

Compensatory responses to existential uncertainty: Self-affirmation can buffer against non-normative collective action intentions in Iraq

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Exposure to self-related uncertainty has been shown to cause defensiveness in the form of embracing extreme political attitudes and intergroup bias. However, so far it is unclear whether this mechanism extends to behavioral intentions, and thus constitutes a motivating factor for engagement in non-normative collective action. Here, this question is examined in Iraq in 2020 after a period of intense regional instability and protests. In a preregistered randomized controlled trial across diverse locations (N=279), participants' self-integrity was threatened by mortality salience. They responded by reporting stronger intentions to engage in collective action, especially for non-normative forms including the use of violence; however, providing alternative self-affirmation opportunities partially mitigated this effect. Secondary analyses suggest the impact of both manipulations to be moderated by low emotional stability, disagreeableness, and high identification with existing social networks. This study extends self-affirmation theory by testing it in a conflict-affected setting and on specific behavioral intentions, discussing practical implications for psychological field interventions in post-conflict resolution.

Keywords

Collective action, radicalism, uncertainty, self-affirmation, mortality salience

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Public significance

Researchers, policymakers and practitioners call for robust, scientifically validated tools for the design and implementation of social interventions to promote reconciliation and preventing cycles of violence in conflict-affected environments. This study contributes causal evidence regarding the role of uncertainty in shaping concrete intentions for political action rather than attitudes which less reliably correspond to realized behavior. Experimental results shows a disproportionate effect on non-normative forms of engagement compared to activism intentions, a distinction that is rarely examined but of critical practical importance. Further, the identified impact of a self-affirmation intervention to pre-empt this mechanism highlights feasible opportunities for designing and adapting interventions for environments suffering the most from recurring political violence and radicalism.

Author contributions

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INTRODUCTION

One in eight people is exposed to political violence in an increasing number of conflicts around the world (Raleigh & Kishi, 2024), presenting an urgent challenge to policymakers and practitioners. Although violent and non-normative political action is driven by a complex interplay of psychological and social factors, one barrier to successful conflict resolution are experiences of *self-related* existential uncertainty beyond environmental uncertainty (Gøtzsche-Astrup, 2021). This hypothesis originates from the concept of self-affirmation (Steele, 1988), according to which embracing extremes is an effective strategy to alleviate anxiety caused by threats to one's self-perception. Compensatory zealotry of this kind has been shown to occur across a variety of political, religious and idealist values (e.g., McGregor et al., 2001; Wichman, 2010; Vergani et al., 2019) which can be viewed as antecedents of non-normative political outcomes (Bliesener et al., 2021). Moreover, attempts to intervene in this process by offering alternative self-affirmation opportunities have found promising results (e.g., McGregor et al., 2001). One question that remains untested, however, is whether 'going to extremes' in response to personal uncertainty also affects behavioral change in the form of higher readiness to participate in non-normative, radical collective action in real-world settings. This extension is crucial, as it bridges the gap between established attitudinal mechanisms and tangible social outcomes, thus enabling a better understanding of the processes underlying intergroup conflict at the individual level.

The present study reports controlled findings regarding the causal links between self-related uncertainty, self-affirmation, and radical political action in a nationwide sample in Iraq during a period of intense unrest as part of the 2019-2021 "Tishreen movement" (Al-Qteishat, 2024). In addition to its high ecological validity, the research builds on previous literature through a focus on behavioral intentions as a more proximal measure of engagement, testing differential effects on radical vs. moderate forms of political action, and exploring individual differences as potential moderators for both the main effect and the intervention.

Existential uncertainty and the appeal of extremes

The theory of self-affirmation, first developed by Steele (1988), posits that people have a fundamental motivation to preserve self-integrity, a superordinate concept consisting of self-worth and the belief of being a valuable and potent causal agent able to control events (Sherman & Cohen, 2006). Crucially, the concept of self-integrity allows for 'fluid

compensation', whereby a positive self-perception increases tolerance for negative feelings about other, unrelated aspects of one's personality. Conversely, when faced with threats to integral aspects of the self, such as by existential uncertainty, individuals can attempt to fend off the resulting anxiety by affirming other values that restore a strong and unique sense of identity. Embracing extremes is one option to bolster self-integrity because extremes provide a potent antidote to the experience of personal uncertainty (McGregor et al., 2013; Webber et al., 2018).

A number of studies have tested the effects of different self-related uncertainty manipulations using mortality salience, temporal discontinuity and other paradigms. In response, participants in these studies demonstrated increased zealotry and extreme convictions on a variety of political attitudes such as capital punishment, abortion rights and armed violence (McGregor et al., 2001; McGregor & Jordan, 2007), religious attitudes (e.g., Vergani et al., 2019), idealist attitudes (McGregor et al., 2013; Nash et al., 2011), and derogatory attitudes against outgroups (Schmeichel & Martens, 2005). In addition, some studies (e.g., Finley et al., 2018; McGregor et al., 2001; Wichman, 2010) tested whether this dynamic can be countered by alternative self-affirmations (typically a reflection task focusing on important personal values) either as a pre-threat inoculation or post-threat 'integrity-repair' intervention. Subsequent attitudinal hardening was weaker in these cases, supporting the notion that adherence to extremes provides a viable compensation strategy for feelings of self-related uncertainty, while also suggesting that self-affirmation can provide a buffer against this mechanism.

These empirical findings are compatible with a broad body of literature including self-affirmation theory, as well as theories of terror management (Greenberg et al., 1986), uncertainty management (van den Bos, 2009), reactive approach motivation (McGregor et al., 2013), and identity-based models of radicalization (e.g., Hogg & Adleman, 2013). However, the evidence supporting a link between self-related uncertainty and political outcomes remains limited to attitudes in study populations from highly developed Western countries, with unclear validity for engagement behavior in collective action in conflict-affected environments. In this context, no controlled studies have investigated individual differences in reactance to uncertainty threats and self-affirmation along personality traits and group identification, which have been shown moderate a variety of political psychological processes (see Mondak, 2010). There remains a paucity of robust investigation of these gaps.

Context and collective action in Iraq

Iraq has been the country most severely affected by terrorism globally from 2004 throughout 2018, and second only to Afghanistan thereafter (Institute for Economics and Peace, 2023). Its exposure to violence spans decades of repressive authoritarian governance, foreign interventions, and extreme sectarian conflicts. Political volatility and uncertainty in the country and across the Middle East remain major challenges for reconstruction and reconciliation in large parts of the country. Against this background, a wave of protests erupted in 2019 opposing the central government's inability to provide basic services, reign in corruption and limit sectarian influence by Iran. Lasting until 2021, the “Tishreen movement” represented the largest civil uprising since the 2003 war in Iraq (Al-Qteishat, 2024) and was met with harsh repression by security forces which, in turn, fueled resentments among protesters. Until today, collective action in Iraq involves a wide range of behaviors including peaceful protests, social media mobilizations, unrests and violence in the pursuit of political goals.

Research in this context must acknowledge and account for the distinct experiences and political situation when interpreting findings. At the same time, contextualized quantitative research of the psychological drivers of collective action is particularly rare, and thus demanded by practitioners, in regions most affected by conflict. Examining whether scientific conclusions from previous studies can offer new insights in appropriate real-world environments remains a critical knowledge gap.

PRESENT RESEARCH

A preregistered randomized controlled trial was conducted in Iraq, adapting the design of McGregor et al. (2001) by using mortality salience (MS) as an uncertainty treatment, and personal value affirmation as a self-affirmation (SA) intervention. The primary objective of this study was to examine causal effects of both manipulations on individual intentions to engage in non-normative political action (hereafter, “radical intentions”). A deliberate distinction was maintained from normative collective action (hereafter, “activism intentions”; they represent two conceptually related and correlated, but psychometrically distinct forms of engagement (Moskalenko & McCauley, 2009). Consequently, activism intentions were measured separately but expected to change similarly to radical intentions as the primary outcome.

H1: Exposure to self-related uncertainty (mortality salience) increases individual intentions to engage in collective action.

H2: A self-affirmation intervention reduces the effect of uncertainty on collective action intentions.

In addition to the direct treatment effects, this study examines the possibility of individual differences in sensitivity to self-integrity manipulations. Since existential uncertainty is the causal antecedent in the studied mechanism, the personality trait neuroticism (a marker for volatility and withdrawal) was tested as a hypothetical moderator. Additionally, the primary outcome of interest – intentions for radical collective action – represents a willingness to violate social norms and, in some cases, cause harm to others; it was thus hypothesized that the personality trait agreeableness (a marker for compassion and politeness) and stronger identification with social groups are negatively related to the main mechanism.

H3: Treatment effects are moderated positively by trait neuroticism, and negatively by trait agreeableness and group identification.

DATA AND METHOD

Adult participants were recruited in July 2020 in collaboration with ten non-governmental and public education organizations in Iraq, across seven locations: Baghdad, Basra, Duhok, Erbil, Karbala, Mosul, and Ninawa. This reflects a diverse coverage of the general population including areas with different population densities and compositions in both Central Iraq and the Kurdistan Region (Figure 1). Power analysis (with $\alpha=0.05$ and $\beta=0.10$) suggested a required sample size of 259 to detect small to moderate effects as observed in previously reported studies using mortality salience but other outcomes (Burke et al., 2010); notably however, no effects specifically on collective action intentions were available a priori.

Overall, 279 individuals completed the experimental materials, of which five observations were removed due to missing data in the outcome variables or participants declaring their responses to be dishonest at the end of the survey. Table 1 summarizes descriptive statistics for the final analysis sample ($N = 274$). A noteworthy feature is a large proportion of more educated individuals (resulting from recruitment through several educational institutions). Implications for generalizability are addressed in the general discussion.

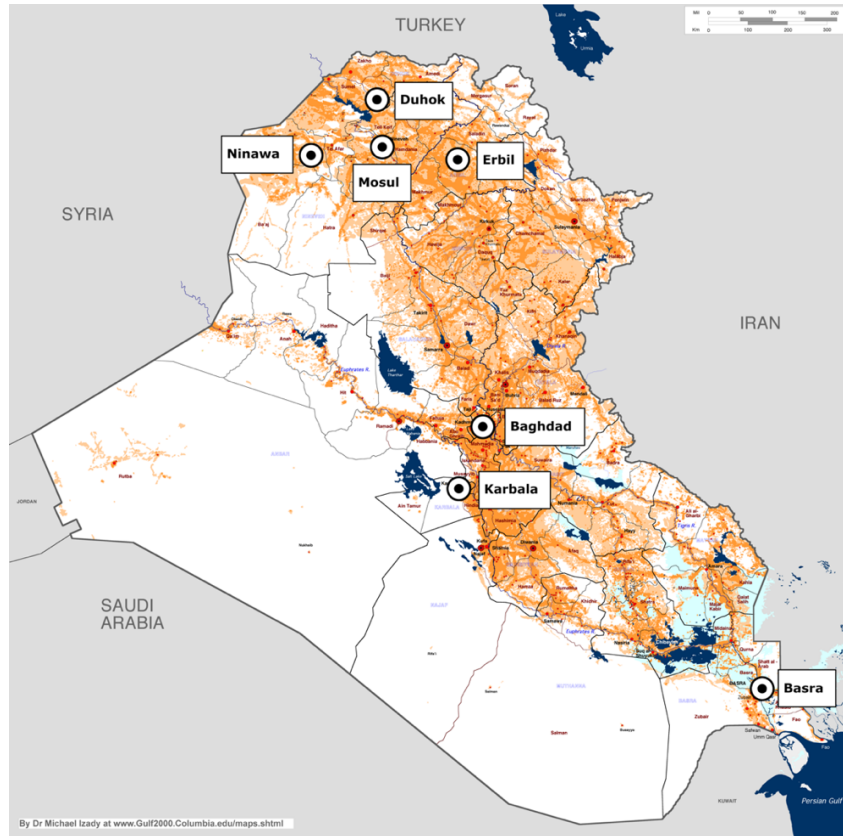


Figure 1. Sampling locations in Iraq with population density colored in orange. Background: Izadi (2018).

Table 1. Sociodemographic characteristics of sample (n=274).

Variables	Frequencies		Variables	Frequencies	
	n	%		n	%
Gender			Employment		
Male	188	68.61	Unemployed	47	17.15
Female	83	30.29	Paid employment	82	29.93
Other/missing	3	1.09	Self-employed	42	15.33
Age			Full-time student	23	8.39
18–24 years	26	9.49	Retired	6	2.19
25–34 years	136	49.64	Other	74	27.01
35–44 years	51	18.61	Education		
45–54 years	51	18.61	Less than school	8	2.92
55–64 years	8	2.92	High school	10	3.65
≥65 years	2	0.73	Vocational training	26	9.49
Nationality			Bachelor's	164	59.85
'Iraqi'	254	92.70	Master's	45	16.42
'Iraqi-Kurdish'	9	3.28	PhD/Doctorate	21	7.66
'Egyptian'	2	0.73	Income (monthly)		
'Palestinian'	2	0.73	<0.8m IRQ	143	52.19
'Arabic'	2	0.73	0.8–1.6m IRQ	70	25.55
Other/missing	5	1.82	1.6–2.4m IRQ	42	15.33
Displacement status			2.4–3.2m IRQ	15	5.47
No	108	39.42	3.2–4.0m IRQ	0	0.00
Yes – internal	148	54.01	>4.0m IRQ	4	1.46
Yes – external	18	6.57			

Note: Nationality was self-reported in a free text response.

Procedure

The research was presented as an interactive survey about personality characteristics and political activism in Iraq, and completed on personal electronic devices (in some cases, devices were provided). After declaring consent and receiving detailed study information, participants completed a baseline survey measuring individual traits neuroticism and agreeableness, as well as group identification. Treatments were then sequentially administered across three randomly assigned between-subject conditions as illustrated in Figure 2. Participants in the first condition (Control) performed two neutral placebo tasks; subsequently measured intentions served as baseline readiness to engage in non-normative and normative collective action. In the second condition (MS), participants completed the uncertainty induction (mortality salience) followed by a placebo task; in line with hypothesis H1, they were expected to respond by intensifying their (non-)normative action intentions. In the third condition (MS + SA), participants completed the uncertainty treatment followed by self-affirmation; in line with hypothesis H2, this was expected to effectively reduce intentions relative to the MS condition, where no intervention was administered before measuring the outcomes.

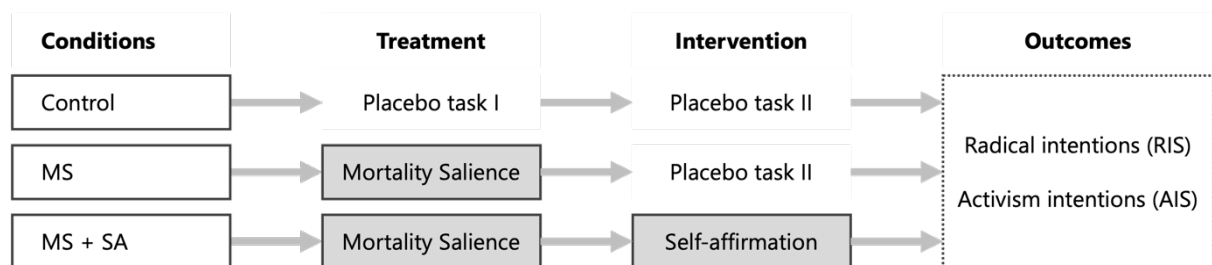


Figure 2. Treatment assignment by between-subjects condition.

Materials

All materials were translated into Iraqi Arabic and reviewed by a native-speaking enumerator involved in the data collection through an iterative process of back-translation and matching against original texts. Additionally, pre-tests with approximately 20 graduate students at a UK university (English version) and two local enumerators (English and Arabic versions) independently confirmed that materials were intelligible and unambiguous; relevant changes were implemented prior to data collection.

Treatment: Mortality salience. For the uncertainty manipulation, participants in both the MS and MS + SA conditions answered two open-ended questions conventionally used to induce mortality salience (Rosenblatt et al., 1989) (“Please write down, as specifically as you can, what you think will happen to your body as you physically die and once you are physically dead”, and “describe the emotions that the thought of your own death arouses in you”). Control participants answered two structurally equivalent questions on the unrelated subject of watching a movie.

Seminal literature (e.g., Greenberg et al., 1994; Pyszczynski et al., 1999) suggests implementing a delay task following mortality salience to allow for distal cognitive reactions to emerge; removing delays can weaken effects (Burke et al., 2010). This design choice was accounted for here by the presence of the second treatment (or placebo task) before measuring outcomes.

Intervention: Self-affirmation. A secondary treatment exercise adapted from McGregor et al. (2001) was administered only to participants in the MS + SA condition following the uncertainty induction. A list of six personal value categories was presented (‘business, economics and money-making’; ‘art, music and theater’; ‘science and the pursuit of knowledge’; ‘social life and relationships’; ‘social action and helping others’; ‘religion and spirituality’). Participants were asked to select their most important value category, then write a paragraph about why it is important to them personally and a time where it has been particularly useful in their lives. The placebo action consisted of participants selecting their least important value category and writing about how it could be important to other people.

Dependent variables. The Activism and Radicalism Intentions Scales (Moskalenko & McCauley, 2009) were used following both treatments to measure individual readiness to engage in non-normative and normative collective actions. Participants were first asked to reflect on a religious, political or social ingroup, then rated their agreement with eight statements on a 7-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’ (range 4-28) in randomized order. The first four items constitute the aggregate measure for activism intentions (AIS; alpha = 0.65):

1. *I would join/belong to an organization that fights for my group's political and legal rights.*
2. *I would donate money to an organization that fights for my group's political and legal rights.*
3. *I would volunteer my time working (i.e. write petitions, distribute flyers, recruit people, etc.) for an organization that fights for my group's political and legal rights.*
4. *I would travel for one hour to join in a public rally, protest, or demonstration in support of my group.*

The last four items constitute the aggregate measure for radical intentions (RIS; alpha = 0.55):

5. *I would continue to support an organization that fights for my group's political and legal rights even if the organization sometimes breaks the law.*
6. *I would continue to support an organization that fights for my group's political and legal rights even if the organization sometimes resorts to violence.*
7. *I would participate in a public protest against oppression of my group even if I thought the protest might turn violent.*
8. *I would attack police or security forces if I saw them beating members of my group.*

Personality traits. 16 items were adapted from the International Personality Item Pool (IPIP-50), a widely established framework for measuring Big Five personality markers (Goldberg, 1992). From a validated Arabic version of IPIP-50 (Almaghbashy, 2017), eight items for each neuroticism and agreeableness were presented in alternating order. Participants at baseline (before treatments) responded on 7-point Likert scales from 'strongly disagree' to 'strongly agree' (range 8-56), with higher scores indicating higher agreeableness (alpha=0.74) and neuroticism (alpha=0.69), respectively.

Social identification. The Inclusion of Other in the Self scale (Aron et al., 1992) was used as a measure of social attachment. It consists of a visual aid of seven pairs of circles with different degrees of overlap; one circle is labelled 'You', the other 'X', representing a pre-specified social group or entity (Gächter et al., 2015). Participants at baseline (before treatments) chose the pair that best reflects the degree to which they viewed their identity

as separate or congruent with that of 'X'. Because Iraq consists of a complex fabric of social identities that are often tied to specific regional or religious-sectarian communities, references to specific groups were replaced by the more general categories family, friends, country, and society ('the people') respectively (range 1-7).

Sociodemographic variables. A short questionnaire at the end measured socio-demographic covariates gender, age, nationality, displacement status (internal and external), occupation status, education level, and income.

Debriefing. After completing the study, participants were encouraged to indicate anonymously whether their responses had been accurate and honest; negative responses led to exclusion from the analysis. A debriefing included contact details to receive supplementary information, which was provided to interested participants on request after data collection concluded.

Transparency and openness

The study underwent full review by the author's institutional Research Ethics Committee prior to data collection. Determination of sample size, all data exclusions, all manipulations, and all measures are reported in the study. The study design, hypotheses and analysis plan were preregistered prospectively before data collection; see (<https://doi.org/10.17605/OSF.IO/D2SV9>). All study materials, data, and analysis code have been made publicly available at the OSF and can be accessed at (<https://doi.org/10.17605/OSF.IO/RU4TW>).

RESULTS

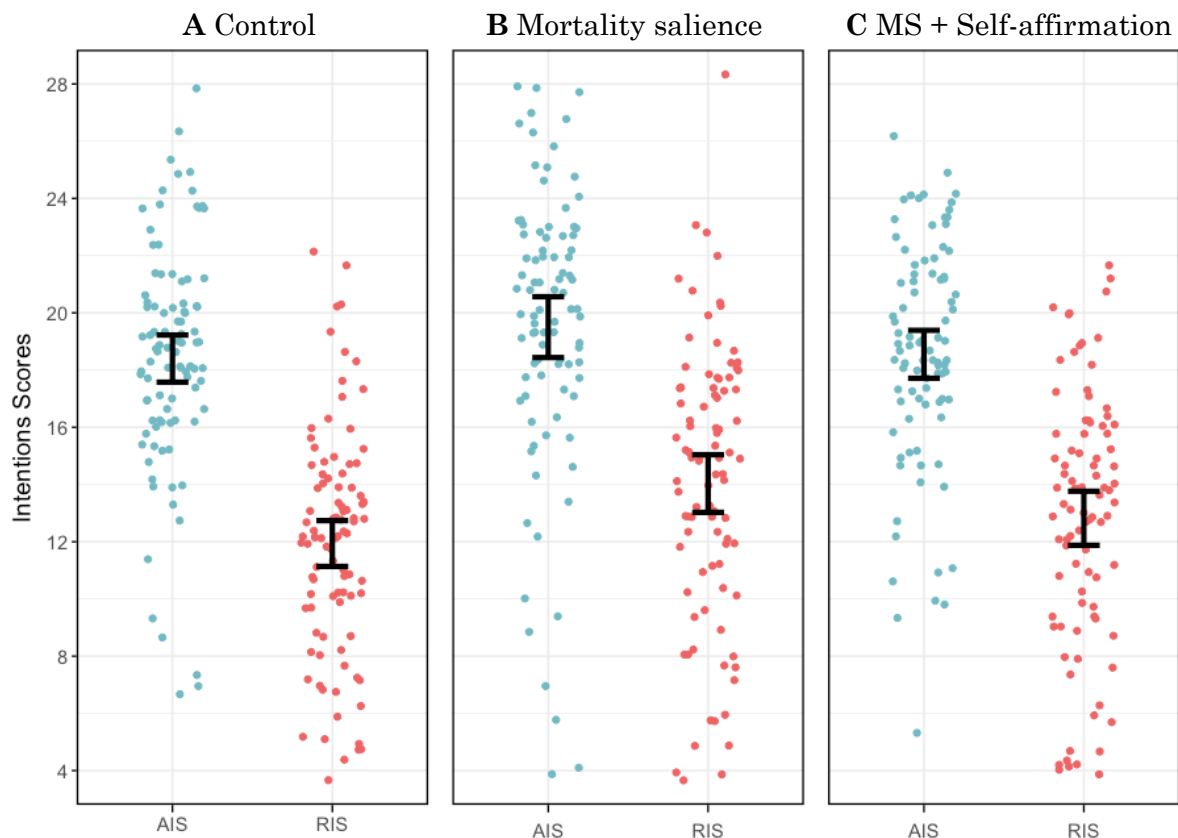


Figure 3. Radical intentions (RIS) and activism intentions (AIS) by exposure to uncertainty manipulations (control, mortality salience, and mortality salience + self-affirmation). Error bars represent 95% within-conditions confidence intervals, and individual data points represent raw participant scores.

Preliminary analyses

Average levels of intentions to engage in radical collective action ($M = 11.94$, $SD = 3.93$) and activism ($M=18.40$, $SD=4.05$) were in line with previous applications (Filho & Modesto, 2019; Miconi et al., 2021; Moskalenko & McCauley, 2009; Pfundmair et al., 2021) in the baseline (Control) condition. Compared to this, as illustrated in Figure 3, participants scored higher in the uncertainty (MS) condition on both RIS ($M = 14.03$, $SD = 4.81$), $t(183) = 3.26$, $p < .001$, and AIS ($M = 19.50$, $SD = 5.08$), $t(183) = 2.06$, $p = .041$. However, scores were not significantly different in the combined treatment (MS+SA) condition compared to Control for RIS ($M = 12.82$, $SD = 4.49$), $t(182) = 1.42$, $p = .156$ and AIS ($M = 18.55$, $SD = 3.98$), $t(182) = 0.24$, $p = .808$. In direct comparison to the uncertainty-only condition, intentions were marginally reduced after the self-affirmation intervention (for RIS, $t(177) = -1.75$, $p = .082$; for AIS, $t(177) = -1.83$, $p = .069$). These findings provide

preliminary support for the exacerbating and mitigating effects of the two manipulations as per hypotheses H1 and H2. No direct associations were found of intentions with sociodemographic characteristics at conventional significance levels.

Uncertainty and self-affirmation effects on political action

Separate multiple regression analyses of the dependent variables – radical intentions scores (RIS) and activism intentions scores (AIS) – were conducted using dummy-coded exposure to the uncertainty (MS) and intervention (MS+SA) materials and sociodemographic controls. Following methodological suggestions for predicting coarse scale data (in this case, Likert-coded RIS and AIS), the analysis applied Probit-adapted OLS (POLS; van Praag & Ferrer-i-Carbonell, 2008). Compared to ordered logit as the usual candidate estimator, POLS yields similar results but transforms the dependent variable into pseudo-continuous, unbounded form which allows for direct interpretation of standardized coefficients using OLS (based on an assumption of latent normality; see Supplemental Material for a full description).

Table 2 reports treatment effect estimations for the two outcomes, standardized RIS and AIS (models I and IV). Results show statistically significant, medium-sized effects. Specifically, intentions to engage in political action increased in response to the uncertainty induction using mortality salience, particularly for radical action (+0.569) with a weaker effect on activism (+0.372). Supporting hypothesis H1, intentions to engage in political action are influenced by a reaction to experiences of existential uncertainty, and embracing non-normative actions appears to be particularly attractive. Relative to these increased intention levels, providing an alternative opportunity of self-affirmation reduced intentions back towards baseline levels. This effect is significant and equally sized for both RIS and AIS (respectively -0.329 and -0.318) but smaller than the original increases, particularly for RIS. In other words, affirming important personal values only partially mitigated the effect of uncertainty on collective action intentions.

To further unpack these findings and for robustness given the ordinal nature of the dependent variables, Figure 4 shows marginal effects at each level of raw (unstandardized) intentions scores, based on ordered logistic regression corresponding to models I and IV. Results reveal a clear pattern of reduced probabilities for lower intentions scores, and increased probabilities for higher intentions scores, in the MS condition relative to control; the overall treatment effects are congruent with the linear model for both RIS and AIS, sizeable and significant at $p < .001$ and $p = .017$, respectively.

Table 2. Treatment effects and interactions.

Model	Radical Intentions (RIS)			Activism Intentions (AIS)		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Mortality salience (MS)	0.569*** (0.154)	0.559*** (0.148)	0.617*** (0.154)	0.372** (0.160)	0.391** (0.160)	0.396** (0.162)
Self-affirmation (SA)	-0.329** (0.152)	-0.280* (0.147)	-0.406*** (0.153)	-0.318** (0.158)	-0.304* (0.160)	-0.313* (0.160)
Neuroticism		-0.002 (0.099)			0.145 (0.108)	
Neuroticism × MS		0.330** (0.135)			-0.156 (0.147)	
Neuroticism × SA		-0.285* (0.145)			0.122 (0.158)	
Agreeableness		-0.036 (0.101)			0.167 (0.110)	
Agreeableness × MS		-0.254* (0.133)			-0.182 (0.145)	
Agreeableness × SA		-0.002 (0.147)			0.187 (0.160)	
ID-Friends			0.089 (0.112)			0.130 (0.117)
ID-Friends × MS			-0.286* (0.157)			-0.245 (0.165)
ID-Friends × SA			0.035 (0.155)			0.146 (0.162)
ID-People			0.095 (0.116)			0.107 (0.122)
ID-People × MS			-0.300* (0.163)			-0.176 (0.171)
ID-People × SA			0.225 (0.153)			0.150 (0.160)
ID-Country			-0.130 (0.106)			0.048 (0.111)
ID-Country × MS			0.257* (0.145)			0.227 (0.153)
ID-Country × SA			-0.005 (0.160)			-0.088 (0.168)
ID-Family			-0.122 (0.102)			-0.005 (0.107)
ID-Family × MS			0.119 (0.150)			0.250 (0.157)
ID-Family × SA			-0.142 (0.155)			-0.188 (0.162)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.425	-0.275	-0.395	-0.433	-0.636	-0.331
Adjusted R ²	0.112	0.188	0.148	0.042	0.042	0.062

Note: Standard errors in parentheses and ***p < 0.01, **p < 0.05, *p < 0.1. ID = social identification scores. Mortality salience (MS) coefficients represent treatment effects relative to the control condition. Self-affirmation (SA) coefficients represent treatment effects relative to the MS condition. Dependent variables are standardized using Probit-adapted OLS (POLS).

The opposite pattern emerges for the self-affirmation intervention in the combined condition, again confirming POLS model estimates and significant for both outcomes. Detailed statistical results for the ordinal regression are in Supplemental Table S1.

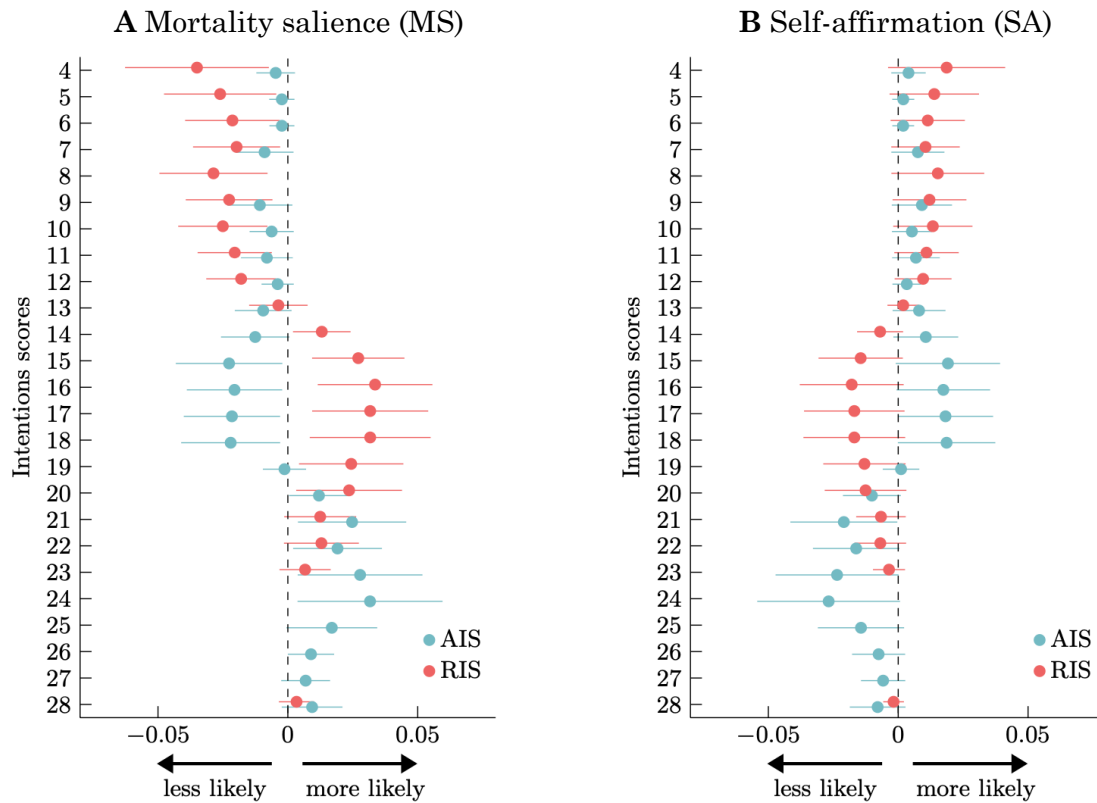


Figure 4. Average marginal effects on radicalism intentions (RIS) and activism intentions (AIS) of mortality salience (A) relative to control, and self-affirmation (B) relative to MS. Coefficients represent changes in ordered log-odds conditional on treatment exposure and sociodemographic controls. Error bars represent estimated confidence intervals at 95%.

Effect heterogeneity: The role of personality and social identity

Beyond main treatment effects, this study set out to test potential heterogeneity by personality traits and social identification. Full interaction results are shown in Figure 5, and coefficients reported in Table 2 for the characteristics specified in hypothesis H3, namely traits neuroticism and agreeableness (models II and V), and identification with friends, ‘the people’, country and family (models III and VI); regressors were standardized for better comparability. Overall, controlling for experimental conditions, neither RIS nor AIS were directly linked to individual characteristics at conventional significance levels

(see the discussion in Pfundmair et al., 2022). However, more nuanced insights can be gained from moderation analysis with the two self-integrity manipulations.

First, trait neuroticism had a strong positive, significant interaction with mortality salience ($d = +0.330$, $p = .015$) and self-affirmation ($d = -0.285$, $p = .051$) for RIS; no association was found for AIS as the outcome. Put differently, lower emotional stability predisposed individuals to be more sensitive to changes in existential uncertainty, and to adjust their willingness to take radical political action, but not moderate activism, in response. On the other hand, individuals with less volatile personalities appear to be not meaningfully affected by either treatment (Fig. 5).

Agreeableness significantly moderated the effect of mortality salience, but not self-affirmation, on RIS. This relationship is negative and, as visualized in Fig. 5, driven entirely by disagreeable participants: on average, a $-1SD$ difference predicts a stronger increase in radical action intentions when experiencing existential uncertainty ($d = +0.254$, $p = .059$), compared to individuals with more compassionate and polite personalities at baseline. Both interaction terms for AIS, as well as Agreeableness \times SA for RIS, were not statistically significant at 5%.

Social identification with friends ($d = -0.286$, $p = .069$) and ‘the people’ ($d = -0.300$, $p = .067$) interacted negatively with mortality salience for RIS, but only at marginal statistical significance; this is because, as Figure 5 shows, only individuals with very weak ties to these groups appear to be reacting more strongly to the treatment. Those with average or strong identification with their social communities appear less sensitive, or less willing to respond with non-normative political intentions, to experienced uncertainty. There was a positive but non-significant interaction between mortality salience and identification with the country ($d = +0.257$, $p = .078$). Social attachment to one’s family displayed ceiling effects (40% of participants reporting complete identification) and did not moderate either treatment effect. Interactions for AIS as the outcome were insignificant.

Manipulation checks

The findings in this study are based on the assumption that the experimental materials of mortality salience and personal value affirmation effectively manipulated self-related uncertainty (and thus conceptually, self-integrity).

Preregistered manipulation checks were conducted in a separate sample of 90 online participants, recruited via Prolific and block-randomized into the Control, MS, and MS+SA conditions, resulting in 30 participants each (sufficient for pilot tests; see Whitehead et al., 2016). After administering the respective treatments, a six-item measurement of experienced uncertainty was adapted from Hohman and Hogg (2015) and answered on a 9-point Likert scale (range 6-54) from ‘strongly disagree’ to ‘strongly agree’ (‘I am uncertain about what my future holds.’; ‘I have a clear sense of who I am’; ‘I am unsure about the opinion I have for myself’; ‘I have a clear understanding of my personality’; ‘I know my place in the world’; and ‘If I were asked to describe who I am, I could easily’; items 2 and 4–6 reverse coded). The scale had good internal consistency (alpha = 0.79). Results confirmed that, in line with previous tests (Hohman & Hogg, 2015; McGregor et al., 2001), uncertainty was successfully increased in the mortality salience condition ($M = 35.07$, $SD = 5.26$) compared to Control ($M = 31.88$, $SD = 5.12$), $t(58) = 2.38$, $p = .010$, and decreased when followed up with the self-affirmation intervention ($M = 32.60$, $SD = 6.36$), although with marginal statistical significance, $t(55) = 1.59$, $p = .059$.

Figure 5. Treatment effect moderation by individual characteristics (95% confidence intervals in grey).

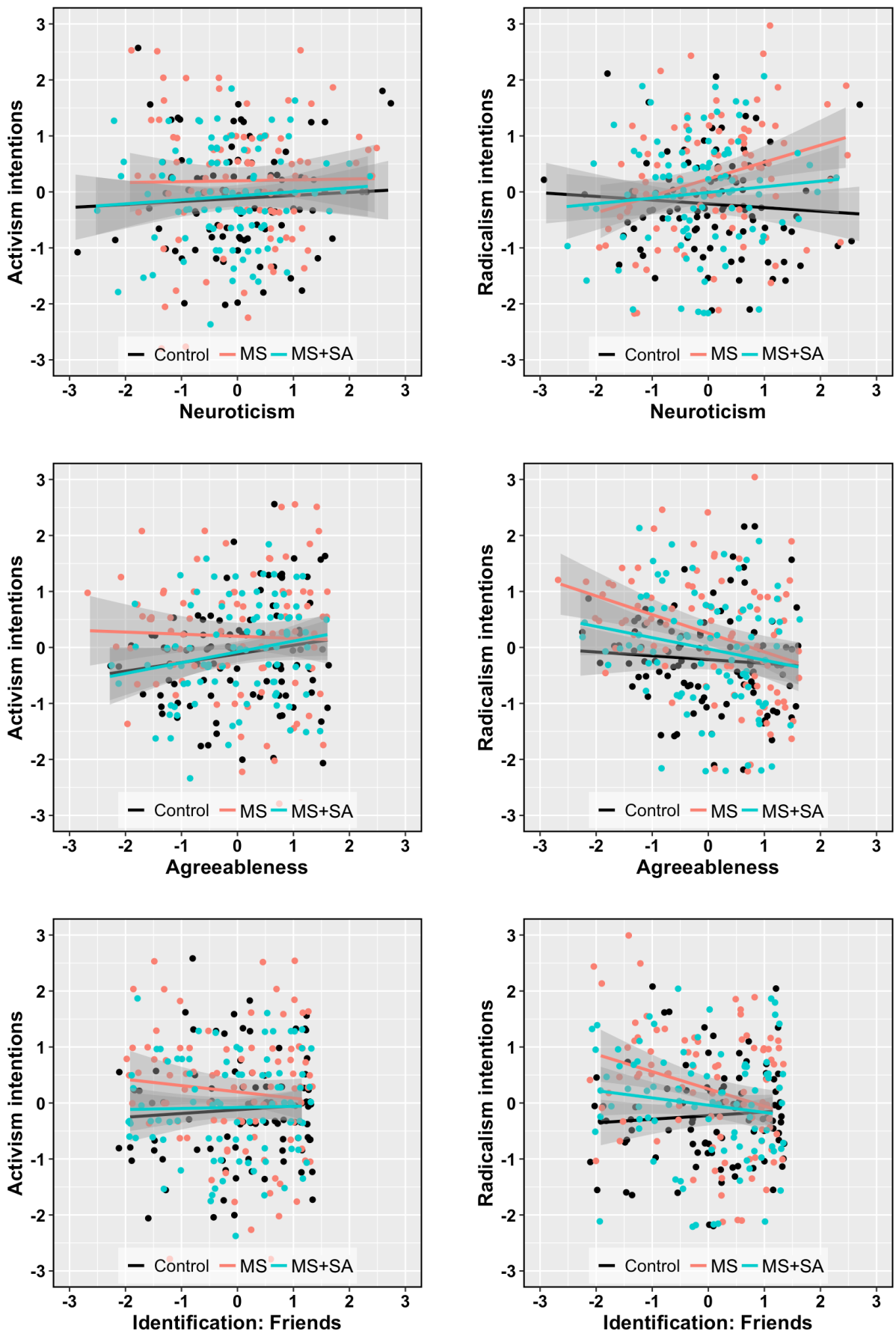
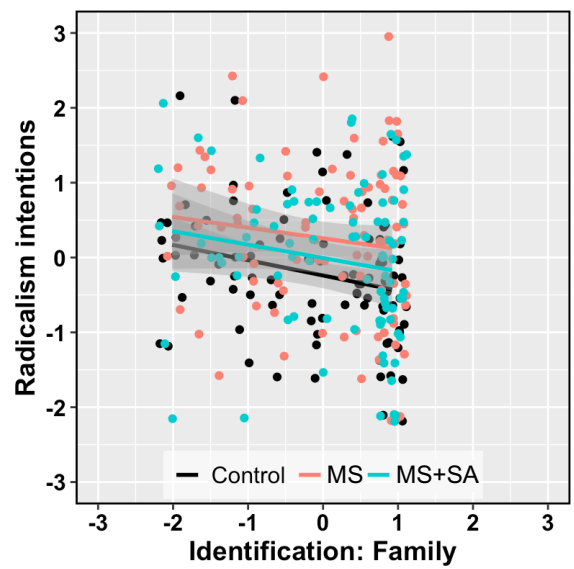
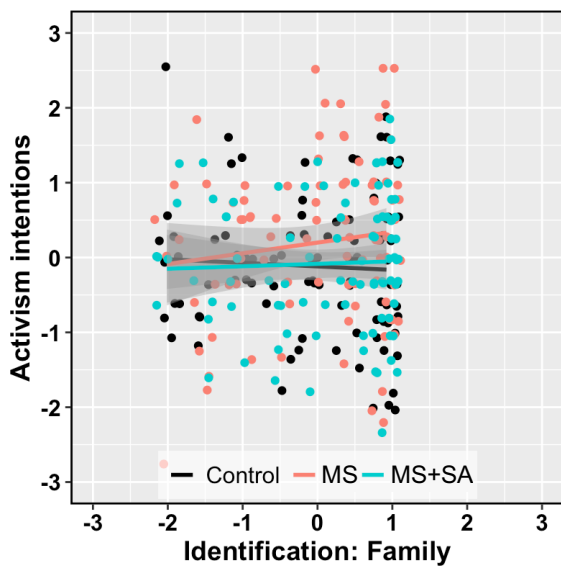
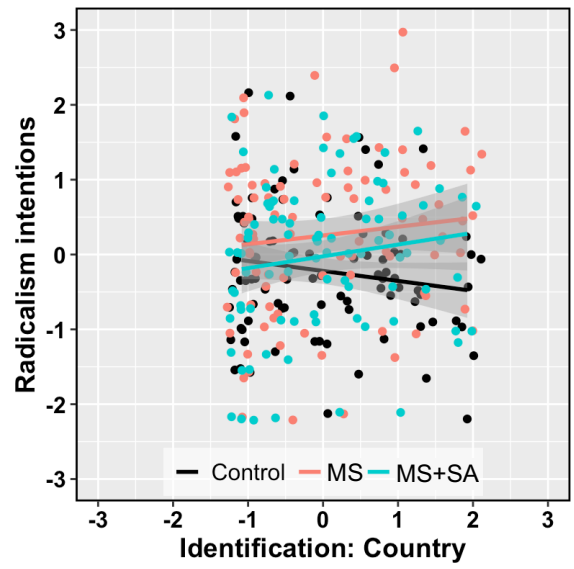
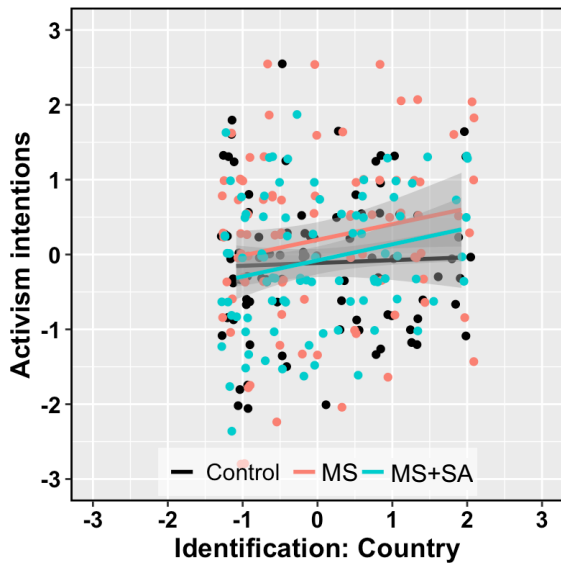
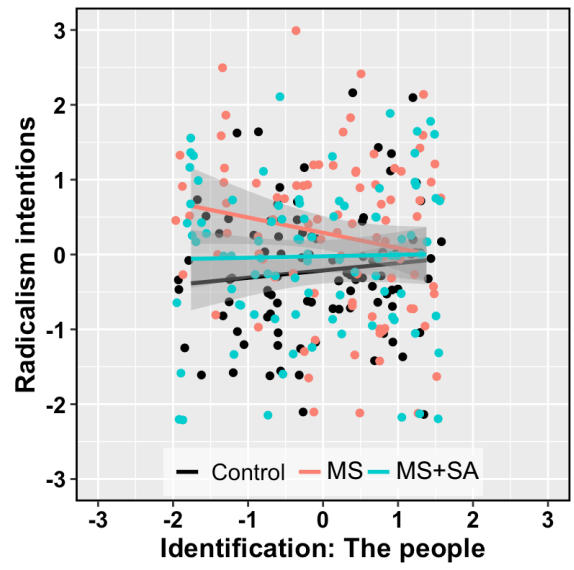
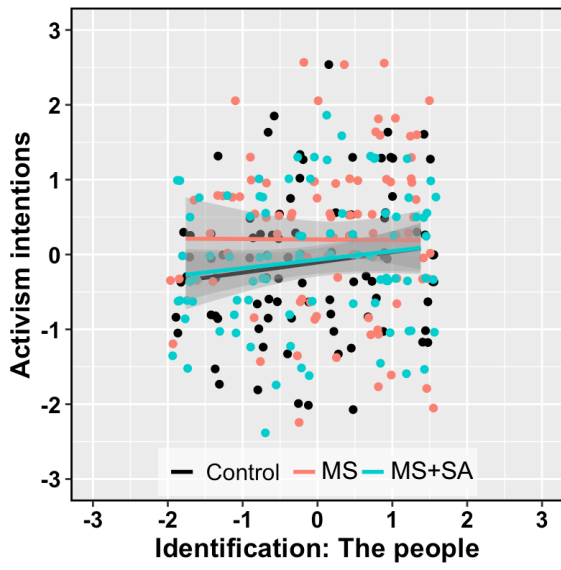


Fig. 5. (cont'd)



DISCUSSION

Interventions aiming to support reconciliation and counter the psychological causes of conflict employ various strategies such as social norm communication, capacity-building, intergroup contact, cognitive reappraisal, and others. Extending previous empirical findings in attitudinal studies, this study demonstrates that compensatory reactions to self-related uncertainty extend to concrete intentions to engage in collective action, and that a self-affirmation intervention was able to partially mitigate this causal mechanism.

These findings have several implications. Conceptually, they augment self-affirmation research by demonstrating that the dynamic of compensatory ‘going to extremes’ can be a motivating factor to participation in radical collective action in conflict-affected environments. Although the focus here is still on self-reported intentions that may not consistently map onto realized engagement behavior, they represent a significantly more proximal and reliable antecedent of behavior compared to attitudinal data (see Conner & Norman, 2022). Moderation analysis further revealed that individual differences in personality and social attachment may help to understand in which environments, and to what extent, people’s self-perception can influence their political beliefs and willingness to act on them. One interesting finding here was emotional volatility (neuroticism) strongly moderating the effect of mortality salience, which connects to a nascent literature challenging traditional views of this mechanism as affect-free (Huang et al., 2021).

Practically, the observed effectiveness of a self-affirmation intervention to partially offset the impact of self-related uncertainty may offer new avenues for the design and implementation of psychological field interventions. One approach to explore would be programs that specifically provide opportunities for self-affirmation. Another option would be tailoring intervention efforts towards individuals with lower emotional stability and weaker felt ties to social communities. The observation that threats to one’s self-integrity primarily affected radical intentions has the additional advantage of lowering the risk of unintentionally suppressing moderate, and often valuable civic activism in post-conflict settings. However, this risk needs to be carefully examined and, if possible, further mitigated before implementing interventions in the field.

Limitations and future research

This study has two main limitations. Conducting experimental work in a conflict-affected environment is challenging, and as with all field research, involves practical constraints. In this case, data collection coincided with the outbreak of the Covid-19 pandemic in 2020. Moreover, as addressed in the data section, the study sample differs from the overall Iraqi population in that a disproportionate number of higher-educated and male participants were included. It can therefore not be fully ruled out that results may differ in other parts of Iraq or other countries, although collaboration with ten enumerator organizations based in seven locations, and with active outreach in various more, achieved a highly diverse sample across major ethnic-religious groups, governorates, displacement camps, urban areas and other characteristics. It is also worth considering that radical and activism intentions at baseline were in line with various studies in other settings, suggesting that the sampled population is generally comparable to others regarding these outcomes. In either case, the internal validity of identified treatment effects remains unaffected, since the random assignment to experimental conditions was balanced across all measured characteristics.

The second shortcoming concerns the exact psychological mechanism underlying observed effects. Reported manipulation checks confirmed that mortality salience and value-affirmation indeed manipulated self-related uncertainty; however, there remains a slight risk that other related factors mediate the effects on intentions to engage in radical collective action. Mortality salience, for instance, has been linked to different cognitive and, increasingly, emotive mechanisms (e.g., Burke et al., 2010; Wessler et al., 2023). Further research into the mechanical aspects of uncertainty and self-affirmation is encouraged and may yield additional insights for further theoretical extensions.

Finally, future work may expand on the moderation effects revealed in this analysis, either through experimental variation (e.g., of social connectedness), or by testing further characteristics, such as other personality traits, attachment to specific ethnic, religious and social groups, and trust in political institutions. A more comprehensive review of how individual differences interact with personal uncertainty can contribute to a more robust psychological understanding of how to foster peace in contexts of intergroup conflict and political violence.

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