Protesting when your life is on the line: Pathways to collective action in conflict-affected environments

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Social psychological models propose that collective action is proximally motivated by group identification, moral outrage and collective efficacy. However, these pathways remain under-examined for high-risk protest and in populations affected by political violence, two crucial perspectives for addressing post-conflict challenges. Here we report preregistered tests in a large-scale, diverse population sample in Iraq ($N = 2148$). Structural equation modelling revealed unsatisfactory fit for direct replications of two identity-based frameworks, but support for an adaptation in which moral outrage predicts protest intentions through increased rejection of outgroups and legitimization of political violence. This model is applied to examine two plausible antecedents of protest — exposure to violent conflict and personal life crises — finding that both activate the moral outrage pathway, with stronger effects for personal versus political adversities. Heterogeneity tests confirm results across various subpopulations. Echoing calls in psychology for cross-cultural validation of mechanisms, implications for theory and interventions in conflict-affected environments are discussed.

KEYWORDS: Political protest, collective action, conflict exposure, life crises, Iraq

Research Transparency Statement

General Disclosures

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Study Disclosures

Preregistration: The hypotheses, methods and analysis plan were preregistered (https://osf.io/5jzuf/overview?view_only=b540efd254d6482697c855675b658fc9) on March 21, 2025, before receiving first access to the primary data, as detailed in the preregistration documentation. Materials: All study materials are publicly available (OSF link above). Data: All primary data are publicly available (https://osf.io/hx8yv/overview?view_only=8fd562e862a24747b3d9a041534fc452). Analysis scripts: All analysis scripts are publicly available (https://osf.io/hx8yv/overview?view_only=8fd562e862a24747b3d9a041534fc452).

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Introduction

In many societies recovering from war, intergroup conflicts or authoritarian rule, the subsiding of political violence does not necessarily usher in peace. Instead, post-conflict periods are often characterized by a breakdown of social cohesion, weakened institutions, unresolved grievances, and competing visions for the future (Fiedler & Rohles, 2021). These conditions can give rise to a broad spectrum of political action in the form of pro-social activism, protests, but also renewed political violence. Indeed, the frequency and intensity of violent unrest is often heightened following periods of armed conflict (Boyle, 2014; e.g., ACLED, 2025). Understanding the motivations underlying different forms of political protest in such settings thus remains an issue of some importance.

Psychological models of collective action provide a robust framework for the motives leading to participation in political protest (see Becker, 2012; Thomas et al., 2009, 2012; van Zomeren et al., 2008; van Zomeren & Iyer, 2009). Three central predictors that emerged from this literature are moral outrage, collective efficacy, and group identification. The first path involves negative affective reactions to moral violations against the ingroup, theorized as perceptions of relative deprivation (Dubé & Guimond, 1986; Gurr, 1970; Runciman, 1966; Stouffer et al., 1949) or of procedural injustice (Lind & Tyler, 1988). The second path, collective efficacy (van Zomeren et al., 2004, 2008; see also Bandura, 1997) captures an instrumental belief that collective action will be successful in achieving group goals. While this mechanism could explain the motivation for groups to take action, it does not solve the incentive problem at the individual level, whereby political goals are typically public goods and subject to free-riding (Whiteley et al., 1994). Thus the efficacy mechanism implies that engaged individuals derive sufficient psychological value – such as social status or satisfaction – from achieving collective goals to justify the personalized costs and risks of participation. Finally, identification with politicized groups (Tajfel & Turner, 1979; Simon & Klandermans, 2001) reflect the extent to which individuals define themselves in terms of a collective with shared goals and grievances, featuring prominently in collective action models with both direct and indirect effects on participation (Fig. 1).

Extensive empirical replication supports three-pathway models – such as the social identity model of collective action (SIMCA; van Zomeren et al., 2008) and the encapsulation model of social identity in collective action (EMSICA; Thomas et al., 2009, 2012) – across regional and political contexts (Fielding et al., 2008; Haslam & Reicher, 2006; van Stekelenburg & Klandermans, 2013; van Zomeren et al., 2012). However, this evidence base is almost exclusively limited to highly developed, liberal democracies, usually in Western populations, and concerns action outcomes that can be considered 'lower-risk', such as student protests (Tausch et al., 2011) or peaceful environmental protests (Mazzoni et al., 2015).

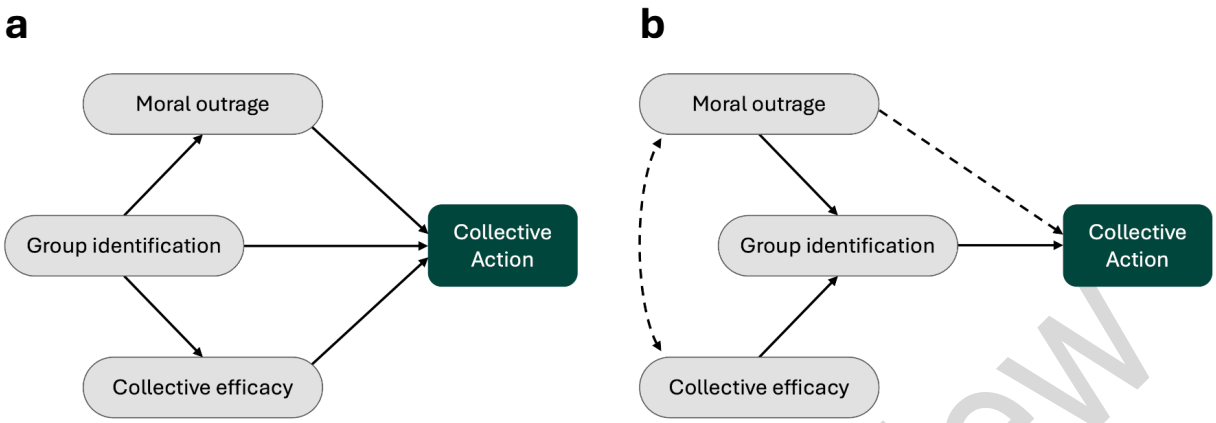

Fig. 1 | Two sociopsychological models of collective action. Conceptual visualizations adapted from **(a)**, the social identity model of collective action (SIMCA; van Zomeren et al., 2008) and **(b)**, the encapsulation model of social identity in collective action (EMSICA; Thomas et al., 2012, final version).

The decision-making process of political actors in high-risk environments may deviate from these models. In addition, collective action has been explored separately from research on radicalization. This is particularly surprising given that both fields study political violence as one potential outcome, and in many cases use the exact same outcome measures (e.g., Fodeman et al., 2020; Pavlović et al., 2024) yet rarely reference or engage with the other. Collective action models confine themselves to *proximal* mechanisms (van Zomeren et al., 2008), while radicalization literature tends to examine *antecedent* factors predisposing individuals to extreme political trajectories. In addition, radicalization studies are often situated in conflict-affected environments, where engaging political action generally involves higher risks. Thus, we make an attempt to integrate these two fields of study within a well-suited population sample.

High-risk environments are characterized by the threat they pose to political actors. Although here we focus on testing predictors of political action under such conditions, one explanation for why they may deviate from lower-risk environments may be individual differences in threat-responsiveness; that is, the interaction between certain life-course experiences and high-threat environments may increase an individual's sensitivity to threat, which changes the decision-making processes involved in protest engagement. This interaction remains therefore an important area of study.

Two antecedents of particular importance, in this context, are personal life-crisis and conflict exposure. Research in radicalization and violent extremism has shown that when people experience a series of life-crises (e.g., divorce, job loss, death in the family, or displacement) their propensity for violent action can increase, as measured by the radicalism intentions scale (Clemmow et al., 2023). One possible explanation for this finding is that such experiences may contribute to a person's response threshold for

activation of moral emotions such as outrage. Personal life-crises and their relationship to political violence have largely been studied in Western contexts (e.g., Wintermute et al., 2025). It is possible that such crises are experienced more frequently or have greater negative consequences in conflict-affected environments due to broader political instability, which may itself be the result of violent conflict such as war.

Like personal life-crises, conflict exposure is associated with political violence. For instance, ISIS members imprisoned in Iraq have shown high rates of war exposure prior to their recruitment into the armed group (Mohamed & Neuner, 2022). While this is less well-studied even within violent extremism literature, its proposed pathway of influence could be similar to that of life crises; that is, conflict exposure may lead to a heightened sense of threat which makes people more prone to moral emotions. In direct comparison, conflict exposure represents a more clearly political pathway, while life-crises represent a more personal pathway to subsequent engagement in political action. To date, research juxtaposing the effects of personally versus politically adverse experiences in high-risk contexts remains sparse.

Present study

This study seeks to test the moral outrage, identity and efficacy pathways directly in the context of high-risk political protest, clearly differentiating higher-risk actions (involving violence or illegality) and lower-risk (non-violent and legal) actions. We then explore the hypothesis that accounting for outgroup-related and violence-related attitudes improves explanatory strength of the moral outrage pathway. Finally, we use this analytical frame to introduce two plausible antecedent factors – life-crises and war exposure – and examine their effects on the pathways in focus.

Iraq represents an appropriate context for this inquiry. The country has suffered from decades of authoritarian rule and intergroup conflict during the Ba'athist regime under Saddam Hussein, successive wars with external military forces, a U.S.-led invasion in 2003, and sectarian violence. This period saw the emergence of extremist groups, most prominently Islamic State (ISIL), which brought another escalation of political violence, leading to hundreds of thousands of deaths, mass displacement, human rights violations, and genocide (Liu, 2025). Although ISIL was territorially defeated by 2017, the post-liberation period has been marked by continued instability, fragmented governance, perceptions of elite corruption and exclusion from the political process. These conditions have given rise to a complex landscape of political protest. On one hand, Iraq has witnessed waves of mobilization, most notably the 2019–2021 *Tishreen* movement, in which hundreds of thousands took to the streets to demand an end to sectarian politics, corruption, and foreign influence (Jawad & Al-Assaf, 2024). On the other hand, protest in Iraq often takes place outside the protection of legal or democratic norms. Demonstrations have been met with violent — even lethal — repression by security forces and non-state actors, while some segments of protest movements have themselves embraced disruptive or violent tactics.

While these unique structural conditions set Iraq apart from the stable democratic contexts in which collective action mechanisms have normally been studied, they do not themselves offer convincing explanations for differential engagement, i.e. why only few individuals go on to participate in non-violent or violent action, and why. We examine this question through a robust investigation using rare large-scale data.

Methods

The research methods and analysis plan were pre-registered with OSF (https://doi.org/10.17605/OSF.IO/5JZUF) on March 21, 2025, after the start of data collection but before receiving first access to the dataset, as evidenced in the preregistration documentation.

Ethics and consent

Ethical approval was granted by the Research Ethics Committee of [Removed for double-blinded review]. Data collection was approved from both the Iraqi central government and the Kurdistan Regional Government (KRG) to conduct opinion polling and social sciences research, including approval from the Prime Minister's Office. Project-specific approval was also gained at regional level where appropriate. In the KRG, security approval was also given by the Peshmerga to ensure that the teams could work safely.

In all cases, informed consent was obtained from research participants at the beginning of interactions. To account for variation in literacy, the information sheet was read aloud to participants, who were given the opportunity to ask questions before deciding whether to take part. An electronic consent form was completed on tablet devices, and the interview was only carried out if the participant agreed to all necessary statements on this consent form. A non-cash incentive was offered to participants in the form of a small gift chosen from a range including beauty products, kitchen gadgets, earphones, etc.

Research staff received in-person training in psychological first aid and trauma-informed practices to enable them to conduct interviews in an appropriate and sensitive way; contact information for local mental health and psychosocial support services was also provided to research participants (free-to-access services provided by established NGOs).

Data

The data collected for this study was part of a longitudinal psychometric survey in Iraq led by the authors as part of [Removed for double-blinded review]. The survey's overarching aim is to explore the impact of trauma and a range of other factors on attitudes to violence and peace amongst diverse, large-scale data collections in conflict-affected populations. The a

priori target sample size was set to $N = 2{,}000$ to allow for sufficient statistical power for complex modelling in the present study.

A cohort of Iraqi adults was recruited from different governorates across Iraq (Baghdad, Al Basra, Al Anbar, Salah Al-Den, Kirkuk, Nineveh, Erbil, Sulaymaniyah). Recruitment and data collection was carried out between January 2024 and February 2025 by the [Removed for double-blinded review]. Baseline inclusion criteria were age $\geq$18 years and provision of informed consent. First, 321 people were recruited and interviewed in January 2024 and then data collection was paused to review data and make final adjustments to the survey. At this stage, the central predictor measures for collective action were added, which were therefore not included in the pilot sample. A further 2,142 people were recruited and interviewed between September 2024 and February 2025, resulting in a total sample of $N = 2{,}463$ across diverse majority and minority groups and sociodemographic characteristics in Iraq, before exclusions (see Procedure). Detailed sample descriptives are provided in Table S1.

A purposive cluster sampling approach was used across studies, with neighborhoods selected to ensure a diverse sample that included both majority and minority ethnic and religious groups, as well as both urban and rural areas. Quotas were used to ensure specified numbers of each ethnic and religious group and to ensure an approx. equal distribution across gender. Within each neighborhood, door to door recruitment followed a protocol to select houses randomly and then to select an adult from each household randomly. The sample is not representative of the general population since minority groups were sampled at a rate higher than in the general population to ensure sufficient sample size for subgroup analysis.

Procedure

Researchers approached people at home after randomly selecting houses in the neighborhood for inclusion. After introducing themselves, researchers provided brief information about the study. If the person expressed interest, and after the informed consent process was completed, the survey was administered as an interview. Interviews were conducted in Arabic by trained and experienced research staff and took approximately 40–60 mins. The survey was administered using the survey platform SurveyToGo on secure tablet devices. A number of quality control measures were used by a dedicated team, e.g., GPS coordinates were checked to verify the location of interviews and monitor adherence to the sampling methodology; time analysis of date, start time, end time, and interview duration was used to verify proper administration; frequency of 'Don't Know' / 'Choose Not to Answer' was checked to identify interviews with high rates of non-response and follow up with interviewers to explore possible reasons for this; a random subsample of participants were recontacted to confirm that they had completed the interview and that key demographic data were correct. Project managers reviewed all quality control data and made independent decisions about which interviews to fail. A total of $n = 315$ (12.8%)

interviews were failed in this process, leaving a final sample of $N = 2{,}148$ for the present analysis.

Measures

Collective action intentions. The two key outcomes of interest were individual intentions to engage in lower-risk and higher-risk protest, assessed using the Activism and Radicalism Intention Scale (Moskalenko & McCauley, 2009). The four-item activism subscale measured *lower-risk protest intentions* ('I would join/belong to an organization that fights for my group's political and legal rights'; 'I would donate money to an organization that fights for my group's political and legal rights'; 'I would volunteer my time working (i.e., write petitions, distribute flyers, recruit new members, etc.) for an organization that fights for my group's political and legal rights'; and 'I would travel for one hour to join in a public rally in support of my group'). The four-item radicalism subscale measured *higher-risk protest intentions* ('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'; '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'; 'I would participate in a public protest against oppression of my group even if I thought the protest might turn violent'; and 'I would physically defend a member of my group if I saw police or security forces attacking them'). The wording of the last item deviated from the original scale item ('I would physically defend…' instead of 'I would attack police or security forces…') to account for the high sensitivity of this activity, reducing the risk of biased underreporting. All responses were collected on a four-point scale from 1 (strongly disagree) to 4 (strongly agree), and scores aggregated to mean indices of lower-risk and higher-risk action intentions, respectively.

Sociopsychological pathways. Given a lack of harmonized measures for the three sociopsychological predictor variables (Hipp, 2016; Tropp & Wright, 1999), we defined our measures closely in line with best practice in the field (Smith et al., 2012) and available literature, especially the seminal model development work by van Zomeren et al. (2008), Thomas et al. (2012), and others.

First, we used three items measuring *moral outrage* that were adapted from Smith et al. (2012), rated on a five-point scale from 1 (strongly disagree) to 5 (strongly agree): 'I feel resentful about the situation of my community compared to other communities in Iraq'; 'I feel furious about the limited opportunities for people in my community in Iraq to get ahead in their lives'; and 'I feel that people in my community in Iraq are marginalized because of the injustice and oppression practiced against them'. These items capture key constructs of both relative deprivation theory and procedural injustice, as well as negative emotional responses (especially anger) that are foundational to the concept of moral outrage.

Collective efficacy was assessed with three items adapted from Yeich & Levine (1994) and coded on a five-point scale from 1 (strongly disagree) to 5 (strongly agree): 'Organized groups of citizens can have a significant impact on politics in Iraq'; 'What people do in Iraq hardly

makes any difference because the government does whatever it wants anyway'; and 'Fundamental change can happen in Iraq if people unite and take action'. These items capture perceptions of group-level agency to specifically achieve political goals.

Finally, *group identification* was measured using a pictorial identity fusion scale first developed by Swann et al. (2009), and adopted in various subsequent studies (e.g., Gómez et al., 2011). The instrument captures the degree to which individuals' personal identity is aligned with the group identity of a specified target group; both entities are visualized as two circles in six symmetrical degrees of overlap/distance, and participants indicated which positioning best represents their relationship to the group. The measure was administered across a range of target groups: family, friends, neighborhood, tribe, Iraq, as well as the participants' respective ethnic and religious affiliations. A particular challenge in diverse settings is that between individuals, different group identities may be active for specific political mobilizations. We solved this by initially focusing on ethnic-religious ingroup for the main analysis (dynamically referring to the participants' respective group based on their responses in the demographic questionnaire). We additionally reiterated the analyses using alternative reference groups for identification, which did not change the central findings (see Fig. S4 for comparative results).

Mediating pathways. To test the two exploratory hypotheses that in conflict-affected populations (i) general feelings of moral outrage are more predictive of political action when they first manifest in concrete outgroup rejection, and (ii) attitudinal support for political violence will precede higher-stakes action intentions, we included two validated corresponding measures.

Outgroup rejection was assessed using the Readiness to Reconcile Inventory (Stammel et al., 2017), specifically the subscales for revenge motives and opposition to interactions; based on exploratory factor analysis (Fig. S2), we retained six of the original eight items: 'I have broken off all relationships with other ethnic/religious groups who caused suffering to my community'; 'It's my obligation to take revenge on other ethnic/religious groups who caused suffering to my community'; 'Other ethnic/religious groups who caused suffering to my community should suffer just as much as we did'; 'I avoid contact with the other ethnic/religious groups who caused suffering to my community'; 'It is my right to take revenge on other ethnic/religious groups who caused suffering to my community'; and 'I have feelings of revenge when I think of other ethnic/religious groups who caused suffering to my community'. All items were rated on a five-point scale from 1 (strongly disagree) to 5 (strongly agree).

Support for political violence was measured using the six-item Violent Extremist Attitudes Scale (Hamid, 2022), rated on a four-point scale from 1 (never) to 4 (always): 'It is acceptable for people to use violence to fight against situations that are very unjust'; 'It is acceptable for people to resort to violence to defend their values, convictions, or religious beliefs'; 'It is acceptable for people to support groups that use violence to fight injustices'; 'It is acceptable for people to use violence, attacks or kidnapping to fight for a better world'; 'It is acceptable for people to use violence against civilians to fight injustice'; and 'It is

acceptable for people to use violence even against their own community in order to defend their values, convictions, or religious beliefs'.

Antecedents. For the third stage of the analysis, we measured exposure to two conditions that could plausibly explain differential pathways to collective action in high-risk environments.

First, *exposure to violent conflict* was measured using the War and Conflict Exposure Checklist (Ibrahim et al., 2018) covering the following 11 exposure forms and coded as binary exposure: 'Have you ever been severely deprived of food and water due to war or flight?'; '…exposed to armed combat (for example, fighting with guns or artillery, bombing, burning, or violent destruction of homes)?'; 'witnessed someone being tortured or executed?'; 'seen a dead body (apart from funerals) or a rotting corps?'; 'witnessed someone being killed?'; 'been imprisoned or kidnapped?'; 'forced to separate from first grade family members because of the war?'; 'lost (death or disappearance) anyone close to you because of the war?'; 'been tortured?'; 'assaulted with or without a weapon (for example, being shot, stabbed, threatened with a knife, hit, slapped, kicked, beaten up)?'; and 'Have there been any other private events that have happened to you that you don't want to describe?'. 10 items from the original scale were retained, with some modification: the last item was adapted from a field study in which it was successfully administered (McEwen et al., 2022). The wording of these items ensures that exposure is closely linked to experiences of political violence and conflict, rather than e.g. domestic violence. The binary responses were summed into an index of exposure intensity.

Personal life crisis exposure was similarly measured using nine binary items adapted from the Cumulative Risk Index (Clemmow et al., 2024): 'A significant and difficult change in your life circumstances (e.g. death in the family, breakdown of marriage, lost your job, failure in education or career, prison, displacement)'; 'Progress towards an important goal interrupted'; 'Humiliated or degraded'; 'Target of prejudice or unfairness based on religion, ethnicity, sexuality, gender or other personal characteristics'; 'Lied to or had a promise broken'; 'Disrespected'; 'Victim of verbal or physical assault'; 'Problems with personal relationships'; and 'Financial problems'. In stark contrast to exposure to violent conflict, these items captured more personal, and more apolitical circumstances. Moreover, the question prompt explicitly limited these items to a time period of the last 12 months. Binary responses were summed into an index of exposure intensity.

Covariates. Demographic and socioeconomic covariates included age and gender, education level, governorate, urban/rural residence, religious and ethnic affiliation, included as controls or in more detail as multigroup SEM comparisons.

Agreement bias. We used the Marlowe Crowne Social Desirability Scale (Crowne & Marlowe, 1960; Reynolds, 1982), specifically three items pertaining to agreement bias ('I have never been irked when people expressed ideas very different from my own'; 'I am always courteous, even to people who are disagreeable'; and 'No matter who I'm talking to, I'm always a good listener'), to allow adjustments for potential acquiescence bias in items

responses. The bias items were coded on a five-point scale from 1 ('strongly disagree') to 5 ('strongly agree').

Analysis

For initial results, we used two-tailed independent samples t-tests to compare mean levels of key sociopsychological predictors — moral outrage, group efficacy, and social identification — between individuals reporting no intention to engage in political action (full disagreement with all items) and those expressing at least minimal openness. Additionally, zero-order Person's correlations were computed for all applicable model variables to assess bivariate relationships and detect potential multicollinearity.

For the main analysis, we employed structural equation modelling (SEM) using the `lavaan` package in R and RStudio version 2023.12.1+402. All models were estimated via full information maximum likelihood (FIML) and routinely included all demographic covariates as controls. Further, the two psychological constructs of collective efficacy and moral outrage were modelled as latent variables observed through three items each (see Measures), to account for potential measurement error and improving construct validity. One concern was potential agreement bias, particularly for items with socially desirable connotations or reverse-coded wording. To account for this, agreement bias scores were included as a single-method factor during measurement model estimation; results are robust to omitting this control. Indirect effects were estimated using non-parametric bootstrapping with 5,000 resamples.

We followed a preregistered analysis plan in three stages to guide model development and hypothesis testing. In the first stage, we directly replicated the conventional SIMCA and EMSICA models to assess their structural validity in this empirical setting. In the second stage, we explored a revised model that incorporates a mediating role of outgroup rejection and support for political violence, which we hypothesized would improve the predictive strength of moral outrage specifically. Finally, we estimated the effects of two plausible antecedent conditions — exposure to violent conflict and experiences of personal life crises — on protest intentions using this refined model. Model fit was consistently evaluated by following consensus indices and thresholds (see Hu & Bentler, 1999; Kline, 2016). Specifically, we report the chi-square (χ^2) statistic but interpret it with caution due to its sensitivity to large sample sizes (see Hu & Bentler, 1999). Instead, we focus on root mean square errors of approximation (RMSEA), which penalise model complexity, with values < .05 indicating good fit and < .08 acceptable fit; comparative fit indices (CFI) and Tucker-Lewis indices (TLI) > .95 and > .90 representing good and acceptable fit, respectively; and standardised root mean square residuals (SRMR) to estimate the average discrepancy between observed and predicted correlations, with values < .08 being considered desirable.

As robustness checks to the final and most comprehensive analysis, we tested for heterogeneity in path coefficients using multiple-group SEM across subgroups defined by participants' gender, age group, ethnic-religious minority status and rural/urban location

(both coded at the town/city level). Each group comparison involved estimation of a fully unconstrained model (allowing all paths to vary), followed by a constrained model with equal structural paths across groups. Where statistically significant group-level differences were identified, we report results from individual path analysis regarding the magnitude and directionality of group differences.

Results

Preliminary analysis

Descriptive statistics and zero-order correlations are reported in Tables 1 and 2. Initially, we tested for group differences at the extensive margin of political action intentions, that is, between the group of inactive participants in Iraq who reported no intentions to engage in any political protest (full disagreement with all intentions items; 22.5% of the total sample, $n = 471$) and inclined participants displaying at least some openness to engagement (77.5%, $n = 1620$). As hypothesized, moral outrage, collective efficacy and social identification were all higher among this group (Table 1), with group differences being statistically significant for moral outrage and ingroup identification, but not efficacy due to only marginal increases compared to inactive individuals. In Table 2 we examined zero-order correlations between all three predictors and outcomes at the intensive margin, i.e. direct associations with the magnitude of intentions to engage in lower-risk and higher-risk protest. Moral outrage, collective efficacy and social identity were weakly associated with stronger intentions for lower-risk protest, lending preliminary support to their predictive effects according to the SIMCA and EMSICA models. However, previewing the main analysis findings, Table 2 also points to two potential limitations of these models in the empirical setting of post-conflict Iraq. First, neither predictor variable was directly associated with higher-risk protest intentions, that is, violent and/or illegal activities; instead they were limited to lower-risk forms. Second, while moral outrage and efficacy were individually predictive of these outcomes, their link to group identification was near-zero and not statistically significant, suggesting identity may not be a reliable mediator or antecedent of these pathways.

Table 1 | Group comparison: inclined vs. inactive individuals.

	Inactive (n=471)		Inclined (n=1,620)		t-test	
Variable	M	SD	M	SD	t	Cohen's d
Moral outrage	4.93	1.63	5.12	1.45	-1.97*	-0.12*
Collective efficacy	4.19	1.16	4.28	1.09	-1.31	-0.08
Group identification	4.70	2.16	4.92	2.09	-1.99*	-0.11*
Lower-risk protest	1.00	0.00	4.33	1.85	-72.65***	-2.05***
Higher-risk protest	1.00	0.00	2.30	1.55	-33.7***	-0.95***

Differences in sociopsychological predictors of protest intentions in the full study sample ($N = 2{,}148$). All variables are reported on harmonised scales from 1 to 7. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

Table 2 | Descriptive statistics and zero-order correlation matrix.

Variable	M	SD	2	3	4	5
1. Moral outrage	5.06	1.50	.09***	.04	.05*	-.01
2. Collective efficacy	4.25	1.11	–	.04	.07**	-.01
3. Group identification	4.85	2.11		–	.07***	-.04
4. Lower-risk protest	3.58	2.14			–	.45***
5. Higher-risk protest	2.01	1.47				–

Protest intentions and sociopsychological predictors in the full study sample ($N = 2{,}148$). All variables are reported on harmonised scales from 1 to 7. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

Testing SIMCA and EMSICA in conflict-affected environments

We then turned to the main SEM analysis of sociopsychological models. Observed items loaded strongly on the latent constructs of moral outrage (standardized $d = 0.62$ to $d = 0.67$; all $p < 0.001$) and collective efficacy ($d = 0.33$ to $d = 0.68$; all $p < 0.001$); detailed measurement and path coefficients are reported in Figure S3. To account for potentially biased responses to the efficacy measures (of which several reflected potentially socially desirable attitudes), items were additionally regressed on individual scores of agreement bias (a subscale of social desirability; see Methods). Bias was detected for two items of which one was reverse-coded, so we adjusted for agreement bias scores throughout the remainder of the analysis; results are robust to omitting this control. Internal reliability was

good for the validated scales measuring lower-risk protest intentions ($\alpha = 0.86$) and higher-risk protest intentions ($\alpha = 0.76$).

First we replicated the exact set of relationships as defined by SIMCA, in which social identification predicts higher levels of moral outrage and perceived collective efficacy, before all three factors predict collective action engagement (Figure 2). While reaching acceptable RMSEA and SRMR values, overall, this replication model displayed unsatisfactory fit in this data [$\chi^2 = 326.12, p < 0.001, CFI = 0.845, TLI = 0.726, RMSEA = 0.072, SRMR = 0.076$]. Moreover, the individual path coefficients for the outcomes were small and only statistically significant at 95% confidence for moderate protest intentions; neither factor seemed to directly predict high-risk protest. Taken together, the SIMCA structure did not offer convincing explanatory strength in predicting collective action intentions in the sample.

Next, we re-specified the model structure to test the EMSICA variant of social identity-based models (Figure 3). This framework reverses the directionality between predictors such that moral outrage and efficacy affect collective action through higher ingroup identification, rather than being influenced by identification. We test here the final version of EMSICA as developed in (Thomas et al., 2012), which additionally allows for a direct effect of moral outrage on outcomes. The SEM analysis shows that EMSICA displays better model fit ($\chi^2 = 165.62, p < 0.001, CFI = 0.934, TLI = 0.896, RMSEA = 0.043, SRMR = 0.042$), satisfying acceptable thresholds for fit indices (Hu & Bentler, 1999; Kline, 2016). Within the EMSICA structure, moderate protest intentions were slightly more reliably predicted by moral outrage and identity, while extreme protest intentions retained a negative relationship with stronger group identification. Overall, EMSICA represented an improvement over SIMCA in the data, yet the evidence for hypothesised pathways remains unclear.

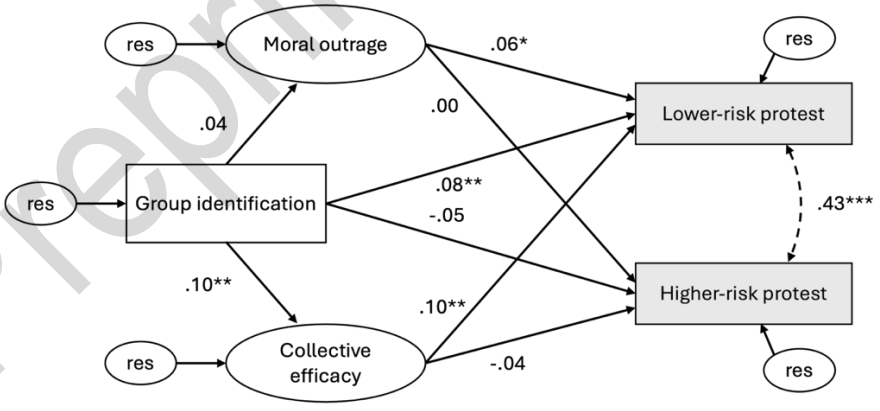

Fig. 2 | SIMCA model replication for lower-risk and higher-risk protest intentions in Iraq. Path coefficients for the model are estimated by maximum likelihood in the full study sample ($N = 2{,}148$), after controlling for sociodemographic characteristics and item-acquiescence bias. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

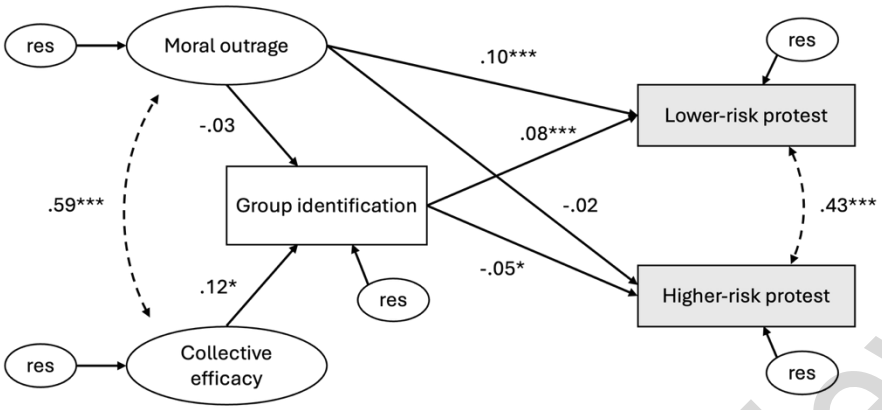

Fig. 3 | EMSICA model replication for lower-risk and higher-risk protest intentions in Iraq. Path coefficients for the model are estimated by maximum likelihood in the full study sample ($N = 2{,}148$), after controlling for sociodemographic characteristics and item-acquiescence bias. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

Outgroup rejection mediates effects of moral outrage in post-conflict environments

Although cautious support was found for some sociopsychological variables, replication models of two classical collective action frameworks — SIMCA and EMSICA — proved unsatisfactory to explain protest intentions in the Iraq study data. Two reasons were suspected for this, respectively relating to the dependent variables and predictors in this context. First, previous studies have overwhelmingly focused on relatively low-risk protest forms. We find some support for these relationships with moderate, but not with extreme protest intentions. One possibility therefore is that generally higher-risk political protest — which involves violent or illegal activities — may not follow the same motivational structures as more moderate political action. Regarding the predictor variables, it was anticipated that the political context in which we examine these relationships — one with a legacy of violent conflict, state repression and prolonged intergroup victimization — means that general feelings of moral outrage would likely be widespread. The data confirms this: levels of moral outrage were significantly higher ($M = 5.06$) across the population compared to previous studies in less conflict-affected societies (e.g., M = 3.78–4.24 on harmonised scales; Thomas et al., 2012, studies 1-3). In this environment, we hypothesized that experiences of moral outrage were commonplace but not necessarily politically mobilizing, unless they manifest in specific negative attitudes towards outgroups that then legitimize taking action. Similarly, we hypothesized that attitudinal support for political violence would provide the moral license for specifically higher-risk protest, preceding the forming of intentions to engage (Moskalenko & McCauley, 2009).

To test these concerns, we defined an exploratory pathway model (see Figure 4) that retains the fundamental structure of EMSICA — which had displayed acceptable empirical fit — but deviates in two important ways, reflecting the above discussion. Specifically we introduced a measure of outgroup rejection (indicating a desire for revenge or distancing from outgroup members; see Methods) and support for political violence as mediators in the moral outrage pathway. Both measures displayed good internal reliability ($\alpha = 0.77$ and $\alpha = 0.80$, respectively). We also removed group identification as a predictor in this model, due to unreliable relationships with the other two predictors and outcomes, as well as conceptual concerns raised in previous work (Thomas et al., 2012). The SEM results show this new model to be a substantial improvement on all model fit indices, reaching good fit ($\chi^2 = 147.61, p < 0.001, CFI = 0.954, TLI = 0.925, RMSEA = 0.036, SRMR = 0.033$). Moreover, individual path analysis shows reliable effects that are more than double the size of EMSICA path coefficients. Moral outrage predicted both lower-risk protest and higher-risk protest intentions through outgroup rejection; this mechanism was slightly stronger for higher-risk than for lower-risk protest intentions, in addition to a partial mediation through increased support for political violence before forming higher-risk protest intentions. Group efficacy weakly predicted lower-risk protest and had a negative, non-significant relationship with higher-risk protest intentions.

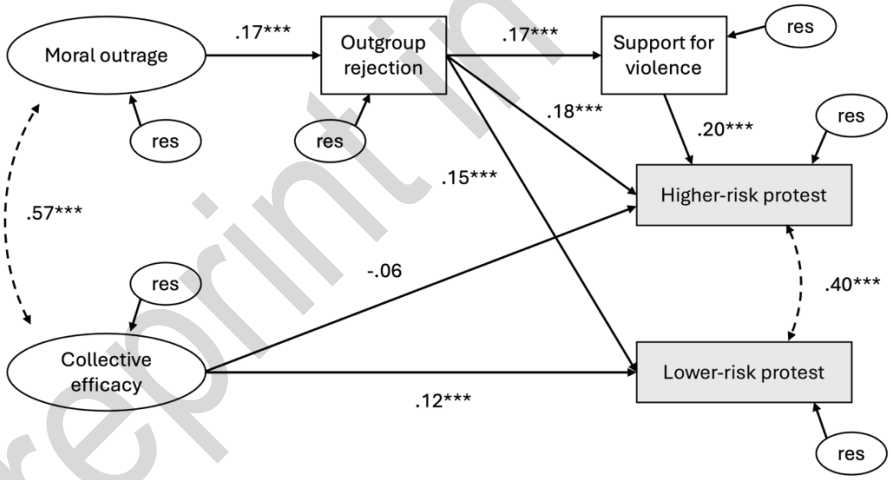

Fig. 4 | Extended structural model of protest intentions in Iraq. Path coefficients for the model are estimated by maximum likelihood in the full study sample ($N = 2{,}148$), after controlling for sociodemographic characteristics and item-acquiescence bias. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

The political or the personal? Effects of crisis exposure on political protest

To further examine the validity of this motivational model of post-conflict collective action, we applied it in a test of two plausible antecedents of protest: Exposure to violent conflict, and personal life crises. While both have been linked to related outcomes, they represent

meaningfully different experiences. In the case of conflict exposure, the adversity is outright political and often related to the very conflict in which individuals may later engage themselves. On the other hand, although personal life crises cannot be strictly separated from contexts of violent conflict, they represent more apolitical forms of adversity. The juxtaposition of both forms of exposure may thus provide interesting insights with implications for theory and practice.

Table 3 reports descriptives and zero-order correlations with the model parameters. As expected, both experiences were prevalent in Iraq, with conflict crises slightly more common than personal life crises. In the fully specified path analysis (see Figure 5), exposure to personal life crises significantly activated the moral outrage pathway ($d = 0.17$, $p < 0.001$) with downstream effects through outgroup rejection on protest intentions, and separately through collective efficacy pathway ($d = 0.12$, $p < 0.001$) which significantly predicted increased intentions for lower-risk, but reduced intentions for higher-risk protest. Exposure to conflict crises similarly activated the moral outrage pathway ($d = 0.11$, $p < 0.001$) but did not affect efficacy ($d = 0.01$, $p = 0.77$). In other words, while both forms of crisis exposure heightened people's sense of emotionally charged grievances, those with more recent personal hardships additionally showed a higher degree of collective empowerment which was associated with intentions to protest in lower-risk, but not higher-risk forms. Moreover, the effects of personal life crises were larger than exposure to more directly political crises.

Table 3 | Descriptive statistics and zero-order correlation matrix (extended).

Variable	M	SD	2	3	4	5	6	7	8
1. Conflict/war crises	2.24	1.65	.20***	.07**	.03	-.20***	.09***	.05*	.13***
2. Personal life crises	2.06	1.60	–	.15***	.02	-.15***	.20***	.14***	.17***
3. Moral outrage	5.06	1.50		–	.09***	-.13***	-.02	.05*	-.01
4. Collective efficacy	4.25	1.11			–	.01	.04	.07**	-.01
5. Outgroup rejection	4.65	1.64				–	.17***	.20***	.24***
6. Support for violence	2.24	1.42					–	.17***	.27***
7. Lower-risk protest	3.58	2.14						–	.45***
8. Higher-risk protest	2.01	1.47							–

Descriptive statistics and zero-order correlation matrix for violent conflict exposure and personal life crises, and extended model variables in the full study sample ($N = 2{,}148$). All variables are reported on harmonised scales from 1 to 7. ***p<0.001, **p<0.01, *p<0.05.

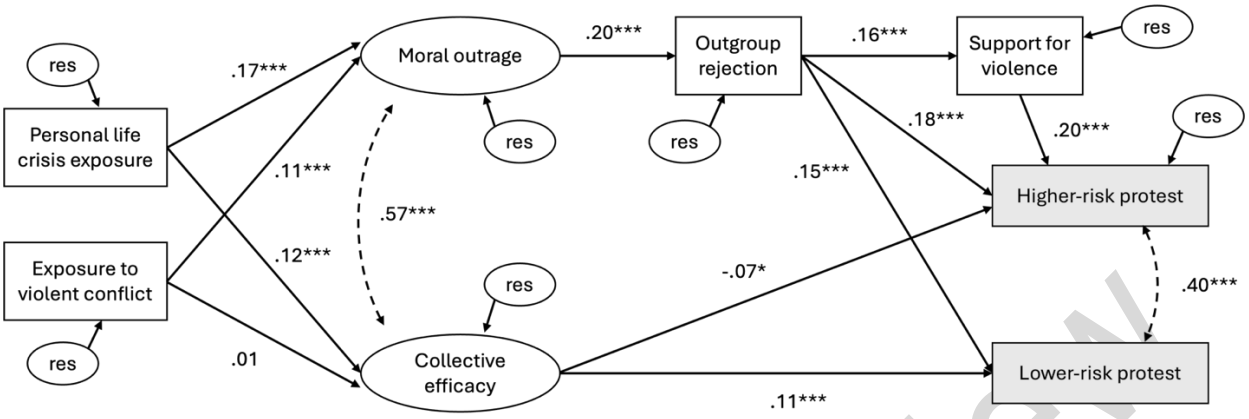

Fig. 5 | Extended model applied to hypothesized antecedents. Path coefficients for the model are estimated by maximum likelihood in the full study sample (N = 2,148), after controlling for sociodemographic characteristics and item-acquiescence bias. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

Robustness: Effect heterogeneity

To test whether structural relationships differed across key socio-demographic subgroups, we conducted a range of multiple-group SEM tests comparing model results to constrained models where paths were held equal across respective groups. Results (Table S5) confirm structural invariance of the core model (without antecedents, see (Figure 4) across gender and age groups, indicating the psychological pathways are general and independent of these characteristics. However, significant differences were revealed across two exploratory group variables, ethnic-religious minority vs. majority and rural vs. urban (both coded at town/city level). These group differences were driven by individual path differences where the link between collective efficacy and lower-risk protest intentions only held for locally defined majority ($d = 0.13, p < 0.001$) but not minority members ($d = 0.08, p = 0.23$); and similarly in urban ($d = 0.13, p < 0.001$) but not rural populations ($d = 0.06, p = 0.37$). Outgroup rejection also only affected support for political violence ($d = 0.18, p < 0.001$) and lower-risk protest intentions ($d = 0.13, p < 0.001$) in the urban subgroup, with nonsignificant path estimates for rural samples (respectively $d = 0.07, p = 0.18$ and $d = 0.09, p = 0.11$). All other model paths, particularly the primary pathway of moral outrage through outgroup rejection on higher-risk protest intentions, was robust across all group comparisons.

We repeated this test for the applied model including the antecedent factors of conflict exposure and personal life crises (see Figure 5). SEM comparisons again showed no structural variance across age groups but revealed important heterogeneity in how these antecedents activate the core model pathways. First, although personal life crises were equally linked to higher moral outrage for men and women, they only predicted higher

collective efficacy beliefs among women ($d = 0.16, p < 0.001$) but not men ($d = 0.08, p = 0.18$). Conversely, exposure to violent conflict only predicted moral outrage among men ($d = 0.20, p < 0.001$) but not women ($d = 0.02, p < 0.60$) within the structural constraints of the model. Additionally, both antecedent factors were more significantly linked to moral outrage and collective efficacy in urban and ethnic-religious majority subgroups.

In one further robustness check, we defined a combined subgroup of individuals with hypothesized higher protest propensity, based on three characteristics. First, even though sociodemographic factors (including gender and age) do not explain differential engagement at the individual level, various studies demonstrate higher base rates of political protest among men in adolescence and early adulthood, which the data confirms: Men reported, on average, 11% higher protesting intentions ($M = 2.41$, $SD = 1.11$) compared to women ($M = 2.18$, $SD = 1.01$), $t(2119) = -5.16, p < .001$; and estimated protest intentions decrease by 7% for every +10 years in a person's age in the sample. For this subgroup analysis, we thus assume higher propensity to male participants below the age of 35 (the average in the data); a third criterion is the regional frequency of protest events (by governorate) in the 12 months prior to data collection, drawing on the Armed Conflict Location and Event Data (Barceló, 2021; Bauer et al., 2016; Dubow et al., 2010, 2019; Lewis & Marsden, 2021; Raleigh et al., 2023; Windisch et al., 2022). In combination, this resulted in a high-propensity subset of $n = 252$ individuals. SEM comparisons between this group and the remaining population ($n = 1{,}896$) confirmed the robustness of both the core and antecedent model pathways (that is, no structural differences across any path coefficients; see (Table S5).

Discussion

Periods following intense conflict do not necessarily mark a return to social stability. In volatile post-conflict environments, understanding the drivers of political protest and the potential for violent collective action is central to sustainable efforts of reconciliation and peace. This research contributes a large-scale quantitative examination of sociopsychological pathways to moderate and extreme forms of protest in Iraq. Using structural equation analysis, two prominent frameworks predicated on social identity mechanisms — SIMCA and EMSICA — did not replicate in this highly conflict-affected setting. Instead, we found support for an adaptation that retained elements of existing models (specifically, a dual-pathway core of moral outrage and efficacy; see van Zomeren et al., 2012) while introducing two novel mediators — outgroup rejection and legitimization of political violence. This revised model significantly improved explanatory power, particularly for higher-risk forms of political action. We additionally tested two antecedents that we hypothesized may be linked to deviating decision-making of political actors in conflict-affected environments: exposure to violent conflict, and personal life crises. Results showed that personal adversity such as losing a family member or recent financial problems — while not fully detachable from contexts of violent conflict — tend to be a stronger motivational driver than experiences of political violence. This was particularly the

case for later intentions to engage in high-risk political activities, primarily by activating the moral outrage-outgroup rejection pathway. In the introduction, we suggested threat as one explanation for this observed sequence in conflict-affected environments: namely, moral outrage may be elicited by higher environmental threat proximally and by life-crisis/conflict exposure dispositionally through increasing threat-sensitivity. Future studies should focus on examining the mechanisms through which antecedent life factors affect moral outrage, with threat perception as one such possible mechanism. Other candidates are identity-uncertainty, need for cognitive closure and perceptions of victimhood.

At the conceptual level, the findings highlight a boundary condition in the applicability of established collective action models. SIMCA and EMSICA have been robustly validated across various empirical studies, but almost exclusively in the lower-risk political environments of Western, liberal democracies. The results suggest these frameworks may not fully capture the motivational structures underlying political action in severely conflict-affected societies such as Iraq. While moral outrage remained a significant (even dominant) predictor, its effect was not direct; instead, it appears to shape action only when it manifests in antagonistic attitudes regarding specific outgroups. Studies have demonstrated that perceptions of others as evil and hate-driven can prompt withdrawal or aggression responses; we show that a similar mechanism may translate affectively charged grievances (moral outrage) into action intentions, especially for violent or illegal protest in conflict-affected environments. Moreover, collective efficacy beliefs — which canonical models suggest are increasing protest tendencies — predicted only moderate protest intentions, and had a weakly negative effect on higher-risk protest forms, in line with Tausch et al. (2011).

Our findings also suggest implications for violence prevention and peacebuilding in post-conflict societies. Traditional interventions often focus on populations directly exposed to political violence, assuming that conflict trauma is the primary driver of subsequent unrest. However, the results suggest a possibility to reconsider this approach. The stronger predictive power of personal life crises — financial hardship, family deaths, health problems — suggests that less politically driven adversities may be equally or more potent in mobilizing political action, including in violent and illegal forms. This suggests that comprehensive social protection systems and accessible psychosocial support services could serve dual purposes: addressing immediate humanitarian needs while potentially reducing the risk of political violence. Moreover, the finding that moral outrage requires channeling through outgroup rejection to motivate action points to specific intervention opportunities. Programs that provide alternative frameworks for understanding grievances — ones that avoid narratives of competitive victimhood and assigning blame to specific groups — may prove useful. Meanwhile, the mixed role of efficacy in predicting high-risk protest further suggests that social empowerment-focused interventions, while valuable for moderate political participation, may be insufficient for preventing violence in deeply fractured societies where antagonistic worldviews are widespread.

Several other limitations provide starting points for future work. While the revised model showed good fit and significant pathways, effect sizes overall remained relatively modest. This is expected in SEM models testing additive effects between multiple related variables,

particularly in broadly diverse field samples where behavioral outcomes are multicausal and do not materialize for some individuals even when predictive factors are present. We have reported here extensive subgroup analysis to demonstrate overall robustness and limited structural variance strong enough to be of concern for the overall model. Nonetheless, the models examined here should be interpreted in the context of various other psychological and social mechanisms that likely promote or inhibit protest engagement in conflict-affected populations, such as trauma and health related responses to adverse conditions (Jahnke et al., 2022). Future work should also replicate and extend the findings in other conflict-affected contexts. While Iraq presents adequate empirical settings, tests of generalizability beyond this scope would make meaningful contributions to the field. Moreover, this study was done on a civilian population affected by violent conflict. Future studies may explore whether similar psychological factors predict mobilization among targeted samples, such as individuals who have joined and/or left armed groups and thus demonstrated a willingness to engage in political violence. Finally, the development of harmonized, validated instruments to measure key constructs such as moral outrage, efficacy, and politicized identity is an urgent priority (see Smith et al., 2012). By improving construct clarity and empirical breadth, future research can provide an improved understanding of the motivations driving collective action and reducing cycles of political violence in fragile societies.

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