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**How Risk Perception Shapes Collective Action Intentions in Repressive Contexts: A
Study of Egyptian Activists during the 2013 Post-Coup Uprising**

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Abstract

Social psychological research has overlooked collective action in repressive contexts, where activists face substantial personal risks. This paper examines the social psychological processes motivating activists to engage in collective action in risky contexts. We investigate the idea that perceived risks due to government sanctions can galvanize action through fuelling anger, shaping efficacy beliefs, and increasing identification with the movement. We also argue that anger, efficacy and identification motivate action intentions directly and indirectly through reducing the personal importance activists attach to these risks. We tested our hypotheses within a sample of Egyptian activists (N = 146) from two protest movements who protested against Morsi's government and the military interventions, respectively, during the 2013 anti-Coup uprising. In line with our hypotheses, the perceived likelihood of risks was positively associated with anger and identity consolidation efficacy, and positively predicted action intentions indirectly through these variables. Risk was also associated with increased political efficacy, but only among anti-military protesters. Anger and political efficacy predicted action intentions directly and indirectly through reduced risk importance. Results also highlighted differential significance of emotional and instrumental motives for the two protest movements. We discuss directions for future research on the motivators of collective action in repressive contexts.

Keywords: Collective action, risk, anger, efficacy, identification, Egypt

The protests in Tiananmen Square in 1989 and, more recently, the protests in Russia, Ukraine, and the Arab World, are just a few examples of activists engaging in collective action with uncertain outcomes and under considerable personal risk, including arrest, injury, or even death. What motivates people to participate in collective action under such conditions, and what are the psychological correlates of expectations of such risks? The present research addresses these questions.

There is a vast literature on the psychological factors that foster engagement in collective action (see van Stekelenburg & Klandermans, 2010, for a review), spanning several theoretical traditions and highlighting a number of psychological drivers of engagement. There is now substantial support for the predictive role of three key variables – grievances and in particular their emotional counterparts such as anger or outrage (e.g., Runciman, 1966; van Zomeren, Spears, Fischer, & Leach, 2004), the perceived efficacy of action (e.g., Mummendey, Kessler, Klink, & Mielke, 1999; van Zomeren et al., 2004), and identification with the aggrieved group or specific social movement (e.g., Simon et al., 1998). These variables have recently been combined in various integrative theoretical models emphasizing that all three variables uniquely predict willingness to participate (see van Zomeren, Postmes, & Spears, 2008, for meta-analytical evidence) but differing somewhat in terms of how they specify the interrelations between these variables (Thomas, Mavor, & McGarty, 2012; van Zomeren et al., 2004).

Nonetheless, most of the existing research on non-violent collective action was conducted in the democratic societies of Western Europe (e.g., DeWeerd & Klandermans, 1999; Tausch & Becker, 2013), North America (Wright, Taylor, & Moghaddam, 1990), or Australia (Blackwood & Louis, 2012; Hornsey, Blackwood, Louis, Fielding, Mavor, Morton et al., 2006), where engagement in protest is relatively risk-free and unlikely to be met with severe repression. Since the importance of these variables in mobilizing action might differ

between high- and low-risk contexts (McAdam, 1986), the extent to which previous findings can be generalized to contexts where activists face substantial sanctions by the authorities is as yet unknown. Furthermore, while a handful of previous studies have considered the role of personal costs (i.e., energy, time, and financial losses incurred) as predictors of future non-violent action (Blackwood & Louis, 2012; Klandermans, 1984), to our knowledge no empirical research has yet systematically examined the impact of the perceived risks of participation (i.e., the anticipated legal, physical, or social dangers associated with activism; see McAdam, 1986).

The present research aims to fill these gaps by investigating the psychological predictors of willingness to engage in collective action in a high-risk context, namely the 2013 post-coup protests in Egypt, during which hundreds of protesters were killed in clashes with the security forces (Human Rights Watch, 2013). In this context, we examine how the subjective likelihood of risk faced through participation shapes the psychological antecedents (anger, efficacy and identification) of protest and predicts willingness to engage in action. In addition, we explore how anger, efficacy and identification relate to an additional dimension of risk appraisal, the subjective importance of risk, and examine to what extent this variable mediates the links between anger, efficacy, identification and action intentions.

Our choice of the term risk was based on previous research on social movements, which distinguished between high/low risk activism (Loveman, 1998; McAdam, McCarthy and Zald, 1988). Moreover, the concept of risk, which has been defined as adverse specific effects that might occur only if one decides to engage in certain behaviour to achieve a goal (Fischhoff, Watson, & Hope, 1984; Luhmann, 1991; Renn, 1992), seems appropriate as we are interested in peoples' decisions of whether or not to engage in action, over and above their past levels of activism (Fillmore & Atkins, 1992; Kahneman & Tversky, 1984).

High-Risk Collective Action

Some insights into the effects of risk on protest behaviour can be gained from work in political science and sociology on the effects of government repression on the occurrence of collective action. Macro-level analyses have provided evidence for both deterrence and backlash effects, suggesting that imposed negative sanctions sometimes inhibit and sometimes foster protest behaviour (Loveman, 1998; Opp, 1994; White, 1989; see Opp & Roehl, 1990, for a review). There are different theoretical accounts of these effects. Resource mobilization theory (Oberschall, 1973; Tilly, 1977), for example, which emphasizes the importance of opportunity structures, predicts a negative effect as sanctions disrupt a protest movement's resources, which limits its ability to mobilize individuals. Similarly, according to the rational actor model of collective action (Olson, 1965; Hardin, 1982), the risks faced through participation are disincentives for individuals and should therefore reduce action intentions.

Opp and Roehl (1990) argue, however, that, while the imposition of sanctions is inherently disagreeable and might therefore have a direct negative effect on protest, it can also indirectly stimulate protest by setting in motion processes of "micro-mobilization" (p.523). For example, grievance theories like relative deprivation theory suggest that sanctions imposed by the authorities are in themselves deprivations which are responded to with anger and raise protest behaviour (Gurr, 1970; see Opp & Roehl, 1990). Sanctions for protest are further likely to motivate anti-government action because citizens become disillusioned with the current political system and view protest as a way to challenge it (Gerlach & Hine, 1970). Such a radicalizing effect would also be predicted by social identity theory (Tajfel & Turner, 1979), which posits that when individuals identify with a group and perceive their group as suffering from illegitimately imposed grievances, this shared common fate will lead them to further embrace their group's identity and to act on its behalf (Drury &

Reicher, 2000; Reicher, 1996). Repression of protest can also strengthen a movement by increasing bystanders' sympathy and widen support for the activists (DeNardo, 1985).

While empirical micro-level analyses of the effects of sanctions on individuals' engagement in protest are rare, there is some evidence that state sanctions can increase motivation to act. For example, in a study of German anti-nuclear power protesters, Opp and Roehl (1990) demonstrated that experiences and expectations of police brutality predict greater willingness to get engaged by increasing informal positive sanctions (expectations of approval by close others), protest norms, and system alienation. Similarly, in a qualitative study conducted during the eviction of protesters in a campaign against the building of a link road in London, Drury and Reicher (2000) demonstrated that harsh actions against peaceful protesters by the police resulted in enhanced determination among protesters.

The Present Research

The present research seeks to shed further light on the individual-level processes involved in the effects of sanctions associated with protesting on protest behaviour. We propose a general predictive model summarised in Figure 1. While we acknowledge the possibility of a direct, negative link between the perceived likelihood of risk and willingness to engage in action, in line with the established effects of cost (e.g., Klandermans, 1984), we suggest that the risks associated with activism also have positive, indirect links to activism. In line with ideas from relative deprivation theory (Gurr, 1970), we consider risks to be perceived as illegitimately-imposed grievances which are responded to with anger. Hence, we expect the perceived risks to positively predict anger toward the authorities (H1). We chose this target as we aim to delineate the effects of risk perceptions which are considered as the pertinent grievances in this context. In fact, social movement and civil resistance literatures document the role of anger towards repression or its agents as triggers for further resistance (Hess & Martin, 2006; Pearlman, 2013). To examine the relation between perceived risks and

efficacy beliefs, we examine two forms of perceived efficacy following recent work by Saab, Tausch, Spears, and Cheung (2015). Political efficacy refers to perceived efficacy of an action in achieving the political goals of the movement, and identity consolidation efficacy is the effectiveness of an action in expressing what the movement stands for, and in gaining support to build a strong movement. Both types of perceived efficacy were shown to uniquely explain variance in collective action intentions (Saab et al., 2015).

Alternative hypotheses are conceivable regarding the relation between risks and efficacy beliefs. On the one hand, the perceived likelihood of risk might negatively predict political efficacy (H2a) as the sanctions imposed by the authorities can signal their resolve and ability to resist protesters' demands (Muller, 1985). Similarly, the expectations of such sanctions might reduce perceived identity consolidation efficacy (H3a) as severe reprisals against protesters might be expected to reduce social action support (i.e., the perceived number of other group members who are willing to act; van Zomeren et al., 2004) and thus reduce the perceived ability of the movement to mobilize people.

On the other hand, it is possible that the risks due to government sanctions increase the expected political efficacy of the movement (H2b). White (1989) and Opp and Roehl (1990) suggested that oppression can lead to increases in efficacy since individuals feel alienated from the political system and consider collective action as the best alternative for political change. One can also hypothesize that the increase in political efficacy is due to protesters' expectation that authorities' oppressive actions signal the government's weakening and concern (Chenoweth, 2015; Sharp, 2005), and can attract the attention of international powers that can impose pressure on the outgroup to concede to protesters' demands.

Also, perceived risks might be positively related to both identification with the movement and identity consolidation efficacy. The greater the risks faced by protesters, the greater their perception of common fate, which will lead them to feel closer to other

protesters and increase their psychological investment in the group (Drury & Reicher, 2000; Reicher, 1996). Awareness of such processes, as well as the fact that the repression of protest can strengthen a movement by drawing in sympathy and support from bystanders and pushing yet uninvolved people onto the streets (DeNardo, 1985), is also likely to increase identity consolidation efficacy. In fact, this idea of a backlash effect forms part of the strategy of many radical movements (see Kydd & Walter, 2006) who are often successful in engendering wider support for their goals due to excessive countermeasures that alienate moderates from the state (e.g., Sedgwick, 2004). Thus, awareness of the risks attached to protesting might increase the belief that taking action will ultimately strengthen the group (H3b) and increase identification with the movement (H4).

A second goal of the present research was to examine how anger, efficacy and identification predict the subjective importance of risk. Psychological models of the effects of risk on behaviour typically distinguish at least two dimensions of risk appraisal (see Brewer, Chapman, Giobbons, Gerrard, et al., 2007). Specifically, the expected likelihood of being harmed can be distinguished from the extent to which individuals perceive that risk is important (see Rohrman, 2008). Risk importance has been conceptualized as the key proximal predictor of risk behaviour (Rohrman, 2008) and is itself subject to the influence of a variety of psychological factors (e.g., experiential, cultural, societal; see Rohrman, 1999). We operationalize risk importance as the subjective importance of the risks of participation and expect this variable to be a proximal, negative predictor of protest behaviour (H9).

Moreover, we expected anger, efficacy, and identification to negatively predict risk importance, and for risk importance to at least partially mediate the relations of these variables to protest intentions. There is substantial evidence from laboratory studies in psychology showing that anger increases risk taking (Fessler, Pillsworth, & Flamson, 2004;

Lerner & Keltner, 2001). In the context of the 2011 Egyptian and Tunisian uprisings, Pearlman (2013) highlighted the role of “emboldening emotions” (p. 388) in encouraging protesters to devalue risk importance. She noted that the anger and indignation aroused by repressive government actions played a pivotal role in overcoming psychological barriers to action under risk of severe government reprisals. Thus, we hypothesize that anger is a negative predictor of risk importance (H5).

We expect political (H6) and identity consolidation (H7) efficacies to be negative predictors of risk importance for two reasons. First, this prediction follows from a simple cost-benefit analysis; a greater perceived likelihood of protest in achieving the political goals or in strengthening the movement should lead people to put less emphasis on the potential negative consequences of protesting. Second, prior research (e.g., Drury & Reicher, 2005) suggests that feelings of empowerment can motivate individuals to undertake bolder and more confrontational actions. Empowerment, hence, seems to encourage protesters to downplay the risk importance.

Finally, we expect identification with the movement to be a negative predictor of risk importance (H8), in line with social identity theory which suggests that a shared identity encourages people to downplay the relevance of personal interests and risks and to adopt the interests and behaviours of the ingroup (see Ellemers, Spears, & Doosje, 1999). This process is further articulated in the model of agentic normative influence (Louis, Taylor, & Neil, 2004) which emphasizes that the importance of costs and personal sacrifices is determined by contextually-salient social identities, such that “even the ultimate sacrifice of one’s life might be subjectively experienced as personally beneficial, where it is a normatively valued response that is beneficial to the group and its goals” (Blackwood & Louis, 2012, p. 76). Similar processes are highlighted in work on repression and political action, which described the role of collective identity in carving risky collective action as “self-serving” rather than

“self-sacrificing” (Calhoun, 1991, p.69). We tested these predictions while controlling for current involvement in collective action to allow us to predict action intentions over and above baseline levels, thus giving some insights into relative changes in action intentions as a function of the predictor variables.

Our study surveyed activists from the two main groups involved in the post-coup protests in Egypt. The first protest movement, which we refer to as anti-Morsi movement, gathered various factions of Egyptian society who demonstrated throughout 2013 against the growing influence of the Muslim Brotherhood in Egypt and criticized Morsi for mismanagement of the country. A mass demonstration on June 30th 2013 called for Morsi’s resignation. The Egyptian Armed Forces sided with this movement and removed Morsi from power on July 3rd. The second main protest movement, which we refer to as the anti-military movement, gathered members and supporters of the Muslim Brotherhood and anti-military activists who demanded Morsi’s reinstatement. Their major protests in Al Adwiyeh and El Nahda were violently opposed by the military and police, resulting in the death of hundreds of protesters (Kingsley, 2013). It should be noted that within the anti-Morsi group there was variation in terms of their agreement with the repressive military actions, with some fully supporting these actions against what they referred to as “terrorists” and others expressing discomfort with the un-democratic and violent actions of the military (Ayanian & Tausch, 2016).

Importantly, the two groups differed substantially in terms of the dangers involved in protesting, with much greater risks faced by anti-military protesters as they were directly targeted by the security services (Human Rights Watch, 2013). Moreover, while the anti-Morsi group had achieved their goal of ending Morsi's presidency, the anti-military movement was struggling to secure the participation of the Muslim Brotherhood in political life (Ketchley, 2013).

Considering these group differences, we hypothesized differential relevance of instrumental vs. emotional factors in motivating activists. We expected security repression of protests to be a common grievance for most participants regardless of protest movement due to the witnessed police violence during the 2011-2012 protests (Ayanian and Tausch, 2016). However, instrumental factors might have been particularly important motivators of further action for the anti-military activists as they were in direct conflict with the authority as they were forcefully distanced from their legitimately-gained power and had the long-term goal of trying to regain their political position. In fact, van Stekelenburg, Klandermans, and van Dijk (2009) proposed that the motivational dynamics of protest vary among movements depending on the goals that are pursued. They provided evidence that, in contexts where two groups are directly competing over power, the motivation to engage in action is driven by political efficacy. This was not the case among members of a value-oriented movement. Moreover, since this group was presently being repressed and media was widely covering it, we hypothesized risk likelihood to positively predict political efficacy particularly for this group.

On the other hand, members of the anti-Morsi movement, having achieved their goal of ousting Morsi, might have been driven to act for a democratic transition by the extent to which they were angry about the actions of the security forces against protesters. Hence, we hypothesized anger to be particularly significant and political efficacy to play a lesser role among the anti-Morsi movement.

Since we aimed at developing a general predictive model of risky collective action while acknowledging potential contextual particularities, we tested the model in the total sample and examined whether group membership moderated any of the proposed relations.

Method

Procedure and Participants

We launched an online survey on 17th August, 2013, a period during which a wave of major protests initiated by both groups took place. Participants were recruited through Facebook and Twitter and were asked to share and re-tweet the link. We advertised the survey as a project examining the psychological factors underlying engagement in protests in Egypt.

A total of 377 participants entered the survey but a substantial number discontinued the survey early on and completed less than 70% of the questions. We deleted these cases from the data set, which resulted in a reduced sample of 233, from which participants who supported either of the two protests mentioned above were considered for analysis. The final sample consisted of 146 participants (47 women; $M_{age} = 26.20$; 88 from the anti-Morsi movement). Most participants (58.9%) were from Cairo, and most (97.2%) had a university degree. The majority of participants were involved in the protests; 30.8% were regular protesters, 23.3% were occasional protesters, and 37% were active only on social networks.

Measures

Separate bilingual speakers translated and back-translated the survey into Arabic. In addition to a number of questions about the situation in Egypt which are not examined here, respondents completed measures of our key constructs.

Support for protest movement. Participants specified their support for one of the protests; supporting the removal of Morsi, against the military interventions, other (to specify) or none.

Current involvement in protests. Using a five-point scale (1 = never *participated* to 5 = *participated to a great extent*), we measured participants' level of current involvement in protests.

Likelihood of risk. On five-point scales (1 = *impossible* to 5 = *guaranteed*), participants evaluated the likelihood of being injured, killed, arrested, tortured, or sexually harassed ($\alpha = .89$) while protesting.

Importance of risk. Participants rated how important each of these risks are for them personally (1 = *very unimportant* to 5 = *very important*; $\alpha = .86$).

Anger towards the police. Participants' indicated their anger towards the police within the context of treatment of protesters (1 = *to a very little extent* to 5 = *to a great extent*).

Political efficacy. Based on our previous interviews with Egyptian activists (Ayanian & Tausch, 2016), we selected five goals which were highly relevant for both protest movements. Participants rated how likely it was for the protests to achieve these goals ("have an impact on what the military does", "stand against injustice", "bring justice to the protesters who were killed", "improve the situation in Egypt", and "stand up for the demands of the January 25 revolution", $\alpha = .85$) on five-point scales ranging from 1 (*impossible*) to 5 (*guaranteed*).

Identity consolidation efficacy. Participants evaluated how likely it was for the protests to achieve three goals ("increase support in Egyptian public opinion for the protest movements", "strengthen the solidarity among protest movement participants", "ensure international support for the protest movement", 1 = *impossible* to 5 = *guaranteed*, $\alpha = .75$; adapted from Saab et al., 2015). In line with the distinction proposed by Saab et al. (2015), a two-factor solution for identity consolidation and political efficacies was a better fit to the data than a one-factor solution ($\Delta\chi^2(1) = 5.144, p = .050$).

Politicized identification. Participants responded to three items on five-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) (e.g. "being part of the anti-

military/anti-Morsi movement is an important part of who I am", $\alpha = .73$; adapted from Cameron, 2004).

Future collective action. Participants rated how willing they are to engage in six actions if a democratic transition in Egypt does not occur within six months (e.g. "demonstrate peacefully", "participate in sit-ins", "be active on social networks ($\alpha = .91$). They responded on 5-point scales ranging from 1 (*not at all willing*) to 5 (*extremely willing*).

Demographic information. Participants also provided demographic information on their gender, age, marital status, monthly income (from less than 200 EGP to more than 5000 EGP), education (from primary and below to higher education) and place of residence.

Results

Except for anger, politicized identification, and level of current involvement in protests, which had less than 3% missing data, all other variables had between 17.8 and 21.2% of missing values. We examined the pattern of distribution of missing values through a missing value analysis in SPSS. Little's Missing Completely at Random test ($\chi^2(1018) = 1036.57, p > .05$) indicated that the pattern of missing values was completely at random. We thus imputed the missing scores using the EM method² (Tabachnick & Fidell, 2007) and corrected out of range imputed values to the closest scale point. There were only minor differences in results when this method was used compared to listwise deletion.¹

The means and standard deviations and respective *F*-values from a series of ANOVAs testing for group differences are displayed in Table 1. The anti-military movement scored significantly higher on their risk perceptions, anger, politicized identification and willingness to engage in future collective action. The anti-Morsi movement scored significantly higher on risk importance. Pearson correlations between the key variables are presented in Table 2.

To test our main hypotheses for direct paths we conducted path analysis using a series of multiple regressions in SPSS. We used the PROCESS macro (Hayes, 2013) to examine

interactive (by protest group) and indirect paths, employing the bootstrapping method with 5000 re-samples and examining 95% bias-corrected confidence intervals (Preacher & Hayes, 2008). For each analysis, we controlled for current engagement in protests, protest group (coded 1 for anti-Morsi group and 2 for anti-military), and gender (coded 1 for men and 2 for females). We controlled for gender since the literature on risk perception highlights gender differences (Boholm, 1998) and our risks measurement included one item on risks of sexual harassment. We report the unstandardized regression coefficients throughout.

Direct Paths

In the first set of regressions, we regressed anger, efficacy, and identification on risk likelihood. We then examined whether these paths interacted with protest group using PROCESS (Model 1). As hypothesized (H1), likelihood of risk positively predicted anger ($B = .43$, $SE = .10$, $p < .001$). The interaction with protest movement was significant ($B = -.62$, $SE = .19$, $p = .002$), such that risk likelihood positively predicted anger in the anti-Morsi movement ($B = .72$, $SE = .13$, $p < .001$), but not in the anti-military movement ($B = .10$, $SE = .14$, $p = .490$). Risk likelihood did not predict political efficacy in our overall sample ($B = .07$, $SE = .08$, $p = .407$), however, the interaction with group was significant ($B = .53$, $SE = .16$, $p = .001$), such that it positively predicted political efficacy for the anti-military movement ($B = .36$, $SE = .12$, $p = .003$), but not for the anti-Morsi movement ($B = -.18$, $SE = .11$, $p = .108$). Consistent with H3b, risk likelihood positively predicted identity consolidation efficacy ($B = .28$, $SE = .07$, $p < .001$). This association was not moderated by group ($B = -.07$, $SE = .14$, $p = .627$). Unexpectedly, risk likelihood did not predict politicized identification ($B = -.08$, $SE = .07$, $p = .269$), and the interaction with group was not significant ($B = .16$, $SE = .15$, $p = .278$).

Next, we regressed risk importance on anger towards the police, political efficacy, identity consolidation efficacy, and identification. In line with our hypothesis (H5), anger was

a significant negative predictor of risk importance ($B = -.25, SE = .09, p = .007$). Although there was no interaction with group ($B = .39, SE = .28, p = .160$), anger predicted risk importance only for the anti-Morsi movement ($B = -.28, SE = .10, p = .005$) but not the anti-military ($B = -.02, SE = .27, p = .956$). As expected (H6), political efficacy negatively predicted risk importance ($B = -.60, SE = .12, p < .001$). This link was moderated by group ($B = -.89, SE = .23, p < .001$), such that political efficacy was a negative predictor of risk importance for the anti-military movement ($B = -.91, SE = .13, p < .001$), but not for the anti-Morsi movement ($B = -.01, SE = .17, p = .976$). Contrary to our expectations, identity consolidation efficacy and politicized identification did not predict risk importance ($B = .16, SE = .14, p = .254$, and $B = -.05, SE = .13, p = .706$, respectively), and the interaction terms were not significant ($B = .13, SE = .25, p = .593$ and $B = -.12, SE = .23, p = .602$, respectively).

We then regressed future collective action on all of the remaining variables. As expected (H9), risk importance was a negative predictor of willingness to engage in future collective action, over and above all of the other variables ($B = -.21, SE = .07, p = .003$). In addition, there were significant direct paths from anger ($B = .35, SE = .08, p < .001$) and identity consolidation efficacy ($B = .27, SE = .11, p = .017$) to action willingness. Although the moderation by group was not significant for the path from anger to collective action ($B = .39, SE = .28, p = .160$), inspection of the simple slopes showed that anger predicted collective action for the anti-Morsi movement ($B = .33, SE = .09, p < .001$) but not the anti-military movement ($B = .25, SE = .19, p = .196$). There was no direct path from politicized identification ($B = .10, SE = .10, p = .322$) and political efficacy ($B = -.11, SE = .10, p = .299$), but a significant interaction between group and political efficacy ($B = -.48, SE = .22, p = .029$), such that this predictor was not significant for anti-Morsi protesters ($B = .18, SE = .18, p = .299$), but was for anti-military activists ($B = -.32, SE = .13, p = .019$). There was an

interaction with group for the direct path from likelihood of risk to collective action ($B = -.48$, $SE = .20$, $p = .016$), but this path was not significant for either group ($B = .32$, $SE = .17$, $p = .055$, for anti-Morsi protesters, and $B = -.18$, $SE = .11$, $p = .106$, for anti-military protesters). We summarised the results in Figure 2, and a summary of all of our analyses is provided in several tables as supplemental material.

Indirect Paths

To examine the size and significance of the indirect paths and to test for moderated mediation, we used PROCESS Models 4 and 59², respectively. We calculated indices of moderated mediation (IMM, Hayes, 2015) to test whether the indirect paths differ significantly between groups.

There was a significant and positive total indirect path from perceived risk to future action intentions ($.19$, $SE = .06$, $[.07, .32]$), in line with the idea that repressive measures can mobilize further action (Opp & Roehl, 1990). Specifically, in the total sample, the indirect path from risk likelihood to action willingness via anger ($.15$, $SE = .06$, $[.07, .32]$), and via identity consolidation efficacy ($.07$, $SE = .04$, $[.01, .19]$) was significant. However, there were significant group differences. The indirect path via anger was qualified by group ($IMM = -.22$, $SE = .08$, $[-.40, -.08]$), such that it was significant for the anti-Morsi movement ($.24$, $SE = .08$, $[.11, .42]$), but not for the anti-military movement ($.02$, $SE = .03$, $[-.01, .11]$). Moreover, although the indirect path via risk importance was not significant for the total sample ($-.01$, $SE = .03$, $[-.08, .06]$), it varied by group ($IMM = .20$, $SE = .10$, $[.03, .45]$); it was significant among anti-Morsi activists ($-.09$, $SE = .06$, $[-.04, -.01]$), but not anti-military protesters ($.10$, $SE = .09$, $[-.03, .32]$).

There was also a significant indirect path from anger to future collective action via reduced risk importance ($.04$, $SE = .03$, $[.01, .12]$), as well as a significant indirect path from political efficacy to action intentions via reduced risk importance ($.13$, $SE = .06$, $[.03, .27]$).

The latter indirect path was moderated by group ($IMM = .29$, $SE = .12$, $[.08, .56]$), such that it was significant among anti-military ($.30$, $SE = .11$, $[.13, .57]$), but not anti-Morsi protesters ($.01$, $SE = .05$, $[-.05, .16]$).

Discussion

The present study is one of only a small minority of studies to examine collective action intentions in a context where engagement in such action carries substantial risks. Furthermore, to our knowledge, our research is the first to examine how perceptions of such risks may shape the key psychological predictors of engagement (anger, efficacy, and identification) and impact on future action tendencies. Overall, our findings indicate that the key motivators of collective action meaningfully predict action intentions in such a high-risk context, but with some variations (discussed below) which reflect the political complexities of this context as well as the nature of our sample. Importantly, our findings are consistent with the idea that risks due to government repression positively predict action by arousing anger and heightening beliefs that collective action can build a movement and ultimately achieve its political goals. This is in line with Opp and Roehl's (1990) argument that the imposition of sanctions can indirectly stimulate protest by setting in motion "micro-mobilization" processes, and provides first evidence of the psychological processes involved. Moreover, results showed that that the key psychological antecedents predict future action intentions in part by determining the extent to which risks are experienced as important; that is, they help to explain how activists overcome psychological barriers to action under risk of severe reprisals. Below we first discuss our findings; we then acknowledge a number of limitations of the present study and point to directions for future research.

Summary of Results

Consistent with the idea that sanctions associated with protest are in themselves grievances which are responded to with anger and raise protest behaviour (Gurr, 1970; see

Opp & Roehl, 1990), risk likelihood positively predicted anger, which, in turn, predicted increased willingness to engage in collective action (over and above current involvement in protests), directly as well as indirectly by reducing the subjective importance of such risks. This confirms the importance of anger as a motivator of collective action (see van Zomeren et al., 2004). This finding is also in line with laboratory studies showing that anger increases risk taking (Fessler et al., 2004; Lerner & Keltner, 2001), as well as observational work describing anger as one of several emboldening emotions that decrease risk importance among protesters (Pearlman, 2013). However, there were significant group differences in our sample. Risk likelihood predicted anger towards the police, and anger was a direct predictor of action, only among anti-Morsi protesters. Anger had no significant role for the anti-military protesters. A potential ceiling effect (96.6% of participants scored above the scale midpoint) can partly explain this non-significance, however, the particular context also provides some insight. At the time of data collection, the Muslim Brotherhood was facing threats to its collective interests as it was denied its right to political participation. Hence, risks to personal welfare measured in this study might have been perceived as less relevant and just by-products of the risks to collective goals. Moreover, in such highly repressive and oppositional situations, resisting risks to personal welfare due to one's activism can become part of realising one's identity as an activist (Calhoun, 1991; Escobar, 1993), especially for a movement supporting the Muslim Brotherhood which has a religious identity with the main ideology of political Islam (Munson, 2001). Their identification might have decreased their level of distress (Branscombe, Schmitt, & Harvey, 1999; Muldoon, Schmid, & Downes, 2009; Ysseldyk, Matheson, & Anisman, 2010) and increased their valuing of martyrdom. In such situations, risks to personal welfare can be perceived as opportunities to confirm their loyalty to the group's ideology and activist identity through risking one's own safety in an attempt to contribute to in-group's goals (Calhoun, 1991). These particularities can also

account for the importance of instrumental factors for the anti-military group, a point we further elaborate below.

Furthermore, perceived risk was positively associated with identity consolidation efficacy, consistent with the idea that protest met with severe repression by the authorities is believed to strengthen the movement (e.g., by drawing in yet uninvolved bystanders and increasing group cohesion; see DeNardo, 1985). Moreover, perceived risk had a positive indirect link to action tendencies via identity consolidation efficacy and this variable also directly predicted future action intentions. Consolidating a protest movement can be the building block to achieve long term political change, which for now is difficult. These findings further support the idea that goals other than achieving the ultimately desired political change can motivate engagement in collective action (Hornsey et al., 2006; Saab et al., 2015). Unexpectedly, however, there was no significant relation between identity consolidation efficacy and risk importance.

Perceived risks were also positively related to political efficacy, but only among anti-military protesters. As mentioned above, increased political efficacy as a function of risk can be explained by protesters' expectation that repressive action would receive media coverage, which can bolster local support for their cause as well as international powers' intervention. Consistent with this idea, Wisler and Giugni (1999) found that media coverage of oppression was negatively related to subsequent police repression of collective actions. Moreover, Ondetti's (2006) analysis of the landless protesters' struggle in Brazil during 1990s showed how the massive repression galvanized domestic and international support for protesters' cause which spurred further protests and obliged authorities to respond to protesters' demands.

Furthermore, political efficacy negatively predicted risk importance, but only for the anti-military movement. This is in line with previous research which has shown that self-

efficacy reduces people's estimates of risk and increases their perceptions of positive possibilities in risky decisions and risk taking behaviour (Llewellyn, Sanchez, Asghar, & Jones, 2008; Krueger & Dickson, 1994). The social identity approach further suggests that once a social identity is salient, attaining group-level goals becomes of foremost importance (Reicher, Spears, & Haslam, 2013; Ouwerkerk, De Gilder, & De Vries, 2000; Tajfel & Turner, 1979). Our findings are consistent with this idea as they indicate that personal risks are downplayed to the extent to which action is likely to fulfil group goals.

Interestingly, over and above the indirect positive path from political efficacy to action intentions via reduced risk importance, there was also a residual negative direct path from political efficacy to action intentions. While this finding might on the surface seem counter-intuitive, it may reflect a 'free rider effect' whereby individuals' perceptions of efficacy demotivate them to act as the group can achieve its goals without their efforts. It also resonates with recent work on the role of perceived efficacy in predicting non-normative collective action which has suggested that such action is considered in particular among those who perceive themselves as marginalized from the political arena (Tausch, Becker, Spears, et al., 2011; Spears, Scheepers, van Zomeren, Tausch, & Gooch, 2015). This can certainly be applied to the anti-military movement which was in direct conflict with the authority over power and control and which might have considered collective action as the only possible way to oppose the military, even if chances to achieve the goals were limited. Moreover, as we mentioned earlier, some anti-military activists might have perceived risks to their welfare as an opportunity to enact their identity as activists and show loyalty to their group through risking their own safety (Calhoun, 1991). This readiness along with the potential to value martyrdom might have contributed to the decrease in risk importance and the adoption of a 'nothing to lose' strategy (Spears et al., 2015).

Finally, in contrast to our expectations, politicized identification did not play a significant role. It was not predicted by perceived risk, nor did it predict risk importance or collective action intentions in either group. This is inconsistent with previous findings (see van Zomeren et al., 2008). Additional analyses also did not find any evidence of its role as a moderator. We believe that the most likely reason for these unexpected results, at least within the anti-military movement, is a ceiling effect or power issues. In fact, the majority (93.1%) of participants from this group scored higher than the scale midpoint on this variable and the sample size was small ($N = 58$). For the anti-Morsi movement, it could be due to the nature of this movement which gathered different fractions of the society which were united mostly around the short term goal of distancing the Muslim Brotherhood from power which was already achieved by the time the study was launched. This does not mean, however, that politicized identification does not play a role in this context. We would expect a greater predictive role of this variable in samples of the wider population.

Limitations, Contributions and Directions for Future Research

The present study presents only initial evidence for the role of risk perceptions in collective action and has a number of limitations. It is important to note that our sample, which consisted mainly of young and highly educated people who had already some level of involvement in protests and were from Cairo, is unlikely to be representative of Egyptian protesters in general. This naturally restricts the external validity and generalizability of our findings. While this is normally less of a problem for research where relations between variables rather than absolute values are of primary interest, it may still have restricted the variance on some variables, as we discussed above. Moreover, the use of an online survey might be less than ideal, however, recent research argues for the validity and contribution of 'internet' samples (Goslig, Vazire, Srivastava, & John, 2004). Thus, future research should consider the role of risk perceptions in different intergroup contexts and the wider population

targeting activists and non-activists. Indeed, van Zomeren (2015) highlighted the differences in motivations between activists and non-activists. Activists have higher political identification and are more motivated by identification (van Zomeren et al., 2008) and moral obligation (Stürmer & Simon, 2004), but less so by anger (Groves, 1995; Smith, Pettigrew, Pippin, & Bialosiewicz, 2012; Stürmer & Simon, 2004, 2009; Tausch et al., 2011). They are also motivated by different efficacy concerns (van Zomeren, 2015). Political efficacy would be more predictive for non-activists (Louis et al., 2004), identity consolidation and participative efficacies are more predictive for activists (Giguere & Lalonde, 2010; Mazzoni, van Zomeren, & Cicognani, in press; Stürmer & Simon, 2004). These differences may lead perceptions of risks to have a more facilitatory role for activists as they would feel more empowered.

We also note that the generalizability of some of our results is restricted to the particular context we examined as well as our emphasis on risks to personal welfare. In line with previous research, we expect these various motivators to uniquely contribute to encouraging people to take action under risk (van Zomeren et al., 2004, 2012; Vilas & Sabucedo, 2012). In line with the civil resistance and protest movement literature (Martin, 2015), we expect the paths to and from anger towards the police to be significant in most contexts. However, we predict non-significant paths of anger within groups with ideologies valuing personal sacrifice or with highly oppositional relation with authorities, where risks to personal welfare can be perceived as by-products of threats to an in-group's collective goals. Under such circumstances, we expect the paths associated with political efficacy to be significant and negatively associated with collective action since protesters might adopt a 'nothing to lose strategy' (Spears et al., 2015). Otherwise, political efficacy might play a less significant role since achieving political and social change is difficult. However, other forms

of efficacies such as identity consolidation efficacy and participative efficacy (van Zomeren, Saguy & Schellhaas, 2012) might be more relevant.

Furthermore, we cannot infer causal relations from cross-sectional data. We tried to address this issue by including current engagement as a control variable in all of our analyses, however future research should address this issue through longitudinal work and by experimentally manipulating expected risks. We also need to acknowledge that we examined willingness to engage rather than actual participation in collective action. Although past research has found that willingness to engage is a good predictor of actual participation (Blackwood & Louis, 2012; DeWeerd, & Klandermans, 1999), a number of additional barriers to actual participation are likely to operate in contexts where protest carries substantial risks. It is thus desirable for future research to examine actual engagement in protests in risky contexts.

Moreover, a number of alternative specifications of the role of risk should be investigated in future research. For example, following the appraisal theory of emotions (Lazarus, Kanner, & Folkman, 1980), the interaction between risk likelihood, as primary, and risk importance, as secondary appraisals, can be explored. Risk likelihood might also act as a moderator in the relation between the predictors and action intentions. For example, politicized identification and identity consolidation efficacy may play a more important role in very high-risk contexts as protesters would need more resources to cope with the risks (Opp & Roehl, 1991). Due to the nature of our data (observational and continuous variables) and small sample size (McClelland & Judd, 1993; Shieh, 2009), all these moderating effects were non-significant, except for risk likelihood moderating the relation between anger and action intentions, such that anger was a significant predictor of action intentions only at low and medium levels of risk. Experimental studies can further examine this interaction by

manipulating levels of risks to explore differential roles of the antecedents of collective action.

We also acknowledge that the concepts of threats and risks are likely to be strongly related. In fact, the (limited) work that is available suggests that threat is one of several predictors of perceived risk (Brooks, 2003; Pinkerton, 2014; Threat Analysis Group, n.d.). Repressive measures pose a number of particular threats, such as a threat to activists' identity (Livingstone, Spears, Manstead, & Bruder, 2009), which, as much previous research has shown, heightens anger and in-group identification (Crisp, Heuston, Farr, & Turner, 2007; Doosje, Spears, & Ellemers, 2002; Voci, 2006). Unfortunately, as we have no separate measures of threats in the present study, we are unable to disentangle the unique effects of threat vs. risk and suggest that this issue should be addressed in future research.

Finally, our study certainly does not consider the full set of psychological variables that operate in high-risk activism. For example, other emotions, such as fear, might be of relevance. Highly identified participants might experience less fear due to feelings of empowerment (Drury & Reicher, 2005) or more fear due to perceptions of being targets of repression which would decrease their motivation for future action (Dumont, Yzerbyt, Wigboldus, & Gordijn, 2003; Mackie, Devos, & Smith, 2000; Miller, Cronin, Garcia & Branscombe, 2009; see also Saab & Ayoub, 2015). It would be particularly interesting to examine the factors that determine the extent to which perceived risks are responded to with fear and anger, and the potential differences between activists and non-activists in the importance of these emotions.

In spite of these limitations, we believe that the current research makes a number of important contributions. It introduces concepts from the psychological literature on risk (Rohrman, 2008) to better understand engagement in collective action in contexts where protesters are faced with severe consequences, including arrest, injury, or even death, and

provides first insights into the psychological processes that help protesters to overcome the psychological barriers to action under such conditions. It opens up a number of potentially fruitful lines for future research that could further contribute to our understanding of the underlying processes motivating individuals to take part collective action under risks.

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Footnotes

¹A number of previously significant results only approached significance, specifically, the effect of risk likelihood on identity consolidation efficacy within the anti-military movement ($N = 113$, $B = .23$, $SE = .16$, $p = .07$, $[-.01, .46]$). The interaction between political efficacy and protest movement was not significant ($N = 107$, $B = -.42$, $SE = .31$, $[-1.05, .20]$). Risk importance was no longer a significant mediator for the anti-Morsi movement ($N = 107$, $B = -.05$, $SE = .06$, $[-.21, .04]$), and the index of moderation was not significant ($N = 107$, $B = .13$, $SE = .10$, $[-.03, .40]$).

²Model 59 allows all three paths in a mediation to be moderated.

Table 1

Means and Standard Deviations (SD) on Main Variables, by Protest Movement

Variable	Protest Group				<i>F</i>
	Anti-Morsi Protesters		Anti-military Protesters		
	Mean	<i>SD</i>	Mean	<i>SD</i>	
Current Engagement in Protests	3.32	1.11	3.54	1.12	1.41
Likelihood of Risk	3.10	.73	3.81	.82	29.68***, $\omega^2 = .16$
Anger towards the Police	2.69	1.15	4.81	.48	125.28***^, $\omega^2 = .55$
Political Efficacy	3.19	.62	3.30	.99	.86.83^
Identity Consolidation Efficacy	3.47	.65	3.58	.81	.83
Politicized Identification	3.97	.75	4.31	.67	7.85**, $\omega^2 = .04$
Importance of Risk	3.74	.88	3.44	1.21	96^
Future Collective Action	3.70	.98	4.14	.80	8.08**, $\omega^2 = .05$

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. ^ Welsh is reported since homogeneity of variance was not assumed.

Table 2
Correlations among Main Variables, Collapsed and by Protest Movement

	1	2	3	4	5	6	7	8	
Overall Sample (N = 146)	1. Current Engagement in Protests	1.00							
	2. Gender	-.07	1.00						
	3. Likelihood of Risk	.12	.13	1.00					
	4. Anger towards the Police	.13	.02	.53**	1.00				
	5. Political Efficacy	.34**	-.00	.12	-.02	1.00			
	6. Identity Consolidation Efficacy	.36**	.00	.32**	.22**	.45**	1.00		
	7. Politicized Identification	.46**	-.04	.06	.11	.37**	.32**	1.00	
	8. Importance of Risk	-.19*	.15	-.01	-.17*	-.40**	-.14	-.20*	1.00
	9. Future Collective Action	.31**	-.16	.24**	.45**	.15	.36**	.23**	-.34**
Anti-Morsi Movement (N = 88)	1. Current Engagement in Protests	1.00							
	2. Gender	.00	1.00						
	3. Likelihood of Risk	-.05	.34**	1.00					
	4. Anger towards the Police	.05	.15	.45**	1.00				
	5. Political Efficacy	.30**	.08	-.20	-.16	1.00			
	6. Identity Consolidation Efficacy	.31**	.17	.32**	.28**	.39**	1.00		
	7. Politicized Identification	.45**	-.01	-.16	-.18	.47**	.30**	1.00	
	8. Importance of Risk	-.18	.12	.35**	-.16	-.02	.05	-.08	1.00
	9. Future Collective Action	.28**	-.07	.24**	.49**	.09	.30**	.12	-.26**
Anti-Military Movement (N = 58)	1. Current Engagement in Protests	1.00							
	2. Gender	-.18	1.00						
	3. Likelihood of Risk	.27**	-.07	1.00					
	4. Anger towards the Police	.20	-.14	.22	1.00				
	5. Political Efficacy	.38**	-.08	.35**	-.02	1.00			
	6. Identity Consolidation Efficacy	.42**	-.19	.32*	.23	.50**	1.00		
	7. Politicized Identification	.45**	-.05	.13	.26*	.28*	.34**	1.00	
	8. Importance of Risk	-.18	.17	-.23	.02	-.66**	-.29*	-.28*	1.00
	9. Future Collective Action	.33*	-.31*	.03	.26*	.20	.46**	.32*	-.43**

Note: *p < .05, ** p < .01, *** p < .001

Figure Captions

Figure 1: Summary of main hypotheses

Figure 2: Results of path analysis using multiple regression analyses. The dashed arrows are non-significant paths in the overall sample. Regression coefficients are the unstandardized estimates. Separate regression coefficients for each movement are represented in boxes for paths where there was a significant interaction with group. Significance of coefficients is indicated, * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1

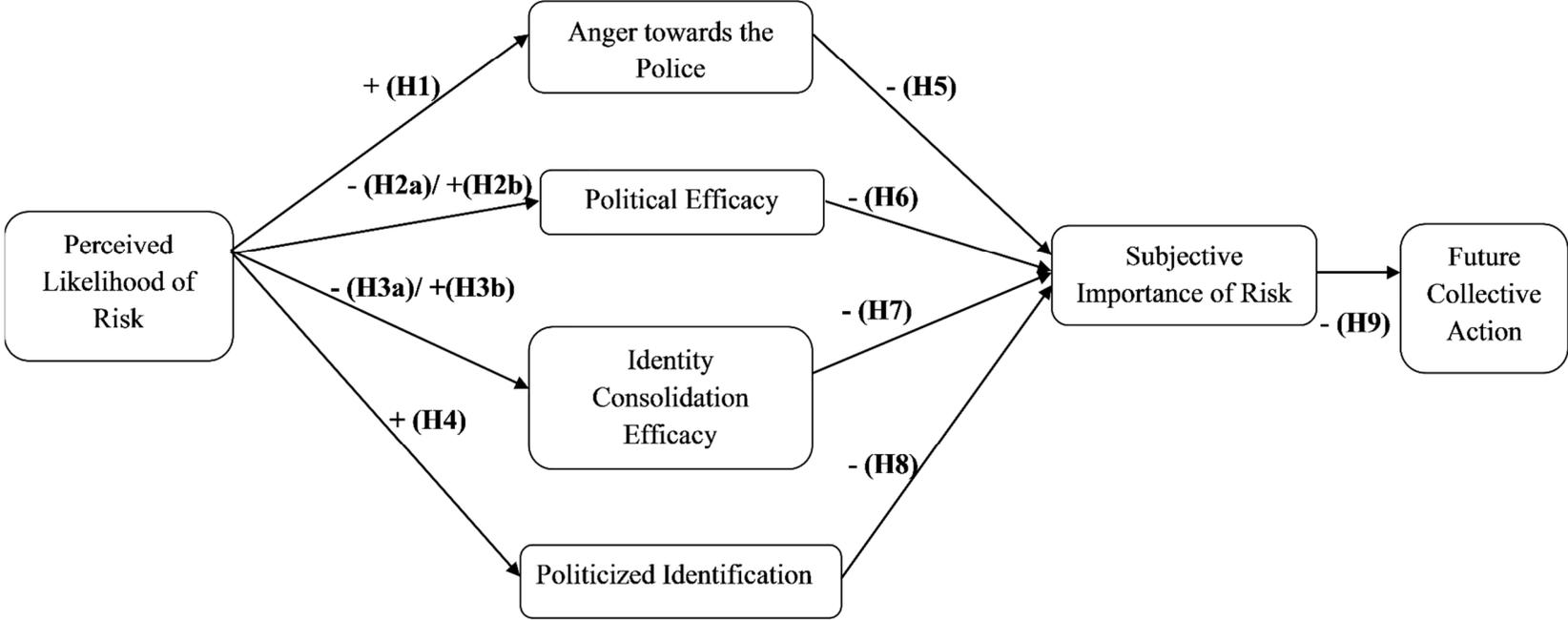


Figure 2

