, and cognitive closure.

Predictor	Identification change																		
	Family			Friends			Neighbor			Country			Europe			Humanity			
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β	
Need to belong	0.886**	0.307	0.094	0.829**	0.274	0.098	0.994**	0.251	0.129	1.159**	0.266	0.141	0.912**	0.262	0.113	1.058**	0.245	0.140	
Perspective taking	0.571**	0.196	0.093	0.648**	0.175	0.117	0.390	0.160	0.077	0.560**	0.170	0.104	0.735**	0.167	0.139	0.554**	0.157	0.111	
Cognitive closure	0.459	0.223	0.066	0.190	0.200	0.030	0.297	0.183	0.052	0.079	0.194	0.013	0.000	0.191	0.000	0.166	0.179	0.030	
Covariates																			
Age	-0.014	0.010	-0.046	-0.027**	0.009	-0.098	-0.007	0.008	-0.026	-0.022*	0.008	-0.081	-0.020	0.008	-0.075	-0.021**	0.008	-0.087	
Gender ^a	0.079	0.271	0.009	-0.036	0.242	-0.005	0.024	0.221	0.003	0.049	0.235	0.007	0.194	0.231	0.026	0.010	0.216	0.001	
	$R^2 = 0.029$			$R^2 = 0.038$			$R^2 = 0.032$			$R^2 = 0.043$			$R^2 = 0.042$			$R^2 = 0.047$			
	$F(5, 999) = 5.973,$			$F(5, 999) = 7.994,$			$F(5, 999) = 6.602,$			$F(5, 999) = 9.072,$			$F(5, 999) = 8.864,$			$F(5, 999) = 9.951,$			
	$p < 0.001$			$p < 0.001$			$p < 0.001$			$p < 0.001$			$p < 0.001$			$p < 0.001$			

Note: $N = 1005$. The table shows the nonstandardized regression coefficients (B), standard error (SE), and standardized coefficients (β). Significance: * $p < .01$ and Bonferroni adjusted alpha ** $p < 0.0083$. Reference categories: ⁰0 = female, 1 = male. Three Individuals who identified as “other” were excluded from this analysis to simplify the model and interpretation.

behavior and well-being. Identification may act as a mechanism to fulfill this fundamental social need. The COVID-19 pandemic created an environment of increased threat and uncertainty in which social ties became even more important as a potential buffer against stress (Haslam et al. 2009; Rudert et al. 2022). Although our study does not allow us to infer causality, increased social identification may reflect greater reliance on groups to satisfy the need to belong during the pandemic.

Furthermore, perspective taking revealed (at least with most of the social groups we examined) a positive association with changes in identification, suggesting that participants who exhibited a stronger tendency towards perspective taking also showed a more pronounced increase in their social identifications. This finding aligns with existing research that links perspective taking to positive social effects, such as improved relationships, effective conflict resolution, and empathy (e.g., Batson, Early, and Salvarani 1997; Todd and Burgmer 2013; Vescio, Sechrist, and Paolucci 2003). In addition, our study contributes to the literature by considering the context of global crisis, thus supporting the notion that perspective taking might serve as a catalyst to promote social connectedness (e.g., Batson et al. 2002). There was no statistically significant relationship between increased social identification with neighbors and perspective taking when applying the Bonferroni correction for multiple testing. Notably, the increase in identification with neighbors was the weakest.

Contrary to our expectations, the need for cognitive closure was not associated with threat-related changes in identification. This finding suggests that the relationship between these variables, particularly during times of crisis, may be more complex and might be influenced by a variety of factors that were not fully captured in our study. In particular, future studies might want to account for the degree of dissent within different social groups (because the need for cognitive closure should become particularly relevant when dissent is stronger). In addition, individual differences in the perception and interpretation of threats, (i.e., due to differences in media use) may influence the relationship between cognitive closure and social identification in times of crisis.

4.1 | Identification Across Different Groups

In our study, we examined changes in identification by exploring different group sizes and levels of exclusivity, including both intimate groups such as family and friends, and broader entities such as Europe and humanity. Despite the diversity of these groups, our results showed no major differences in the relationships between interindividual differences and changes in identification between narrow and broader social groups. Correlational analyses consistently demonstrated moderate to strong correlations between these groups. These findings are consistent with previous research suggesting that identification with both close and broader groups can play an important role in coping with stress and perceiving threats as a collective challenge during crises (Albarelo, Crocetti, and Rubini 2021; Greenaway et al. 2016; Haslam et al. 2018).

The substantial correlations between changes in identification with distinct groups suggest that social identification may have

trait-like aspects independent of specific social groups. In other words, it seems like that there may be interindividual differences in the likelihood and degree of social identification, with (generally) stronger identifiers and (generally) weaker identifiers. In the context of social identification, “trait-like characteristics” refer to the consistency and stability of an individual’s identification with social groups over time and across situations. This perspective is in line with social identity theory, which emphasizes the stability of identities over time rather than high variability (Tajfel and Turner 1979).

4.2 | Limitations and Directions for Further Research

In the face of ongoing global threats, our study, based on a large sample, provides valuable insights into individual responses to uncertainty. Nevertheless, our study is not without limitations. First, it should be noted that the associations observed in this study were small, explaining only between 3% and 4% of the variance in social identification and indicating the potential influence of unaccounted variables. However, the relevance of small effect sizes should not be underestimated as even small effects can have a huge impact, especially when applied to a large population (Carey et al. 2023). The absolute number of people affected by the effect size varies dramatically with population size, so context and population size must be considered when interpreting effect sizes.

A second limitation of our study concerns the measurement of changes in social identification, which was based on participants’ subjective self-assessments. Consequently, our findings may—at least to some degree—reflect participants’ perceptions or beliefs about changes in social identification rather than actual changes. Future research should aim to develop more objective measures and establish baseline levels of social identification before significant events to allow accurate comparisons of pre- and post-event states. This approach would allow for a more nuanced understanding of the dynamics of social identification. Furthermore, we took a broader approach to explore identification changes in response to crises, in general. Future studies might aim to complement this perspective by linking their findings more closely to specific crises. More focused analyses of specific crises would provide deeper insights into how different types or aspects of crises affect identity processes.

Third, the use of self-report measures may limit the validity of our findings, as we cannot rule out the possibility of potential biases such as social desirability and self-protective tendencies (Trower, Gilbert, and Sherling 1990). In particular, perspective-taking is considered a socially desirable ability, which may lead to biased self-reports. Despite these limitations, the use of the subscale of the Interpersonal Reactivity Index (IRI) to assess perspective taking is supported by the findings of a study by Israelashvili, Sauter, and Fischer (2019). Their study showed that self-reported assessments of perspective taking correlate with objective performance on emotion recognition tests. In their meta-analysis of six experiments, individuals with higher self-rated perspective taking performed significantly better on classical emotion recognition tests, lending validity to our

subjective approach. Furthermore, self-assessments can lead to common-method bias, potentially inflating the relationships between variables (Podsakoff et al. 2003). However, Spector (2006) argued that correlations derived from a single method are not necessarily stronger than those derived from multiple methods. In addition, many of the variables we used in our study are best captured by self-report measures or even require self-report (e.g., need to belong and perceived psychological identification with social groups).

Finally, it is important to note that our study reveals correlative findings and does not allow for causal conclusions. While we have shown associations between psychological traits and social identification, we cannot infer clear causal relationships. Further research is needed to fully understand the causal relationships and complex interactions between interindividual differences and social identification.

4.3 | Conclusion

In times of global crisis, people experience uncertainty and ambivalence. Identification with different social groups, from close family to broader communities, such as one's home country, can provide them with protection and the necessary resources to cope with the uncertainty. Our findings show that a higher need to belong and higher levels of perspective taking are associated with threat-related increases in social identification. However, the role of the need for cognitive closure and its relationship with identification might be more complex and requires further investigation.

Acknowledgments

Open Access funding enabled and organized by Projekt DEAL.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data is available on the Open Science Framework (https://osf.io/sa3qv/?view_only=7515619210154b3d9d9c78e3eb6cec29).

Endnotes

¹In addition to the measures presented in this study, other variables were collected, including identification with different social groups (e.g., family, country, humanity), social support, collective self-efficacy, political participation, identity leadership, external political efficacy, conspiracy beliefs, threat perception, physical symptoms, stress, loneliness, vaccination attitudes and compliance with COVID-19-related health recommendations, identification with Ukrainian people, and helping behavior for Ukraine.

²All constructs were measured at all timepoints. Using T1 predictors and outcomes (or T2 predictors and outcomes) did not change the pattern of results.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.