



rijksuniversiteit  
 groningen

# **Nothing to Lose? How New Financial Policies Impact Support for Radical Action Among University Students in the Netherlands.**

Veerle G. Wilborts

Master Thesis – Applied Social Psychology

s6115985  
July, 2025  
Department of Psychology  
University of Groningen  
Examiner/Daily supervisor:  
Prof. Dr. Russell Spears

A thesis is an aptitude test for students. The approval of the thesis is proof that the student has sufficient research and reporting skills to graduate, but does not guarantee the quality of the research and the results of the research as such, and the thesis is therefore not necessarily suitable to be used as an academic source to refer to. If you would like to know more about the research discussed in this thesis and any publications based on it, to which you could refer, please contact the supervisor mentioned.

### **Abstract**

This study examines how recent financial policies in education in the Netherlands, such as severe budget cuts, reduced basic grants, increased loan interest rates, and the threat of a study delay fine, influence students' support for collective action. The study is grounded in the Social Identity Theory (SIT) and expanded through the Nothing-to-Lose (NTL) framework. It explores how perceived financial disadvantage (PFD), group efficacy, group identification, nationality, and belief in conspiracy theories interact to predict support for both moderate and radical forms of collective action. A survey conducted among first-year psychology students at the University of Groningen (N = 277) measured the support for three action types: moderate, radical without aggression, and radical with aggression. Results show that higher PFD predicted greater support for collective action in general and that this relationship was strongest for moderate action and weakened once the action became more radical and more aggressive. While the group efficacy manipulation had a limited effect on its own, its interaction with PFD revealed increased support for radical (non-aggressive) action in the low group efficacy condition. Group identification strengthened support for both moderate and radical (non-aggressive) actions but decreased support when aggression was involved. International students showed significantly higher levels of activism in general compared to Dutch students, and belief in conspiracy theories partially mediated the relationship between PFD and support for radical action. These findings provided additional support for the NTL explanation of radicalisation and offered new insights into the mechanisms influencing collective action among students, deepening our understanding of the processes in which disadvantaged individuals radicalise.

**Keywords:** Social identity theory, Nothing-to-Lose, perceived financial disadvantage, group efficacy, group identification, conspiracy belief, collective action, radical action, university students

## **Introduction**

From signing petitions and peaceful protests to vandalism and threats against politicians, collective action can take many forms, but what drives individuals to move beyond more moderate normative action and towards more radical action? One factor that remains stable in predicting collective action is perceived injustice, as people often act on behalf of their group to achieve collective goals, and when those goals are perceived to be under threat, they may feel compelled to engage in collective action to protect or improve their group's conditions (Tausch et al., 2011). Building upon this context of perceived injustice, this study seeks to understand which additional factors influence whether individuals engage in collective action at all and what drives the choice between different forms of collective action, such as moderate or radical forms of action.

To understand the dynamics behind these group processes, this study builds upon the well-known Social Identity Theory (SIT) of Tajfel and Turner (1979; 1986). SIT describes how group membership shapes people's identity and sets norms for individuals on how to think and behave (Blaya Burgo, 2024). It also explains how group membership can motivate individuals to act on behalf of the group and how situational factors such as inequality can amplify group identities and influence support for collective action amongst these disadvantaged groups (Blaya Burgo, 2024). However, while SIT guides our understanding of people's engagement in collective action, the theory mainly focuses on moderate forms of action and has often overlooked the diverse forms collective action can take, particularly ignoring the more radical forms of action (Tausch et al., 2011). Thus, SIT does not easily explain individuals' engagement in radical or aggressive forms of collective action.

So, what influences radicalisation? There have been multiple theories trying to explain the process towards radicalisation. Some theories argue that radicalisation is a process reached through different steps of stages, in which individuals gradually adopt more extreme views or

behaviours in response to triggers or structural injustices (Moghaddam, 2005; Feddes et al., 2015). Examples of trigger factors and root factors influencing this process of radicalisation are long-term conditions of perceived unfairness or specific underlying events (Feddes et al., 2015). Other theories frame radicalisation as a quest for personal significance, where individuals turn to extreme ideologies or actions to reclaim a sense of meaning or respect in the face of marginalisation (Kruglanski et al., 2014). However, understanding when and why individuals resort to radical forms of collective action also requires considering how individuals or groups evaluate their ability to achieve change.

This is where the Nothing-to-Lose (NTL) framework, first mentioned by Scheepers et al. (2006), offers a valuable insight into the process towards radicalisation. This framework builds on SIT and suggests that individuals belonging to marginalised groups, particularly those facing both stable and prolonged injustice, coupled with a lack of efficacy (such as stable low status), are more susceptible to adopting radical forms of action (Tausch et al., 2011). In this context, a lack of efficacy is conceptualised as a sense of powerlessness, stemming from the belief that meaningful change cannot be achieved through normative means, thereby creating the belief that they have 'nothing left to lose' (Tausch et al., 2011). Research predicts that, under these conditions, individuals will be more likely to resort to radical or aggressive action (Scheepers et al., 2006; Spears et al., 2010; Tausch et al., 2011). This study will further explore the role of efficacy in the process of radicalisation.

Building on these theoretical insights, the present study focuses on a relevant contemporary issue, analysing how recent financial policies in the Netherlands may contribute to a sense of powerlessness among university students, placing them in a disadvantaged position. There has been quite some resistance in the Netherlands as the current (now outgoing) cabinet – Cabinet-Schoof – introduced a 'recovery plan quality education', a plan explaining new financial policies regarding education (Ministerie van Algemene Zaken, 2024). To realise this

plan, the cabinet planned to cut one billion euros in education, the largest cut to educational funding of this century (Brandt, 2024). In addition to these severe budget cuts, they also planned to implement a fine of 3,000 euros per year for students who exceed their nominal study duration (Ministerie van Algemene Zaken, 2024). The fine is also known as the 'langstudeerboete' in the Netherlands and was planned to be implemented in the study year 2026/2027, aimed at saving money usually spent on students with study delays. However, due to resistance against the fine, the introduction of the fine is currently being put on hold. The government has also lowered the amount of basic grants available for students this year by 164.30 euros and raised the interest on student loans by around 2% compared to last year (Dienst Uitvoering Onderwijs, n.d.a; Dienst Uitvoering Onderwijs, n.d.b). As a result of the cumulative impact of these policies, many students may come to perceive themselves or their financial situation as disadvantaged, creating a relevant and contemporary context in which to study the conditions under which disadvantaged groups mobilise towards collective action.

Given the current context, this study aims to examine the relationship between students' perceived financial disadvantage and their support for different types of collective action, distinguishing between moderate and radical forms of action. While the Nothing-to-Lose (NTL) framework highlights the role of low group efficacy in the process towards radicalisation, this study builds upon this framework by manipulating group efficacy through the level of support from the university staff. In doing so, the study aims to examine how differences in perceived group efficacy affect students' support for moderate and radical forms of collective action in the current context.

In addition to group efficacy, this study also explores group identification as a potentially moderating factor in predicting support for collective action, specifically looking at its role in predicting radical action. Previous research has suggested that individuals who strongly identify with a disadvantaged group are generally more likely to engage in radical

action than individuals with low group identification (Saab et al., 2016). They argued that this may occur because strong group identification enhances feelings of empowerment and efficacy, which are crucial factors in mobilising radicalisation. In contrast, the study of Jiménez-Moya et al. (2015) found that low identifiers were more likely to support radical/aggressive action, possibly because they are less concerned with the group's reputation, which might be a concern discouraging high identifiers from engaging in norm-violating strategies. From an NTL standpoint, this might also suggest that low identifiers have 'less to lose', making them more susceptible to radicalisation. These mixed findings raise important questions about the precise role of group identification in predicting support for radical action and will be further explored in this study.

In addition to group identification, other social identities, such as nationality, may also shape how individuals perceive their situation as disadvantaged and decide to engage in collective action. Given that the financial policies referred to in this study are specific to the Dutch national context, Dutch and international students may differ in their experiences and responses. To capture this variation, nationality will be included in the model as a predictor of support for collective action.

While group efficacy, group identification and nationality offer an interesting path to understanding the process from perceived disadvantage to radicalisation, another potentially relevant factor influencing radicalisation might be belief in conspiracy theories. Prior research has linked conspiracy beliefs with feelings of uncertainty, powerlessness, low control and insecurity, experiences common among disadvantaged groups (Douglas et al., 2019). Moreover, belief in conspiracy theories also tend to be more prevalent among low-status groups who perceive their position as unjustly disadvantaged (Douglas et al., 2019). On the other hand, these conspiracy beliefs have also been associated with higher levels of radicalisation and extremist behaviours (Douglas et al., 2019). Given these findings, this study aims to examine

belief in conspiracy theories as an additional possible factor influencing the relationship between perceived disadvantage and support for radical action. Although students are not typically considered a low-status group, they do currently face financial pressures that put them in a disadvantaged position, allowing this study to explore how belief in conspiracy theories might function in disadvantaged populations outside traditionally low-status groups, potentially offering new insights into their role in predicting radical action.

In summary, this study aims to investigate how perceived financial disadvantage among university students in the Netherlands influences their support for moderate and radical forms of collective action, considering the role of group efficacy, group identification, nationality and belief in conspiracy theories in this relationship. By integrating these variables in a contemporary context, this research aims to deepen our understanding of the mechanisms that drive individuals to engage in collective action and offer new insights into the process of radicalisation among disadvantaged groups.

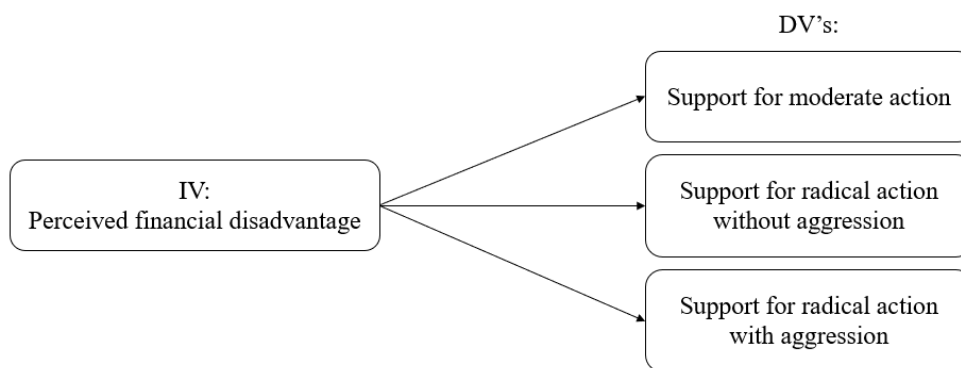
### **Research questions**

**R1:** How does perceived financial disadvantage (PFD) influence students' support for collective action in response to new financial policies in the Netherlands?

*H1a:* Higher levels of PFD among students will be associated with greater support for collective action in general.

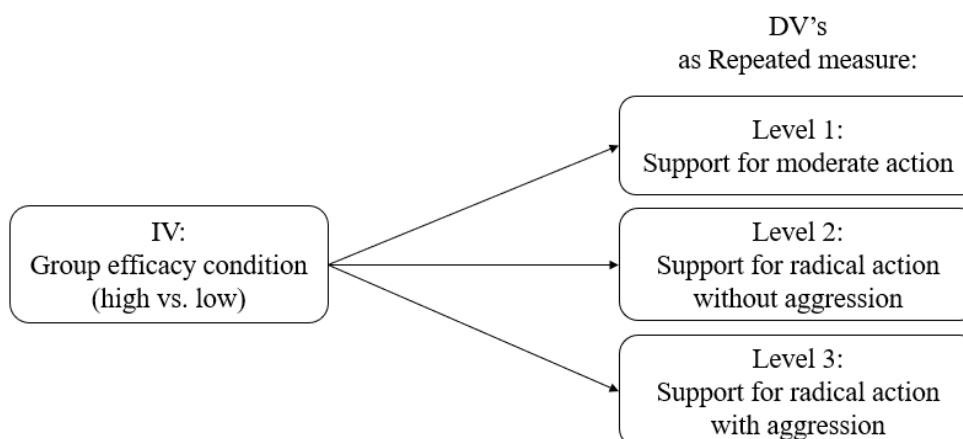
*H1b:* Additionally, the relationship between PFD and support for collective action is expected to differ for each action type, with the relationship between PFD and moderate action expected to be stronger than the relationship between PFD and support for radical action.





**R2:** How does group efficacy influence students' support for collective action in response to new financial policies in the Netherlands?

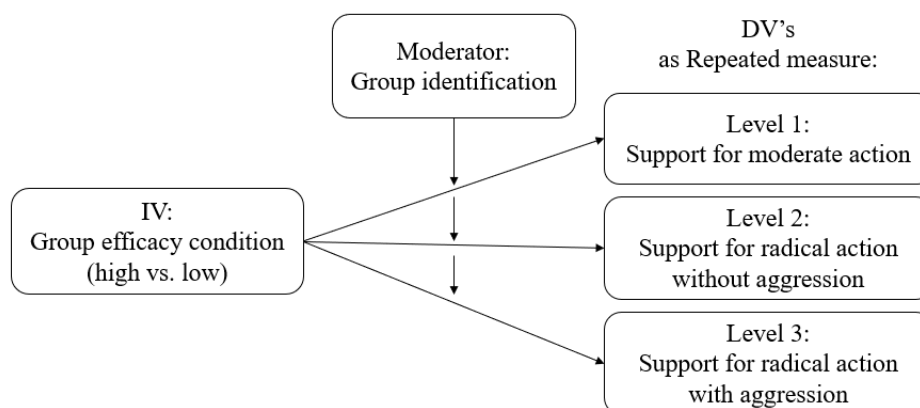
*H2:* Students exposed to the low group efficacy condition (i.e., lack of perceived university staff support) will report higher levels of support for radical action. In contrast, students in the high group efficacy condition (i.e., strong perceived university staff support) will report higher levels of support for moderate action.



**R3:** How does group identification influence students' support for collective action, and to what extent does it interact with group efficacy in shaping this support in response to the new financial policies in the Netherlands?

*H3a:* Group identification (as a university student) is expected to have a direct effect on support for action (moderate, radical without aggression, and radical with aggression), although the direction of this effect is exploratory.

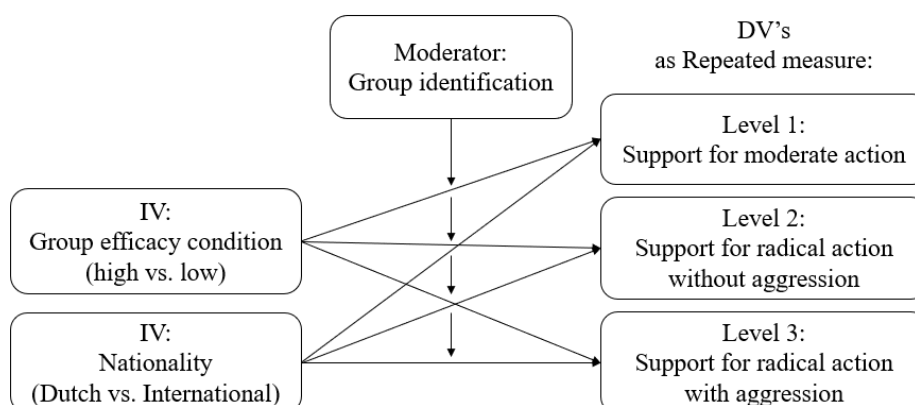
*H3b:* Additionally, group identification will interact with group efficacy in predicting support for collective action. Specifically, the effect of group efficacy on support for radical action is expected to be affected by students' level of group identification. However, the direction and strength of this effect are exploratory.



**R4:** To what extent does nationality (Dutch vs. international) influence the relationship between group efficacy and group identification and support for collective action among students in response to new financial policies in the Netherlands?

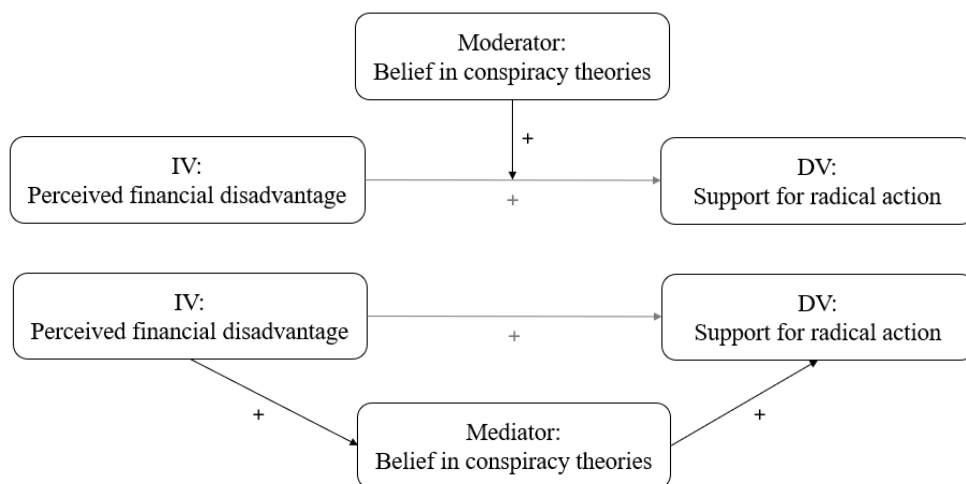
*H4a:* Nationality is expected to have a direct effect on support for collective action (moderate, radical without aggression, and radical with aggression), but the direction and strength of this effect are exploratory.

*H4b:* Additionally, nationality will interact with group efficacy and group identification in predicting support for collective action, but again, the direction and strength of this effect are to be explored.



**R5:** To what extent does belief in conspiracy theories influence the relationship between PFD and support for radical action among students in response to new financial policies in the Netherlands?

*H5:* Belief in conspiracy theories is expected to strengthen the relationship between PFD and support for radical action. However, whether this influence operates as a moderating or mediating effect is to be explored.



## Method

### Participants

The participants included in this study were Bachelor psychology students at the University of Groningen, aged 18 years or older. The majority were first-year students (95.7%), with a small number of second-year ( $n = 10$ ; 3.6%) and third-year students ( $n = 2$ ; 0.7%). The initial sample consisted of 291 participants. However, 14 participants were excluded from the data, of which 13 were due to duplicate participation<sup>1</sup>, and one was due to missing data. This resulted in a final sample of 277 participants.

Most participants identified as female ( $n = 220$ ; 79.4%), followed by male ( $n = 55$ ; 19.9%), and non-binary/prefer not to say ( $n = 2$ ; 0.7%). The mean age of participants was 19.9 years ( $SD = 1.93$ ; range 18 – 31). Both Dutch and international students were included in the study, as both groups are affected by recent changes in financial policies and because their differences are of interest to this study. The majority of participants were Dutch ( $n = 193$ ; 69.7%), while other most frequently reported nationalities included German ( $n = 19$ ; 6.9%), Romanian ( $n = 9$ ; 3.2%), and Spanish ( $n = 5$ ; 1.8%). Regarding academic progress, most participants reported no study delay ( $n = 240$ ; 86.6%). However, a small portion of the sample reported a half-year study delay ( $n = 13$ , 4.7%), a one-year study delay ( $n = 19$ , 6.9%), or a study delay of more than two years ( $n = 5$ , 1.8%).

### Design

The primary analysis of the study employed a 2 (Group efficacy condition; High vs Low) x 2 (Nationality; Dutch vs international) x 3 (Collective action; Moderate vs Radical without aggression vs Radical with aggression) x Group identification (continuous) mixed design with repeated measures on the 3rd factor. In addition, an exploratory analysis was conducted using

---

<sup>1</sup> Due to a technical error in the questionnaire, a small number of participants were able to complete the questionnaire more than once. To prevent potential bias – particularly in relation to the random allocation of experimental conditions – only the data from the first participation attempts were retained, and any subsequent entries were excluded.

a 3 (Collective action; Moderate vs Radical without aggression vs Radical with aggression) x PFD (continuous) x Belief in conspiracy theories (continues) mixed factorial design.

### **Group efficacy manipulation**

#### ***Scenarios***

To manipulate group efficacy, the questionnaire randomly displayed one of two different scenarios. The first scenario was designed to induce high group efficacy by presenting high university support for the students from the staff regarding the changes in financial policies. The text provided fabricated statistics from realistic sources to support the manipulation. The second scenario was designed to induce low group efficacy by highlighting a lack of such university staff support. This text contained almost identical information, with only the level of support and the fabricated statistics being altered. Participants were randomly assigned to either the high group efficacy ( $n = 139$ ) or low group efficacy ( $n = 138$ ) scenario. See Appendix B for both scenarios.

#### ***Manipulation checks***

To assess whether the manipulation was successful, the questionnaire included three questions about the information presented in the scenarios (e.g., "According to the text, do students receive support from the university and its staff?") to verify whether participants had read the scenario and to reinforce key details. Additionally, a strong manipulation check was included in the form of a group efficacy scale. This scale consisted of four items (e.g., "Students are strong as a group") adapted from the group efficacy scale developed by Tausch et al. (2011), with the addition of three extra items measuring participants' perceptions of how university support affects group efficacy (e.g., "The university's support is necessary for students to challenge their financial situation"). All items were measured on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The internal consistency of the final group

efficacy scale in the current sample was acceptable, with a Cronbach's alpha of  $\alpha = .73$ . See Appendix B for all the items of the final scale.

## **Measures**

### ***Demographics***

To assess the demographic characteristics of the participants in the study, the questionnaire included items on age, gender, nationality, current academic year, and the number of years exceeding the nominal study duration. Gender was categorised as "Male", "Female", "Non-binary/Third gender", and "Prefer not to say". Nationality was categorised as "Dutch", "German", and "Other", with an open-text field provided for those selecting "Other". The current academic year was categorised as "First", "Second", "Third", "Fourth", and "Fifth or more". Study delay was assessed using the categories "None", "~ 0.5 years", "1 year", "~ 1.5 years", "2 years", and "> 2 years". See Appendix B for all demographic questions.

### ***Group identification***

To measure group identification, this study used the validated Multicomponent In-Group Identification Scale developed by Leach et al. (2008). The scale consists of 14 items measuring group identification (e.g., "I am similar to the average [in-group] person"). For this study, the placeholder "[in-group]" was replaced with "students" in all 14 items. In the scale's introductory statement, participants were asked to rate their agreement with each item in the context of being a university student, using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The group identification scale demonstrated good internal consistency in the current sample, with a Cronbach's alpha of  $\alpha = .87$ . See Appendix 1 for all the items of the scale.

### ***Perceived financial disadvantage (PFD)***

To measure PFD, the validated Financial Threat Scale (FTS) developed by Marjanovic et al. (2013) was used, with the addition of three extra items. The FTS consists of 5 items

assessing perceived financial threat (e.g., "How much do you feel at risk?") within the context of participants' current financial situation as influenced by recent changes in financial policies in education. Responses were measured on a 5-point scale, ranging from 1 (not at all) to 5 (extremely). To capture the feeling of financial disadvantage, three additional items were included (e.g., "To what extent do you feel that it is unfair?"), all measured on the same 5-point scale. The final PFD scale, comprising both the FTS items and the additional items, demonstrated excellent internal consistency in the current sample, with a Cronbach's alpha of  $\alpha = .90$ . See Appendix B for all the items of the scale.

### ***Belief in conspiracy theories***

To measure belief in conspiracy theories, the single-item conspiracy belief scale developed by Lantian et al. (2016) was used. The scale first introduced participants to the idea that certain political and social events are sometimes subject to public debate, with some individuals questioning the official explanations. It was explained that, from this perspective, official accounts may be perceived as attempts to obscure the truth. Participants were then asked to indicate the extent to which they agreed with the following statement: "I think that the official version of the events (like the financial necessity of the new policies in education) given by the authorities very often hides the truth". This item was slightly adapted to reflect the context of recent financial policy changes. Responses were recorded on a 9-point scale, ranging from 1 (completely false) to 9 (completely true). Because the scale consists of a single item, the internal consistency of the scale in the current sample could not be evaluated. However, Lantian et al. (2016) extensively validated the scale, demonstrating good reliability and validity for measuring general belief in conspiracy theories.

### ***Support for collective action***

To measure support for collective action, the questionnaire included items that measured three distinct categories of collective action. These included moderate actions (e.g.,

"Signing petitions to demand policy changes"), radical action without aggression (e.g., "Blocking access to government buildings to demand a response"), and radical actions with aggression (e.g., "Attacking the police during protests"). Radical action without aggression, unlike the action with aggression, does not cause any harm to people or properties. This approach allowed for the assessment of the overall support for collective action (combining all three scales as one collective action scale), as well as for the comparisons between support for moderate, radical without aggression, and radical actions with aggression. Participants were asked to indicate how likely they were to support each action as a response to the changes in financial policies, using a 7-point Likert scale ranging from 1 (very unlikely) to 7 (very likely).

All items were inspired by real-life examples of collective action. Although the scales were not previously validated, they demonstrated good to excellent internal consistency in the current sample as indicated by Cronbach's alpha values:  $\alpha = .86$  for the moderate action scale,  $\alpha = .87$  for the radical action without aggression scale,  $\alpha = .95$  for the radical action with aggression scale, and  $\alpha = .89$  for the combined collective action scale. See Appendix B for the items of all three scales.

## **Procedure**

The data for this study was collected between March 11th and April 9th, 2025, after obtaining ethical approval from the BSS Ethics Committee of the University of Groningen. The questionnaire was created using Qualtrics, and participants were recruited via the University's SONA system, a platform where mainly first-year psychology students participate in the research of thesis students to earn credits. This way, the study targeted primarily first-year psychology students, with the occasional second and third-year students still needing credit. In order to participate, students had to be 18 years or older. The estimated completion time of the survey was 15 minutes, and after participation, students would receive 0.4 credits. On the SONA platform, the study was titled "The Financial Crisis: A Threat to Students?" the name



was approved by the Ethics Committee and accompanied by the estimated duration, credit information, a single sentence abstract and a short description (see Appendix C).

The questionnaire began with a brief introduction and informed consent. Participants then completed demographic questions and read factual information about the new financial policies in education. Next, they filled out measures on PFD and group identification. Afterwards, participants were randomly assigned by Qualtrics to either a high or low group efficacy condition, each followed by a weak and strong manipulation check. Subsequently, participants completed items measuring support for moderate, radical without aggression and radical action with aggression and items measuring belief in conspiracy theories. At the end of the survey, a debriefing clarified the studies and the manipulations' true nature. Participants were asked to provide a final informed consent and were given the researcher's contact information for any questions or concerns.

After data collection, the dataset was exported from Qualtrics into RStudio for analysis. Duplicate entries were identified and removed by retaining only the first complete response per participant. Cases with missing data on key variables were also excluded. Composite variables were created for PFD, group identification, group efficacy, conspiracy belief, and the three types of collective action, as well as an overall collective action score and a combined radical action score (with and without aggression). Prior to conducting the primary analysis, preliminary analyses of all key assumptions for each analysis were performed using R. Most key assumptions were met; although a few were not met, the robustness of the analysis ensures that these violations should not pose any issues for interpreting the results. For a more detailed description of all the assumptions, see Appendix D. A significance level of  $p < .05$  was adopted to determine statistical significance for all analyses.

## Results

### **H1: Effect of perceived financial disadvantage (PFD) on support for collective action.**

First, a simple linear regression was conducted to examine whether PFD predicted support for collective action. Here, all three types of collective action were combined into one collective action scale. In line with hypothesis 1a, PFD was a significant positive predictor for collective action,  $B = 0.55$ ,  $F(1, 275) = 66.38$ ,  $p < .001$ , accounting for 19.2% of the variance in levels of support. These results indicate that participants who experience higher levels of PFD were more likely to express support for collective action in general.

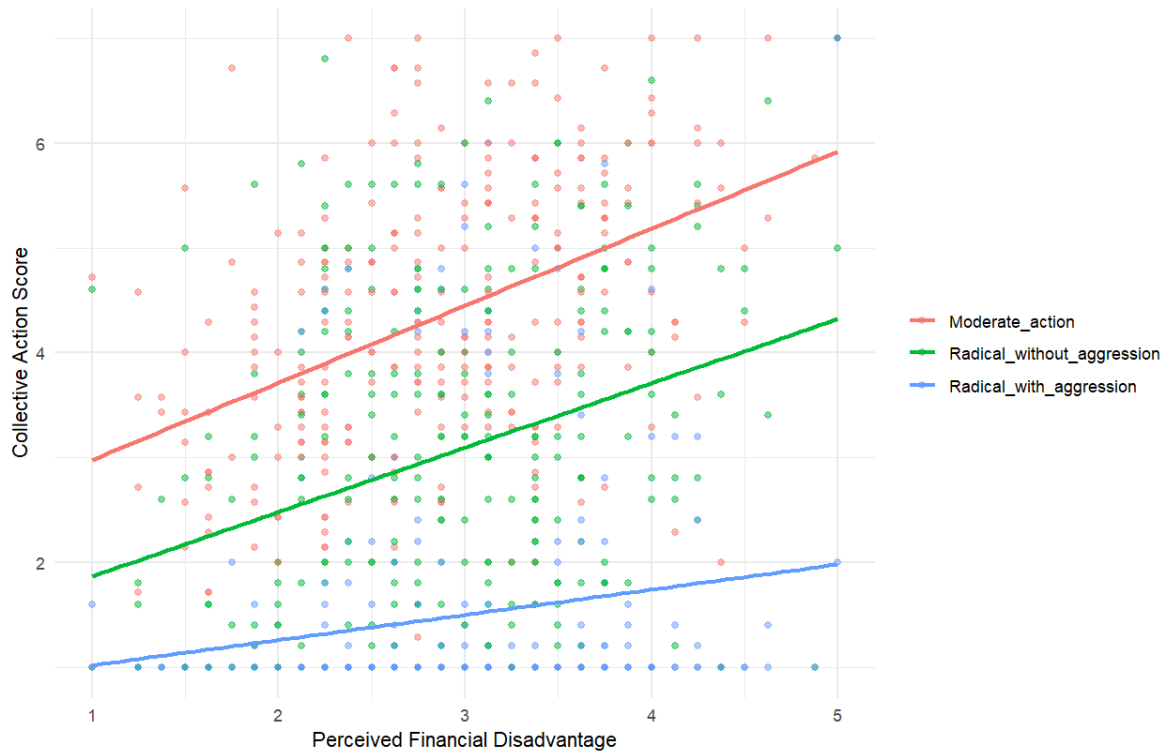
Subsequently, a multivariate multiple regression analysis was conducted using PFD as an independent variable and all three types of collective action (i.e., moderate, radical without aggression, and radical action with aggression) as dependent variables. This analysis examined the strength differences in the relationship across three forms of collective action. The analysis revealed the PFD was significantly related to all three types of collective action (all  $p < .001$ ). When comparing the standardised regression coefficients for moderate action ( $\beta = 0.74$ ), radical action without aggression ( $\beta = 0.61$ ), and radical action with aggression ( $\beta = 0.24$ ), the analysis suggests that the strength of the relationship varied across the different types of collective action, with moderate action showing the strongest relationship with PFD, as expected. Pillai's test statistic further confirms a significant multivariate effect of PFD on collective action across all three forms of action (Pillai's test statistic = 0.23,  $F(3, 273) = 26.59$ ,  $p < .001$ ).

These findings indicate that students who perceive a higher financial disadvantage are more likely to engage in moderate actions, followed by radical action without aggression and radical action with aggression (See Figure 1). Therefore, hypothesis 1b is accepted, suggesting that the baseline assumption of this study, which argues that individuals will show more support for collective action when they are in a more (perceived) disadvantaged position, is generally met. It also suggests that individuals will first resort to more moderate forms of collective action

and thus generally show more support for these types of action before resorting to more radical forms of collective action.

**Figure 1**

*Relationship between PFD and types of collective action.*



### Group efficacy manipulation checks

To assess whether the participants read and understood the text of their assigned scenario, a weak manipulation check was implemented, asking three questions designed to confirm comprehension of the information in the text of their assigned scenario (e.g., "According to the text, do students receive support from the university and its staff?"; see Appendix B for all questions). Participants responded largely in line with expectations, with 79.9% of participants in the high group efficacy condition answering all three questions correctly, and 65.2% of participants in the low condition answering all three questions correct. However, the manipulation success differed significantly,  $t(231.49) = 3.60, p < .001$ , suggesting that the high group efficacy condition was significantly more convincing.

Interestingly, for the second question of the weak check, participants in the low efficacy condition answered correctly more often (91.3%) than those in the high condition (84.9%). This might reflect students' general expectation of the number of students who feel supported by the university staff, according to an NSE report. Making this one detail more memorable for those in the low-efficiency condition despite it being the overall weaker manipulation.

The study also included a 'strong' manipulation check designed to assess whether the manipulation was also internalised. First, the questions testing the level of perceived group efficacy revealed a difference that approached significance between the high ( $M = 4.68$ ) and low ( $M = 4.45$ ) conditions,  $t(273.47) = 1.97, p = .05$  (see Appendix B for all questions). Additionally, the questions testing the idea that university support is necessary to increase levels of group efficacy revealed that the participants from both conditions strongly agreed, ( $M = 5.34, SD = 1.07$ ),  $t(276) = 26.43, p < .001$ . These results indicate that the manipulation was broadly successful, though the observed difference in perceived group efficacy was relatively small.

## **H2: Effect of group efficacy on support for collective action.**

To examine the effect of the group efficacy condition on support for collective action, the participants' scores on the support for the three types of collective action (i.e., moderate action, radical action without aggression, radical action with aggression) were treated as a repeated measures variable. This allowed for a mixed-design ANOVA with group efficacy scenario condition (high vs. low) as a between-subjects factor and action type (moderate action, radical action without aggression, radical action with aggression) as a within-subjects factor. The analysis tested whether the level of support varied between types of action divided by group efficacy condition. For the mean scores and standard deviations of each action type and within each scenario condition, see Table 2.

**Table 2**

*Descriptive statistics for support for collective action grouped by group efficacy condition.*

	Group Efficacy Condition				Total	
	High		Low			
Collective Action	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Moderate	4.30	1.29	4.41	1.34	4.35	1.31
Radical without Aggression	3.05	1.52	2.98	1.55	3.02	1.53
Radical with Aggression	1.49	1.18	1.44	1.00	1.47	1.09

The repeated measures ANOVA revealed a significant main effect of action type (i.e., moderate action, radical action without aggression and radical action with aggression) on the support for collective action,  $F(2, 550) = 536.59, p < .001, \eta^2 = .44$  (see Figure 3). This indicates that participants significantly differ in their support for moderate, radical without aggression, and radical actions with aggression. However, no significant main effect was found of the group efficacy scenario condition on action scores,  $F(1, 275) = 0.002, p = .967$ , nor of the interaction effect between the group efficacy scenario condition and action type on action scores,  $F(2, 550) = 0.60, p = .541$ . As Mauchly's test indicated a violation of sphericity ( $W = 0.96, p = .002$ ), the analysis was conducted using the Greenhouse-Geisser (GG) corrections. However, even after applying these corrections, the results remained non-significant. Therefore, the second hypothesis is rejected, suggesting that the group efficacy manipulation did not affect the overall support for collective action nor the pattern of support across different action types.

### **H3: Effect of group identification and group efficacy on support for collective action.**

In continuation of the previous repeated measures analysis, the repeated measures model with group efficacy as the independent variable and the three types of collective action as the

dependent repeated measures variables were again used to conduct the analysis of third hypothesis, this time including group identification as a continuous moderator. For analytical purposes, group identification scores were standardised (z-scores) prior to the analysis.

The analysis once more revealed a strong main effect of action type on the support for collective action, a non-significant main effect of group efficacy scenario condition on the level of support for collective action, and a non-significant interaction effect of action type and group efficacy scenario condition on the level of support for collective action. Nevertheless, the analysis also demonstrates a significant between subjects' effect of group identification on the levels of support for collective action  $F(1, 273) = 4.59, p = .03$ . Accepting hypothesis 3a and suggesting that group identification positively influences the level of support for collective action. As Mauchly's test indicated a violation of sphericity ( $W = 0.96, p = .004$ ), the analysis was conducted using the Greenhouse-Geisser (GG) corrections (see Table 3 for the corrected values).

Additionally, the interaction effect between group identification (standardised) and action type on the level of support for collective action also appeared to be significant  $F(2, 546) = 8.02, p < .001$ , indicating that the relationship between group identification and levels of support differed for each action type. As shown in Figure 2, for both moderate and radical action without aggression, the level of support increases for participants with higher levels of group identification, while for radical action with aggression, the level of support slightly decreases when group identification levels increase. The three-way interaction effect on support for collective action, including group efficacy condition, did not appear to be significant, thus rejecting hypothesis 3b (see Table 3).

**Table 3**

*Within and Between Subjects' Effect of Three-way Repeated Measures Analysis.*

	SS	df	F	p	p [GG]
--	----	----	---	---	--------

## Between subjects

Group Efficacy	0.0	1, 273	0.01	.937	-
Group Identification	14.2	1, 273	4.59	.033*	-

## Within subjects

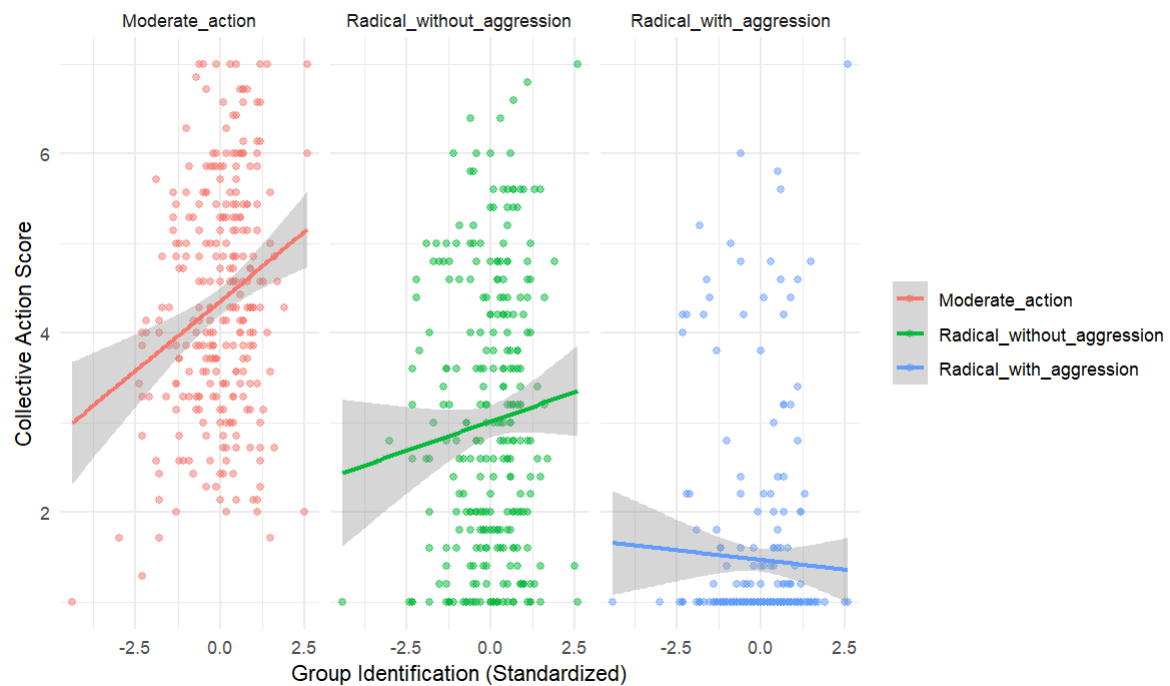
Action Type	1152.8	2, 546	548.37	2.2e-16***	2.2e-16***
Action Type $\times$ Group Efficacy	1.8	2, 546	0.84	.432	.428
Action Type $\times$ Group Identification	16.9	2, 546	8.02	3.6e-4***	4.5e-4***
Action Type $\times$ Group Efficacy $\times$ Group Identification	0.4	2, 546	0.17	0.845	.836

*Note.* Type 3 Sums of Squares. Group identification is standardized.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Figure 2**

*Relationships between group identification and level of support for collective action.*



#### **H4: Effect of nationality, group identification, and group efficacy on support for collective action.**

Continuing the previous analysis, the analysis of the fourth hypothesis used the same repeated measures model, this time incorporating nationality as an independent predictor. The model thus includes group efficacy condition (high vs low) and nationality (Dutch vs international) as independent predictors, action type (moderate, radical without aggression, radical with aggression) as dependent repeated measures factor, and group identification as a continuous moderator. All these factors were included in the two-, three-, and four-way interaction effects of the model. For the mean scores and standard deviations of group identification and collective action divided by nationality and Group efficacy scenario condition, see Table 4.

**Table 4**

*Descriptive Statistics of Group Identification and Collective Action grouped by Group Efficacy Scenario Condition and Nationality.*

				Collective Action					
Group Identification				Moderate		Radical without Aggression		Radical with Aggression	
Nationality	<i>M</i>	<i>SD</i>	Condition	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dutch	5.07	0.74	High	4.15	1.27	2.98	1.52	1.47	1.18
			Low	4.20	1.35	2.76	1.47	1.44	1.08
International	5.30	0.63	High	4.64	1.28	3.21	1.51	1.54	1.18
			Low	4.92	1.16	3.52	1.63	1.46	0.78

Consistent with earlier analysis, the repeated measures analysis demonstrated a strong significance within subjects' effect of action type on support for collective action and a significance within subjects' interaction effect of action type and group identification on support



for collective action. However, the between-subjects effect of the group efficacy condition, the within-subjects interaction effect of action type and group efficacy condition, and the three-way interaction effect including action type, group efficacy condition and group identification remained non-significant. In contrast to the previous analysis, the between subjects' effect of group identification on support for action does not appear to be significant in this four-way repeated measures analysis (see Table 5).

Notably, when including nationality, the analysis revealed a strong significant between subjects' effect of nationality on support for collective action,  $F(1, 269) = 7.07, p = .008$ , indicating that Dutch and international students generally differ on their levels of support for collective action. Note that Mauchly's test indicated a violation of sphericity, so Greenhouse-Geisser corrections were applied (see Table 5 for the corrected values). As shown in Table 4, international students consistently reported higher levels of support for collective action across all action types compared to Dutch students. Moreover, the within subjects' interaction effect of action type and nationality on support for action scores also appeared to be significant,  $F(2, 538) = 3.42, p = .036$  (see Table 6), suggesting that the pattern of support across the different types of collective action (i.e., moderate, radical without aggression, and radical with aggression) varied depending on the participants' nationality. In this case, this pattern shows a steeper decrease in the level of support for international students, when going from support for moderate, to radical without aggression, to radical with aggression compared to the Dutch students (see Figure 3).

**Table 5**

*Between Subjects Effects of 4-way Repeated Measures Analysis on Support for Action Scores.*

	SS	df	F	p
Group Efficacy	1.3	1, 269	0.43	.513
Group Identification	3.9	1, 269	1.28	.259

Nationality	21.4	1, 269	7.07	.008**
-------------	------	--------	------	--------

*Note.* Type 3 Sums of Squares. Group identification is standardized.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 6**

*Within Subjects Effects of 4-way Repeated Measures Analysis on Support for Action Scores.*

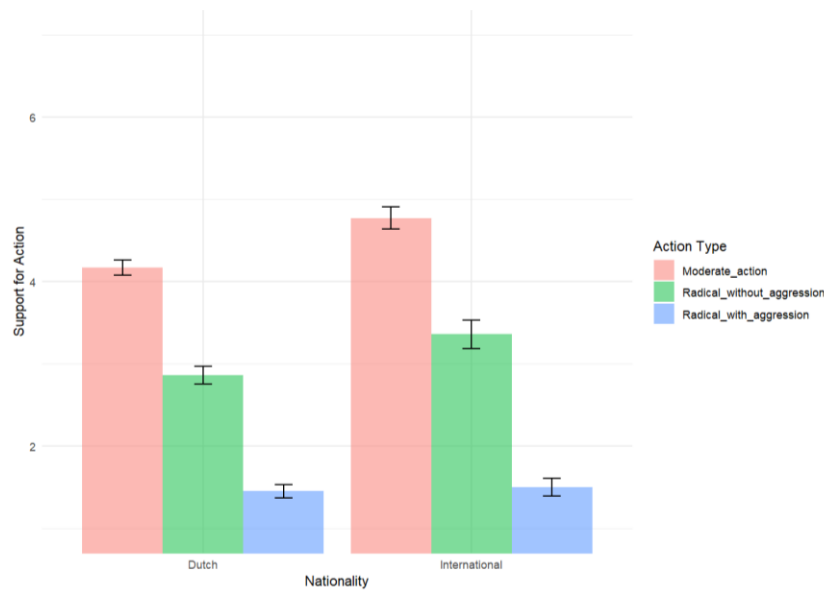
	SS	<i>df</i>	<i>F</i>	<i>p</i>	<i>p</i> [GG]
Action Type	994.5	2, 538	482.16	2.2e-16***	2e-16***
Action Type × Group Efficacy	3.0	2, 538	1.45	.235	.235
Action Type × Group Identification	6.9	2, 538	3.36	.035*	.038*
Action Type × Nationality	7.1	2, 538	3.42	.033*	.036*
Action Type × Group Efficacy × Group Identification	1.1	2, 538	0.53	.588	.578
Action Type × Group Efficacy × Nationality	3.5	2, 538	1.68	.187	.189
Action Type × Nationality × Group Identification	1.1	2, 538	0.56	.579	.570
Action Type × Group Efficacy × Nationality × Group Identification	7.6	2, 538	3.69	.026*	.028*

*Note.* Type 3 Sums of Squares. Group identification is standardized.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Figure 3**

*Relationship between Nationality and Levels of Support for Collective Action.*



When looking at the three-way interaction effects of the repeated measures analysis, none of the interactions appeared to be significant, as expected, due to the non-significant effect of the group efficacy manipulation (see Table 6). However, interestingly the four-way within subjects' interaction effect of action type, group efficacy scenario, group identification and nationality on the support for collective action appeared to be significant,  $F(2, 538) = 3.69, p = .028$ . This indicates that the relationship between group identification and support for collective action depends on the complex interplay between group efficacy condition, nationality and type of action. In other words, the extent to which group identification predicts support for collective action changes depending on whether the participant was exposed to the high or the low group efficacy condition, depending on the type of collective action, and the nationality of the participant (Dutch vs international).

In Figure 4, all the individual regression lines of the four-way interaction effect are illustrated. Interestingly, these regression lines demonstrate that among Dutch students, high group identification generally predicted higher levels of support for collective action when looking at moderate and radical action without aggression, regardless of the exposure to different group efficacy scenarios. However, while this relationship between group identification and support for action appeared to flatten for radical action involving aggression,

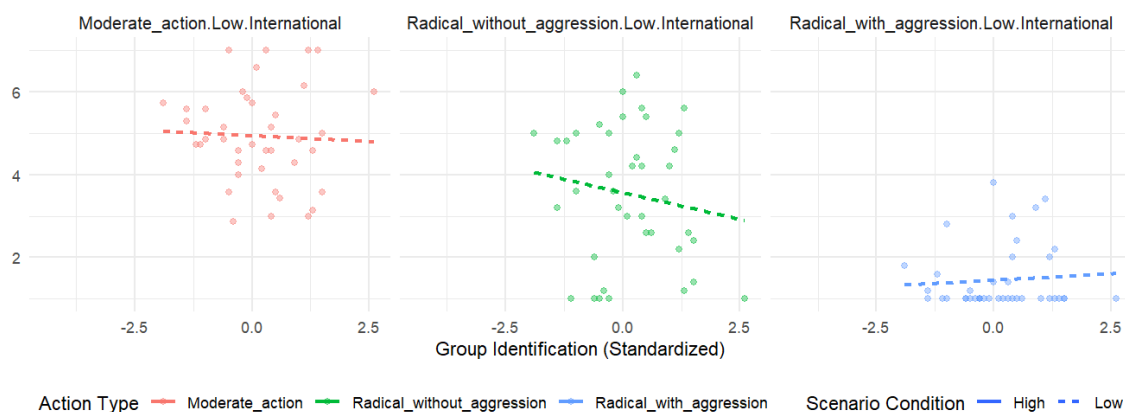
high group identification among Dutch students in the low group efficacy condition marginally predicted lower levels of support for radical action with aggression.

Another interesting pattern appeared when inspecting the slopes of the international students. While the relationship between group identification and support for collective action for international students in the high group efficacy condition appeared to be shaped in a similar direction with similar strength as that of the Dutch students, the pattern changes its direction and its strength for the international students in the low group efficacy condition. Here, the slopes for moderate action and radical action without aggression appeared to be negative, and the slopes for radical action with aggression appeared to be somewhat positive, though the slopes for moderate and radical action with aggression appear to be relatively flat.

**Figure 4**

*Regression Lines for 4-way Repeated Measures Analysis on Support for Collective Actions.*





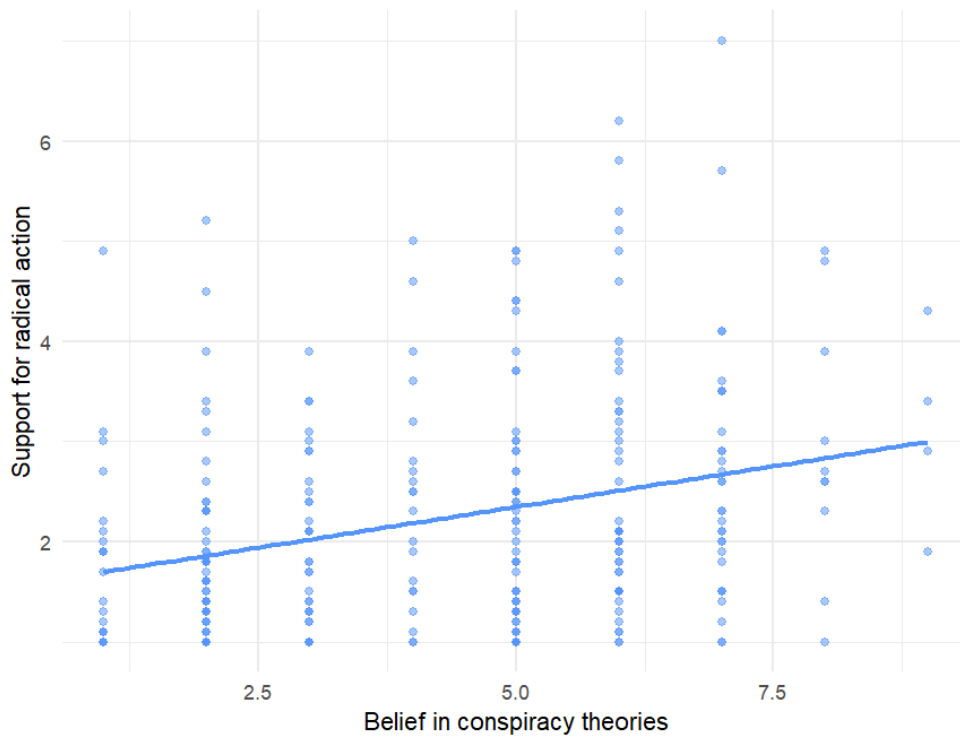
### H5: Effect of belief in conspiracy theories and PFD on support for radical action.

For the final analysis, both radical action without aggression and radical action with aggression were combined into one variable: support for radical action. To explore how beliefs in conspiracy theories influence the relationship between PFD and support for radical action, both a moderation and a mediation analysis were conducted with belief in conspiracy theories as moderator or mediator, PFD as independent variable and support for radical action as dependent variable.

The moderation analysis showed that the direct effects of both PFD ( $B = 0.27$ ,  $SE = 0.07$ ,  $t = 4.05$ ,  $p < .001$ ), and belief in conspiracy theories ( $B = 0.27$ ,  $SE = 0.07$ ,  $t = 3.94$ ,  $p < .001$ ) on support for radical action appeared to be significant. The direct effect indicates that participants with higher levels of PFD report more support for radical action. The positive relationship found for conspiracy belief suggests that participants who are more likely to believe in conspiracy theories and think that official versions of events given by the authorities often hide the truth are more likely to support radical action (see Figure 5). The analysis did not reveal a significant interaction effect, indicating that belief in conspiracy theories does not moderate the relationship between PFD and support for radical action.

**Figure 5**

*Direct effect of Conspiracy Beliefs on support for radical action.*



Next, a mediation analysis was conducted to examine whether belief in conspiracy theories mediated the relationship between PFD and support for radical action. The analysis revealed a significant indirect effect of PFD on support for radical action through belief in conspiracy theories ( $\beta = 0.09$ , 95% CI [0.04, 0.15],  $p < .001$ ), supporting the fifth hypothesis and suggesting that higher levels of PFD predict a higher likelihood to believe in conspiracy theories, which then results in higher levels of support for radical action (see Figure 6). The direct effect of PFD on support for radical action remained significant when controlling for conspiracy theories, indicating that belief in conspiracy theories only partially mediates the relationship. About 20% of the total effect ( $\beta = 0.43$ , 95% CI [0.27, 0.59],  $p < .001$ ) is explained by the mediator, thus the other 80% might be explained through other factors (see Table 7).

**Table 7**

*Mediation analysis examining the role of conspiracy beliefs in the relationship between PFD and support for radical action.*

Effect	Estimate ( $\beta$ )	95% CI	$p$
--------	----------------------	--------	-----

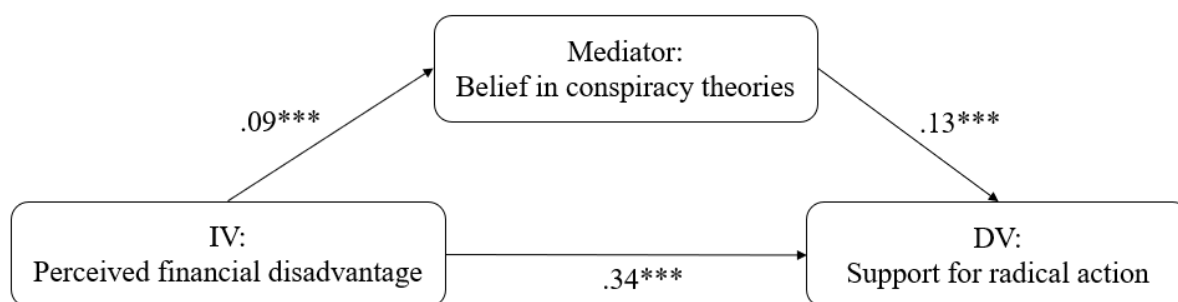
ACME (Indirect effect)	0.09	[0.04, 0.14]	<2e-16***
ADE (Direct effect)	0.34	[0.18, 0.51]	<2e-16***
Total effect	0.43	[0.27, 0.59]	<2e-16***
Proportion Mediated	0.20	[0.09, 0.39]	<2e-16***

*Note.* Nonparametric bootstrap with 1000 simulations. ACME = Average Causal Mediation Effect. ADE = Average Direct Effect.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Figure 6**

*Schematic representation of mediation effect of belief in conspiracy theories on the relationship between PFD and support for radical action.*



\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

### **Exploratory analysis: Effect of group efficacy and PFD on support for collective action.**

Although the interaction between perceived financial disadvantage (PFD) and the group efficacy manipulation was not originally included in previous models, as they examined the predictors separately, an additional analysis was conducted to explore this relationship. Given the assumptions of the Nothing-to-Lose (NTL) framework that perceptions of disadvantage are a necessary precondition for low group efficacy to translate into radical action, it was considered theoretically relevant to include PFD as a moderator. A more detailed explanation of the rationale is provided in the Discussion.

In line with the previous analyses, the group efficacy scenario condition did not appear to be significantly predict support for collective action, whereas PFD did. However, interestingly, the interaction effect between group efficacy and PFD did appear to be significant  $F(1, 273) = 3.98, p = .047$  (See Table 3), providing some support for the Nothing-to-Lose (NTL) explanation. After visual inspections of the relationship and follow-up regressions (see Figure 7), the relationship between PFD and moderate action was observed to be significantly stronger in the low group efficacy condition ( $B = 0.70$ ), compared to the high group efficacy condition ( $B = 0.49$ ). However, the largest difference in relationship strength was found between PFD and support radical action without aggression, as this relationship was significantly stronger in the low group efficacy condition ( $B = 0.72$ ) than in the high group efficacy condition ( $B = 0.29$ ). Moreover, the relationship between PFD and support for radical action without aggression in the low group efficacy condition was the strongest observed across all combinations. These findings suggest that participants who report high levels of PFD are more likely to support radical action (without aggression) when they are placed in the low group efficacy condition compared to those in the high group efficacy condition. However, this effect was only found for radical action without aggression since no significant difference was found between group efficacy conditions for the relationship between PFD and radical action with aggression.

**Table 3**

*Between Subjects' Effect of Repeated Measures Analysis including PFD as a moderator.*

	SS	df	F	p
Group Efficacy	0.1	1, 273	0.03	.870
PFD	154.2	1, 273	60.54	1.5e-13***
Group Efficacy × PFD	10.1	1, 273	3.98	.047*

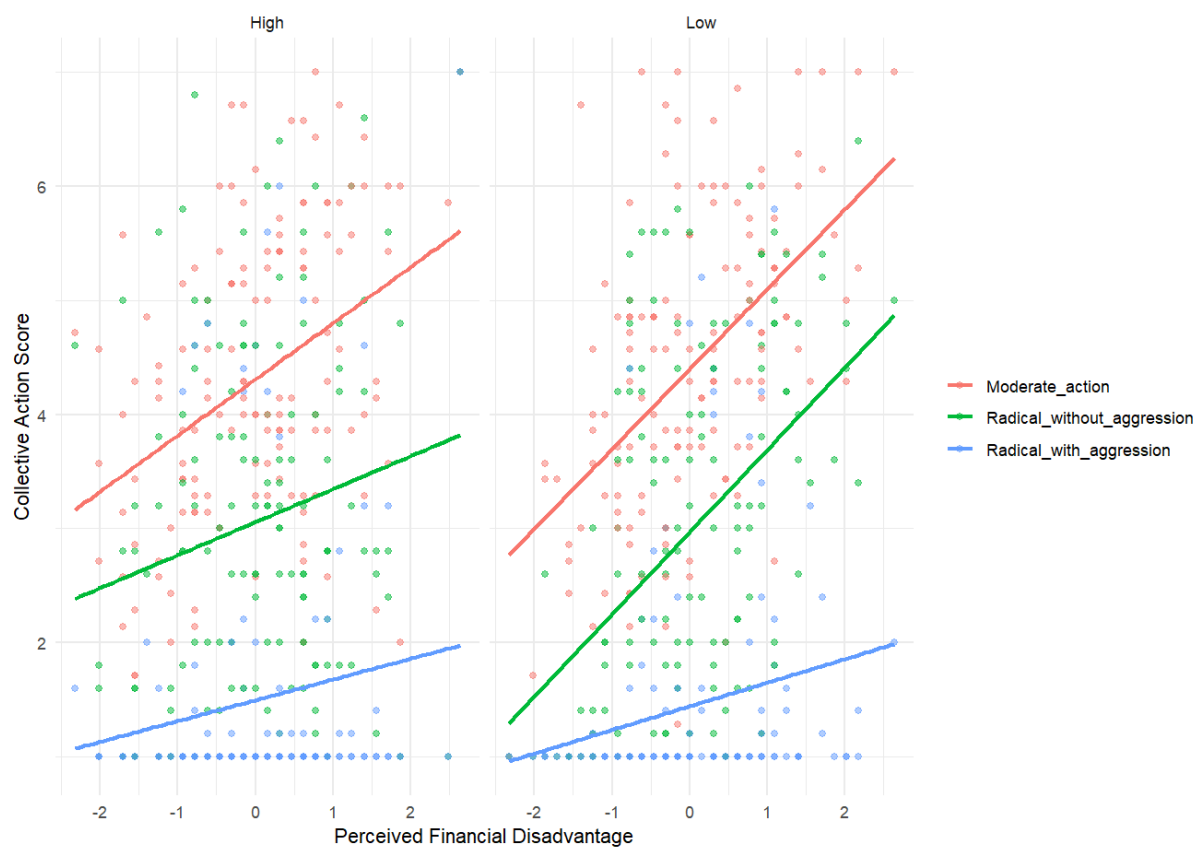
*Note.* Type 3 Sums of Squares. PFD = Perceived Financial Disadvantage. PFD is standardized.



\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Figure 7**

*Interaction effect of group efficacy and perceived financial disadvantage on support for collective action.*



## Discussion

### Findings and possible explanations

The aim of the study was to further explore the conditions underlying support for radical action through the Nothing-to-Lose explanation to radicalization. This explanation builds on Tajfel and Turner's (1979; 1986) Social Identity Theory (SIT) and argues that individuals in disadvantaged positions are more likely to resort to radical action when perceiving a lack of efficacy, as this lack of efficacy can create the belief that change cannot be achieved through normative means (Tausch et al., 2011). The study focused on university students' reactions in response to new financial policies in the Netherlands, manipulating group efficacy through scenarios with high and low institutional support, conceptualized as the support of the university staff in relation to the financial policies. The manipulation was largely effective, although the differences between the groups were minimal. Moreover, the high group efficacy condition proved to be slightly more convincing than the low group efficacy condition. Besides the manipulation, the study measured several other factors, such as perceived financial disadvantage (PFD), group identification, nationality, belief in conspiracy theories and support for collective action. This study compared three types of support for collective action: moderate action, radical action without aggression and radical action with aggression.

### *Perceived financial disadvantage (PFD)*

The first hypothesis of this study served as a baseline, proposing that perceived disadvantage would influence the level of support for collective action, but that this relationship would differ according to the type of action (moderate, radical without aggression and radical with aggression). The Social Identity Theory (SIT) suggested that individuals are more likely to support collective action when the action aligns with their group's accepted norms and when the action is seen a legitimate way to achieve the groups goals without threatening one's social identity (Blaya-Burgo, 2024; Tajfel & Turner, 1979; 1986). This suggests that individuals are

more likely to support moderate forms of collective action when experiencing high levels of PFD, before resorting to more radical forms of collective action. The results of the first analysis also supported this, by showing that PFD significantly and positively influenced collective action in general and that the relationship between PFD and support for action was stronger for moderate action than for radical action, and stronger for radical action without aggression than for radical action with aggression. Again, implying that when individuals perceive their situation, in this case their financial situation, as more deprived, they are more likely to support collective action, first resorting to moderate form of action (i.e., signing petitions) before advancing to radical action.

### ***Group efficacy***

Contrary to the expectations of the second hypothesis, suggesting that the group efficacy manipulation would influence individuals support for collective action, this study did not find a significant result supporting this hypothesis. There are several possible explanations for these findings. First, this study conceptualized group efficacy differently than in traditional approaches as in Tausch et al. (2011), which mostly centre on the internal strength and resilience of the in-group (in this case university students) itself, rather than conceptualizing it in terms of support from potential allies. Instead, this study focused on the extent to which students feel supported by the staff members of the university, which should also underline a sense of powerlessness for those in the low group efficacy condition, when being left to face the financial challenges without institutional backing. However, due to the non-traditional conceptualization of group efficacy, the manipulation might have had a different effect on the participants than expected. Additionally, the manipulation was not as strong as anticipated. Although the weak manipulation check showed that the participants understood the scenarios largely as expected, the difference in perceived group efficacy between the two groups was relatively small. This suggests that perceived group efficacy, conceptualized as institutional support from the

university staff, may be difficult to directly manipulate through a scenario. This non-traditional approach to group efficacy, combined with the limited strength of the manipulation, may have contributed to the absence of a significant effect of group efficacy on support for collective action (but see exploratory analysis combining with financial disadvantage discussed below).

### ***Group identification***

The third hypothesis suggested that group identification would influence the level of support for collective action and would play a role in the relationship between group efficacy and support for action. The study found that group identification had a significant direct effect on support for radical action, with the strength and direction of the relationship differing per action type. The relationship was the strongest for moderate action, suggesting that those who more strongly identified as a university student, showed significantly more support for moderate action than those who did not identify as strong. This may be explained by the SIT and suggests that the moderate action may have been considered as more group normative among the university students. The relationship was weaker but still positive for radical action without aggression, suggesting that individuals who more strongly identified as university students would also show more support for radical action (i.e., occupying university buildings). However, this relationship only upholds when there is no aggression involved, since the relationship with radical action with aggression appeared to be negative, proposing that high identifiers would show less support for radical action when aggression is involved (i.e., throwing stones as politicians).

These findings align with the Social Identity Theory (SIT) relating to support for moderate forms of collective action, suggesting that a shared sense of belonging and collective identity strengthens commitment for collective action (Tajfel & Turner, 1979). Likewise, regarding the controversy of the role of group identification in support for radical action, in the studies of Saab et al. (2016) and Jimenez et al. (2015), the findings of this study align with parts

of both perspectives. In accordance with Saab's findings, these findings suggesting that strong identifiers are more likely to support radical action, as seen in the positive the relationship between group identification and radical action without aggression. But, in line with Jimenez's findings, the results also demonstrate that high identifiers are less likely to support aggressive action, as seen with the relationship between group identification and radical action involving aggression. So given the results of the present study, both arguments for the role of group identification in support for collective action appear valid and depend on additional factors. The more one identifies with the disadvantaged group, the more collective action one would support, even when it comes to more radical forms of collective action. This level of support is possibly explained by a strong involvement in the in-groups' problems combined with a strong interest in the improving the in-groups' wellbeing (Saab et al., 2016). However, as the findings of the current study and that of Jimenez et al. (2015), also suggests, once those actions become aggressive and could possibly harm others, high identifiers are less likely to support these collective actions. This may be due to a heightened sense of concern among high identifiers regarding how their actions could affect their in-groups' image.

### ***Nationality***

The fourth hypothesis suggested the involvement of nationality as either directly influencing individuals' level of support for collective action or as playing a role in the relationship between group efficacy, group identification and support for collective action. Since the context which placed participant in a disadvantaged group/position, regarded Dutch financial policies in the Dutch education system, a difference in perceived disadvantage and support for collective action between Dutch and international student was expected. Interestingly, the findings of this study suggested that international students showed significantly *more* support for all three types of collective action, with the strongest relationships observed for moderate and radical action not involving aggression. This difference

in support for collective action might be due to the individualistic culture in the Netherlands. As data from this study paradoxically shows that Dutch students feel less disadvantaged and less connected with students as a group (see Table 4 in results & Table 5 in Appendix E), thus Dutch students can be seen as having a weaker collective identity, resulting in lower levels of commitment for collective action according to the SIT (Tajfel & Turner, 1979).

Another interesting finding of this study is the significant interaction effect of group efficacy, group identification and nationality on support for collective action, differing for each action type. A pattern emerges in which Dutch students adhere to the broader principles of SIT, showing increased support for action in relation to higher levels of group identification. This relationship is the strongest for moderate action, weakens as the action becomes more radical, and flattens once the action becomes aggressive. Notably, no substantial difference in support appears based on group efficacy among Dutch students. Interestingly, for the international students in the low group efficacy condition, the support for action (for moderate and radical without aggression) decreases in when the students show higher levels of group identification. This may be attributed to the cultural backgrounds of international students, which often include more traditional hierarchies within universities and a greater respect for authority figures (Rienties & Tempelaar, 2013). According to van Brok et al. (2010), students from higher power distance cultures tend to be more likely to comply with the opinions of authority figures, as those from university staff. This pattern observed among international students in the low group efficacy condition may also be interpreted through the NTL principle. As international students, compared to Dutch students, may perceive themselves as having more to lose, particularly when it comes to engaging in radical forms of collective action. Because such actions could pose risks to their stability and security, given their status as a student in a foreign country.

### ***Belief in conspiracy theories***

The last hypothesis in this study suggested that belief in conspiracy theories would play a role in the relationship between Perceived Financial Disadvantage (PFD) and support for radical action. Previous research has shown that individuals who perceive themselves as being in a disadvantaged position may experience feelings of powerlessness and lack of control, conditions that are linked to greater tendencies to belief in conspiracy theories (Douglas et al., 2019). Belief in conspiracy theories has also been associated with greater support for radical forms of collective action (Douglas et al., 2019). In line with these theoretical expectations, the findings of the current study revealed a significant positive partially mediating effect of belief in conspiracy theories in the relationship between PFD and support for radical action, explaining around 20% of the total effect between the two. So, though the majority of the effect of remains unexplained and is likely to be contributed to by other contextual or psychological factors, these findings suggest that belief in conspiracy theories serves as a one of the significant psychological mechanisms through which feelings of disadvantage may translate into support for radical action. Notably, this effect was observed within a sample of university students, a group not typically associated with low socioeconomic status. This suggests that the psychological mechanisms linking perceived disadvantage to belief in conspiracy and subsequently to support for radical action, may not only be limited to low-status populations, as traditional theory implies (i.e. NTL reasoning focuses on stable low status or low group efficacy, although the latter can also occur more situationally in groups with otherwise high status in society such as student here).

### ***Interaction of Group efficacy and PFD***

While PFD and group efficacy were initially treated as independent and separate predictors of support for collective action, an exploratory analysis was conducted to also examine their interaction. After theoretical consideration, it was deemed relevant to include perceived disadvantage when predicting support for collective action through group efficacy,

as the Nothing-to-Lose (NTL) framework suggested that perceptions of disadvantage are a necessary precondition for low group efficacy to translate into increased support for radical action (Tausch et al., 2011). The results of this exploratory analysis supported this theoretical rationale, revealing a significant interaction effect between group efficacy and PFD on the support for collective action.

Most interestingly was that the relationship between PFD and support for radical action without aggression was not only significantly stronger in the low group efficacy condition compared to the high group efficacy condition (in line with NTL), but that the relationship was also the strongest relationship observed across all collective action types in the low group efficacy condition. These findings provide additional support for the Nothing-to-Lose explanations to radicalization, suggesting that individuals who experience high levels of disadvantage, but low levels of group efficacy are more likely to support radical action. However, it should be noted that this relationship between PFD and support for radical action does not significantly differ between high or low group efficacy when aggression is involved. This suggests that within the sample of this study, the NTL explanation only applied when predicting support for radical action that does not involve aggression. This is a trend that we see throughout all the analyses, where the effects in general only appear to be strong and significant for moderate action and radical action without aggression.

## **Implications**

The findings of this study contribute to broader theoretical concepts such as Social Identity Theory (SIT), offering additional insight into the psychological mechanisms underlying support for normative and radical action. While the group efficacy manipulation did not directly influence support for radical action, its conceptualization (as institutional support) offered a new perspective to the NTL framework. When combined with group identification,



nationality, and perceived financial disadvantage, this operationalization of group efficacy still played a significant role in the process towards radicalization.

Exploratory analyses showed that perceived disadvantage was more strongly associated with support for radical action without aggression when institutional support was perceived as low. This finding provided further empirical support for the NTL framework. Notably, support for radical action decreased when the actions involved harm to people or property, suggesting the existence of a threshold of extremity, beyond which psychological predictors (e.g., perceived disadvantage or group identification) become less predictive.

This study also uncovered the differences between Dutch and international students' responses to perceived disadvantage, authority norms, and perceived institutional support. Suggesting that cultural context plays a significant role in shaping protest behaviour and has practical implications for how universities approach student engagement activism. Universities aiming to respond to student concerns, whether financial or political, should consider the impact of perceived institutional support on students' engagement in activism.

Additionally, the study found a partial mediation effect of belief in conspiracy theories, offering new insight in the relationship between perceived disadvantage and support for radical action. This understanding may help to reduce radicalization by addressing conspiracy beliefs, particularly in contexts where students feel disadvantaged. Notably, this effect was observed in a relatively high-status and educated group, broadening prior research that focused mainly on low-status groups. These findings highlight that radicalization through conspiracy thinking is not limited to traditionally marginalized groups but may emerge among anyone in a perceived disadvantaged position.

### **Strengths and limitations**

While this study offers important new insights into the above-mentioned concepts, some limitations should be considered. One key limitation is the conceptualization and

operationalization of group efficacy. This study defined group efficacy in terms of institutional support from university staff, which differs from traditional conceptualizations focusing more on a groups' internal power to achieve a desired outcome. Although this offered new insight within the NTL framework, it may have shaped participants' interpretations of the manipulation differently than intended, possibly contributing to the relatively weak manipulation effect between high and low group efficacy.

Another limitation lies in the statistical analysis plan. Though, the interaction between perceived financial disadvantage (PFD) and group efficacy proved to be significant and theoretically relevant in predicting support for radical action without aggression, it was not originally part of the hypothesis. As this emerged through exploratory analysis, the findings should be interpreted with caution. While theoretically aligning with NTL explanation in hindsight, the post hoc nature of the result increases the risk of HARKing and potential confirmation bias. Therefore, one should avoid drawing definitive conclusion from these results until further replication research is conducted.

Furthermore, the measurement of support for radical action with aggression was limited as the results had extremely low levels of support, resulting in a floor effect and skewed data. This makes it difficult to interpret the findings and may explain the non-significant findings related to radical action with aggression. Additionally, the cross-sectional design limits conclusions about how support for radical action evolves over time and the sample was relatively homogeneous, consisting mostly of young, female, first-year psychology students, which may affect generalizability to students in the Netherlands. The use of self-report measures introduces potential social desirability bias, particularly given the sensitive nature of the questionnaire.

Despite these limitations, the study revealed several strengths. A notable strength is the theoretical nuance created by distinguishing between the three different forms of collective

action. Although not unique to this study, this distinction was central to the NTL framework and allowed for a more precise understanding of how predictors differently influenced support for moderate and radical actions, especially in relation to aggression thresholds.

The analytical approach of this study was strong, applying multivariate, repeated measures, moderation, mediation, and interaction analyses to uncover complex patterns between psychological factors. Examples include the four-way interaction between group efficacy, group identification, nationality, and action type, and the interaction between group efficacy and perceived financial disadvantage. Additionally, the study was methodologically robust with a relatively large sample of 277 participants, providing sufficient statistical power. The internal consistencies of scales were also relatively high, assuring reliable measurements.

Finally, the study offered valuable insights into cross-cultural protest behaviour and radicalization by including both Dutch and international students. The findings highlight how cultural background, and nationality may shape responses to perceived disadvantage and institutional support, broadening the applicability of the NTL framework. Additionally, the emergence of these mechanisms within a relatively high-status, educated sample, strengthened the study and revealed that similar psychological processes can occur among privileged individuals in situationally disadvantaged contexts.

### **Directions for future research**

Future research should continue to explore perceived financial disadvantage as a moderator in the relationship between group efficacy and support for collective action, especially radical action, within the NTL framework. This could be examined alongside factors such as group identification and nationality to better understand when and for whom low group efficacy leads to radicalization. Comparing the current conceptualization of group efficacy as institutional support with more traditional approaches may also clarify the differences in effects on support for collective action. Additionally, in relation to Dutch financial policies, study delay

could be examined as a predictor of perceived disadvantage, as the current study collected this data but did not analyse it. To better understand the cross-cultural differences, future studies should examine the differences among specific cultural group among international students. Finally, improving the realism of group efficacy manipulations may also enhance their credibility and effectiveness and interventions that address belief in conspiracy theories, such as those promoting critical thinking, could be tested as strategies for reducing support for radical action.

## **Conclusion**

This study highlights how perceived disadvantage and high group identification significantly drive support for both moderate and radical action among university students, while the level of support strongly declines when aggression gets involved. Notably, the interaction between perceived disadvantage and support for radical action without aggression was significantly stronger among individuals placed in a low group efficacy condition, offering support for the Nothing-to-Lose explanation to radicalization. Additionally, international students showed greater activism than Dutch students and belief in conspiracy theories had a significant mediating role in predicting support for radical action, even among a relatively privileged group. These findings emphasize the importance of understanding social and psychological mechanism to effectively address and prevent escalation toward radical behaviour.

## References

- Blaya Burgo, M. (2024). A Bibliometric Analysis of Social Identity Theory in Radicalization Research. <https://doi.org/10.31234/osf.io/z2h3j>
- Brandt, V. (2024, September 17). *Kabinet-Schoof zet onderwijs onder druk met bezuinigingen*. Metafoor Onderwijs. <https://www.metafooronderwijs.nl/onderwijs-artikelen/kabinet-schoof-zet-onderwijs-onder-druk-met-bezuinigingen/>
- den Brok, P., van Tartwijk, J., Wubbels, T., & Veldman, I. (2010). The differential effect of the teacher–student interpersonal relationship on student outcomes for students with different ethnic backgrounds. *British Journal of Educational Psychology*, 80(2), 199-221. <https://doi.org/10.1348/000709909X465632>
- Brotherton, R., French, C.C., & Pickering, A.D. (2013). Measuring belief in conspiracy Theories: The Generic Conspiracist Beliefs scale. *Frontiers in Psychology*, 4. <https://doi.org/10.3389/fpsyg.2013.00279>
- Dienst Uitvoering Onderwijs. (n.d.a). *Rente voor terugbetalers*. Ministerie van Onderwijs, Cultuur en Wetenschap. <https://www.duo.nl/particulier/rente/rente-voor-terugbetalers.jsp>
- Dienst Uitvoering Onderwijs. (n.d.b). *Studiefinanciering*. Ministerie van Onderwijs, Cultuur en Wetenschap. [https://duo.nl/particulier/studiefinanciering/#:~:text=Vanaf%201%20augustus%202024%20\(mbo,verlaagd%20met%20%E2%82%AC%20164%2C30](https://duo.nl/particulier/studiefinanciering/#:~:text=Vanaf%201%20augustus%202024%20(mbo,verlaagd%20met%20%E2%82%AC%20164%2C30)
- Douglas, K.M., Uscinski, J.E., Sutton, R.M., Cichocka, A., Nefes, T., Ang, C.S., & Deravi, F. (2019). Understanding Conspiracy Theories. *Political Psychology*, 40, 3-35. <https://doi.org/10.1111/pops.12568>

Feddes, A., Nickolson, L., & Doosje, B. (2016). Triggerfactoren in het radicaliseringsproces.

*Justitiële Verkenningen*, 42(2), 22–48.

<https://doi.org/10.5553/jv/016758502016042002003>

Jiménez-Moya, G., Spears, R., Rodríguez-Bailón, R., & De Lemus, S. (2015). By any means necessary? When and why Low group identification paradoxically predicts radical collective action. *Journal of Social Issues*, 71(3), 517–535.

<https://doi.org/10.1111/josi.12126>

Kruglanski, A.W., Gelfand, M.J., Bélanger, J.J., Sheveland, A., Hetiarachchi, M. and

Gunaratna, R. (2014). Processes of Radicalization and Deradicalization. *Political Psychology*, 35, 69-93. <https://doi.org/10.1111/pops.12163>

Lantian, A., Muller, D., Nurra, C., & Douglas, K.M. (2016). Measuring belief in conspiracy theories: Validation of a French and English single-item scale. *International Review of Social Psychology*, 29(1), 1-14. <https://doi.org/10.5334/irsp.8>

Leach, C.W., van Zomeren, M., Zebel, S., Vliek, M.L., Pennekamp, S.F., Doosje, B., Ouwerkerk, J.W., & Spears, R. (2008). Group-Level Self-Definition and Self-Investment: A Hierarchical (Multicomponent) Model of In-Group Identification. *Journal of Personality and Social Psychology*, 95(1), 144-165.

<https://doi.org/10.1037/0022-3514.95.1.144>

Marjanovic, Z., Greenglass, E.R., Fiksenbaum, L., & Bell, C.M (2013). Psychometric evaluation of the Financial Threat Scale (FTS) in the context of the great recession. *Journal of Economic Psychology*, 36, 1-10.

<http://dx.doi.org/10.1016/j.joep.2013.02.005>

Ministerie van Algemene Zaken. (2024, September 13). *Hoofdstuk 6b. Onderwijs*. Regering | Rijksoverheid.nl. <https://www.rijksoverheid.nl/regering/regeerprogramma/6b-onderwijs>

- Moghaddam, F.M. (2005). The Staircase to Terrorism: *A Psychological Exploration*. *American Psychologist*, 60(2), 161–169. <https://doi.org/10.1037/0003-066X.60.2.161>
- Packer, D.J. (2008). On Being Both with Us and Against Us: A Normative Conflict Model of Dissent in Social Groups. *Personality and social psychology review: an official journal of the Society for Personality and Social Psychology, Inc*, 12(1), 50–72. <https://doi.org/10.1177/1088868307309606>
- Postmes, T., Haslam, S.A., & Jans, L. (2012). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology*, 52(4), 597–617. <https://doi.org/10.1111/bjso.12006>
- Postmes, T., & Spears, R. (1998). Deindividuation and Antinormative Behavior: A Meta-Analysis. *Psychological Bulletin*, 123(3), 238-259. <https://psycnet.apa.org/doi/10.1037/0033-2909.123.3.238>
- Rienties, B., & Tempelaar, D. (2013). The role of cultural dimensions of international and Dutch students on academic and social integration and academic performance in the Netherlands. *International Journal of Intercultural Relations*, 37(2), 188-201. <https://doi.org/10.1016/j.ijintrel.2012.11.004>
- Saab, R., Spears, R., Tausch, N., & Sasse, J. (2016). Predicting aggressive collective action based on the efficacy of peaceful and aggressive actions. *European Journal of Social Psychology*, 46(5), 529–543. <https://doi.org/10.1002/ejsp.2193>
- Scheepers, D., Spears, R., Doosje, B., & Manstead, A. S. (2006). Diversity in in-group bias: structural factors, situational features, and social functions. *Journal of personality and social psychology*, 90(6), 944–960. <https://doi.org/10.1037/0022-3514.90.6.944>

- Spears, R., Greenwood, R., de Lemus, S., & Sweetman, J. (2010). Legitimacy, social identity, and power. In: A. Guinote & T.K. Vesci (Eds.), *The social psychology of power* (pp. 251–283). New York: The Guilford Press.
- Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In J. A. Williams & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Belmont, CA: Wadsworth.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson Hall.
- Tausch, N., Becker, J.C., Spears, R., Christ, O., Saab, R., Singh, P., & Siddiqui, R.N. (2011). Explaining radical group behaviour: Developing emotion and efficacy routes to normative and non-normative collective action. *Journal of Personality and Social Psychology*, 101, 129-148. <https://doi/10.1037/a0022728>
- Van den Bos, K. (2020). Unfairness and radicalization. *Annual review of psychology*, 71, 563-588. <https://doi.org/10.1146/annurev-psych-010419-050953>



## Appendix A

### AI statement

*"During the preparation of this thesis, I used Chat-GPT for assistance spelling, grammar, paraphrasing and general structure and for assistance with writing R codes and finding errors in the codes for the analysis. I also used Grammarly to correct the grammar and spelling in my report and to check for plagiarism. After using these tools/services, I thoroughly reviewed and edited the content as needed, taking full responsibility for the final outcome."*

## Appendix B

### Qualtrics questionnaire content

#### Introduction

##### Information research

You are invited to participate in a research study on how recent financial policy changes in education affect university students' experiences, beliefs, and behaviours. The study focuses on financial challenges such as reduced student grants, increased loan interest rates, and penalties for study delays. You will complete a one-time questionnaire that starts with general background questions, followed by information on these policy changes. You will then reflect on some information related to these policies and answer questions about your thoughts, feelings, and opinions. The questionnaire will take approximately **20 minutes**, and upon completion, you will receive **0.5 SONA credits**.

To participate, you must be **18 years or older**. Participation is entirely voluntary, and you may withdraw at any time without explanation or consequences.

This study is conducted by Veerle G. Wilborts, a master's student in Applied Social Psychology at the University of Groningen (UG), as part of her thesis, under the supervision of Prof. dr. Russell Spears. All collected data will be used for educational purposes only. The only personal data processed is your SONA number, which is used to confirm participation and will be deleted before analysis. Data will be stored securely on RUG-protected systems, anonymized, and retained for up to 10 years in accordance with UG guidelines. Until anonymization, you have the right to access, correct, or withdraw your data.

If you have any questions about the study, you can contact Veerle G. Wilborts at **v.g.wilborts@student.rug.nl** or **+316-82587133**. For concerns about your rights as a participant, you may contact the UG Ethics Committee at **ec-bss@rug.nl**. For privacy concerns, contact the UG Data Protection Officer at **privacy@rug.nl**.

*You have the right to a copy of this information for your records.*

### *Informed consent*

#### **Informed consent**

- I have read the information about the research. I have had enough opportunity to ask questions about it.
- I understand what the research is about, what is being asked of me, which consequences participation can have, how my data will be handled, and what my rights as a participant are.
- I understand that participation in the research is voluntary. I myself choose to participate. I can stop participating at any moment. If I stop, I do not need to explain why. Stopping will have no negative consequences for me.
- Below I indicate what I am consenting to.

### *Consent participation*

#### **Consent to participate in the research:**

☐ Yes, I consent to participate; this consent is valid until 01-07-2025

☐ No, I do not consent to participate

### *Consent data*

#### **Consent to processing my personal data:**

☐ Yes, I consent to the processing of my personal data as mentioned in the research information. I know that until the point of anonymization I can ask to have my data withdrawn and erased. I can also ask for this if I decide to stop participating in the research.

☐ No, I do not consent to the processing of my personal data.

### *Demographic questions*

#### *Age*

What is your age?

.....

#### *Gender*

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Non-binary/third gender
- ☐ Prefer not to say

#### *Nationality*

What is your nationality?

- ☐ Dutch
- ☐ German
- ☐ Other
- ☐ .....

#### *Study year*

In which year of your study program are you currently enrolled?

- First
- Second
- Third
- Fourth
- Fifth or more

#### *Study delay*

How many years of study delay have you accumulated?

*(Please indicate the number of years beyond the standard duration of your program.)*

- None
- ~ 0.5 year
- 1 year
- ~ 1.5 years
- 2 years
- > 2 years

#### Group Identification

##### *Group identification*

**Please indicate the extent to which you agree or disagree with the following statements about being a university student:**

1. I feel a bond with students.
2. I feel solidarity with students.
3. I feel committed to being a student.
4. I am glad to be a student.
5. I think that students have a lot to be proud of.
6. It is pleasant to be a student.
7. Being a student gives me a good feeling.
8. I often think about the fact that I am a student.
9. The fact that I am a student is an important part of my identity.
10. Being a student is an important part of how I see myself.
11. I have a lot in common with the average student.
12. I am similar to the average student.
13. Students have a lot in common with each other.
14. Students are very similar to each other.

On a 7-point scale, which ranged from 1 (strongly disagree) to 7 (strongly agree)

#### Information about financial policies

##### *Info financial situ*

**Please read the following information about recent financial policy changes in education carefully before continuing because you will be asked questions about it later.**

In recent years, the Dutch government has implemented several financial policy changes that significantly affect university students. As of January 1, 2024, the interest rate on student loans increased from **0.46% to 2.56%**, meaning students with existing loans will face higher repayment costs. Additionally, annual tuition fees have increased by **over €200**,

bringing the cost to **€2.530** for the 2024-2025 academic year (compared to the €2.314 in 2023-2024). At the same time, the basic student grant has been reduced by **€164,30**, providing less financial support while living costs (such as groceries and rent) continue to rise.

The government has also announced plans to **cut €1.2 billion from higher education funding** over the next four years, starting with a **€175 million reduction** in 2025. These cuts may impact various aspects of academic life, such as research opportunities and educational resources.

The government planned to introduce a **€3.000 fine** for students who exceed the nominal study duration ("Langstudeerboete") starting in 2026/2027. However, this measure has now been put on hold and will not be implemented for the time being. While it is not currently in effect, discussions about study delay policies remain ongoing, and future changes have not been ruled out.

These financial policy changes are expected to impact students across the Netherlands, affecting their education costs and financial planning.

#### *Test info*

How many euros is the government planning to cut from higher education funding?

- 1.2 Billion
- 1.2 Million

\*Error message: 'Your answer is incorrect. The Dutch government is planning to cut **€1.2 billion** from higher education funding, not €1.2 million. Please make sure to carefully read the provided information next time, as similar questions will follow.'

#### Perceived financial disadvantage

##### *PFD*

**Please indicate how you feel about your current financial situation as result of the changes in financial policies in education. Consider how these policies — such as higher loan interest rates, tuition fees, reduced student grants, and the proposed fine for exceeding the nominal study duration — have affected your financial well-being.**

- How uncertain do you feel?
- How much do you feel at risk?
- How much do you feel threatened?
- How much do you worry about it?
- How much do you think about it?
- To what extent do you feel that it is unfair?
- How powerless does it make you feel?
- To what extent do you feel discriminated?

1 = Not at all to 5 = Extremely

## Group efficacy scenarios

### *Scenario 1 – High*

**Please read carefully the following text about the university's response to the financial policies. You will be asked questions about it later.**

At the University of Groningen, staff members are actively supporting students in their struggle against the new financial policies. While discussions about budget cuts have taken place, the university has made it clear that they are equally concerned about the financial burden on students as how these policies affect the staff and research funding. **A report by the Association of Universities in the Netherlands highlighted that faculties at several universities through the Netherlands are pushing back against these financial measures, advocating for more student support instead (VSNU, 2024).** So, when students organize protests or raise concerns, staff members actively participate and publicly express their support.

Many staff members strongly oppose the introduction of the proposed €3,000 fine for exceeding the standard study duration (the so-called 'langstudeerboete'), arguing that students should not be punished for taking longer to complete their degrees (VSNU, 2024). They recognize that financial stress can negatively impact academic performance and believe that students should have the freedom to focus on their education without unnecessary financial pressure. Staff members reject the idea that students are simply delaying graduation for social reasons and instead understand the challenges students face in balancing their studies, work, social life and personal circumstances.

When students seek guidance or support from staff members regarding the financial policies, they are met with understanding and encouragement. Staff members actively help students navigate these challenges, offering advice and collaborate with student organizations to push for policy changes. This strong institutional support is also reflected in the 2024 National Student Survey (NSE), which found that 78% of students at Dutch universities feel that university staff actively support them in financial and academic matters (NSE Report, 2024). According to this survey, with this backing, students feel empowered in their fight against the new policies, knowing they have the support and encouragement of the university and its staff.

### *Scenario 2 – Low*

**Please read carefully the following text about the university's response to the financial policies. You will be asked questions about it later.**

At the University of Groningen, staff members have shown little direct support for students in their struggle against the new financial policies. While discussions about budget cuts have taken place, most of the concern has been about how these policies affect staff and research funding rather than the financial burden on students. A report by the Association of Universities in the Netherlands highlighted that faculties at several universities throughout the Netherlands have largely accepted these financial measures, showing little opposition or

advocacy for student support (VSNU, 2024). So, when students organize protests or raise concerns, staff rarely participate and often remain silent on the issue.

Many staff members believe that students should take more responsibility for their financial situation. Some openly support the introduction of the proposed €3,000 fine for exceeding the standard study duration (the so called 'langstudeerboete'), arguing that students should finish their degrees on time instead of prolonging their studies for personal or social reasons (VSNU, 2024). Others suggest that too many students prioritize having a good time over their academic progress, and that stricter policies are necessary to encourage discipline.

When students seek guidance or support from staff members regarding the financial policies, they are often met with indifference. Staff members claim that these issues are beyond their influence and that students will have to adapt. This lack of support is reflected in the **2024 National Student Survey (NSE), which found that only 28% of students at Dutch universities feel that university staff actively support them in financial and academic matters** (NSE Report, 2024). According to this survey, with no clear backing from those within the university, students are left to face these challenges alone, without any support or encouragement from the university and its staff.

#### Weak manipulation test

##### Test 1

According to the text, do students receive support from the university and its staff?

- ☐ Yes
- ☐ No
- ☐ Don't know

##### Test 2

What percentage of students feel actively supported by university staff, according to the NSE report?

- ☐ 28%
- ☐ 58%
- ☐ 78%

##### Test 3

How do the staff member of the university view the introduction of the proposed €3,000 fine for exceeding the standard study duration?

- ☐ Many staff members are neutral on the policy and believe it is beyond their influence.
- ☐ Many staff members support the fine, arguing that students should take more responsibility and finish their degrees on time.
- ☐ Many staff members oppose the fine, arguing that financial stress negatively impacts students and they should not be punished for study delays.

#### Strong manipulation test

##### Group Efficacy

**Please indicate the extent to which you agree or disagree with the following statements about students and their role in policy changes:**

*Group efficacy*

1. Students are capable of working together to improve their financial situation.
2. Students can successfully defend their rights.
3. Students are strong as a group.
4. I think that students no longer have the opportunity to fight against the policy changes. (-)

*Whether university support encourages group efficacy*

5. The university's support is necessary for students to challenge their financial situation.
6. Getting support from the university is necessary to strengthen students' ability to take action against unfair financial policies.
7. Without backing from the university, students will feel alone in their fight against the financial policies.

Measured on a 7-point Likert scale going from 1 (strongly disagree) to 7 (strongly disagree)

*Support for radical action*

*Moderate action*

**Student organizations and activist groups have proposed different ways to respond to the financial policy changes. Please indicate how likely you would be to support the following actions taken by students.**

1. Signing petitions to demand policy changes
2. Writing letters or emails to government officials and politicians
3. Participating in peaceful demonstrations or marches to raise awareness
4. Engaging in discussion meetings with policy makers, university boards or student representatives
5. Encouraging students to vote for political parties that oppose the financial cuts
6. Using social media to spread awareness about the impact of the financial policies on students
7. Organizing debates or information sessions to educate students and gain support

*Radical action without aggression*

**Student organizations and activist groups have proposed different ways to respond to the financial policy changes. Please indicate how likely you would be to support the following actions taken by students.**

1. Occupying university buildings as a form of protest to gain attention from government officials and politicians
2. Interrupting university lectures or government meetings as a form of protest to gain attention from government officials and politicians
3. Blocking access to governmental buildings to demand a response
4. Organizing coordinated mass absences (students refusing to attend lectures as a form of strike) to gain attention from government officials and politicians
5. Boycotting official university events where government officials or politicians are present

### *Radical action with aggression*

**Student organizations and activist groups have proposed different ways to respond to the financial policy changes. Please indicate how likely you would be to support the following actions taken by students.**

1. Vandalizing government buildings
2. Hacking governmental websites to disrupt operations
3. Sabotaging governmental infrastructure (e.g., shutting down IT systems or interrupting online platforms)
4. Attacking the police during protests
5. Throwing stones or bottles at responsible government officials or politicians

Measured on a 7-point Likert scale going from 1 (very unlikely) to 7 (very likely).

### *Belief in conspiracy theories*

#### *Conspiracy scale*

**Some political and social events are debated (for example 09/11 attacks, the death of Lady Diana, the assassination of John F. Kennedy). It is suggested that the “official version” of these events could be an attempt to hide the truth to the public. This “official version” could mask the fact that these events have been planned and secretly prepared by a covert alliance of powerful individuals or organizations (for example secret services or government). What do you think? To answer, please indicate to what extent the sentence below represents how you think about this:**

- I think that the official version of the events (like the financial necessity of the new policies in education) given by the authorities very often hides the truth.

Measured on a 9-point Likert scale going from 1 (completely false) to 9 (completely true).

### *Debriefing*

#### *Debriefing*

Thank you for participating in our study. The purpose of this research was to explore how university students in the Netherlands respond to recent changes in financial policies for education, particularly how feelings of disadvantage may contribute to support for different responses, including support for moderate and radical action. The study aimed to investigate the factors that could influence radicalization, such as group efficacy, students' group identification and their likelihood to believe in conspiracies.

During the study, we did not provide you with the full details of the experimental setup to avoid influencing your responses. Specifically, we did not inform you that all participants were randomly selected into two different scenarios on support from the university. The purpose of withholding this information was to prevent bias in the study's results. We assure you that the information withheld was only relevant for the research design and will not affect your participation.

Please remember to not discuss the study with other students. Revealing any details about the conditions or scenarios used in the research could affect the study's integrity and impact on the participants responses. This would interfere with the results of the study for you as



well as for other participants. We ask for your cooperation in keeping this information private.

Now that you have completed the study and received all information, please indicate if you still consent. If you rescind your consent, there will be no negative consequences to you, you will still receive your credit and we will ensure that your data is removed from the study.

### *Consent debriefing*

#### **Consent to processing my personal data:**

☐ Yes, I consent to the processing of my personal data as mentioned in the research information. I know that until the point of anonymization I can ask to have my data withdrawn and erased. I can also ask for this if I decide to stop participating in the research.

☐ No, I do not consent to the processing of my personal data.

### *Debriefing end*

You have the right to withdraw your data at any time after the study without giving any reason. If you wish to withdraw your data later, please contact the research team (details below).


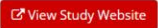


If you have any questions or would like more information about the study please feel free to contact us. Your participation is valuable and we deeply appreciate your contribution to this research.

Veerle G. Wilborts; [v.g.wilborts@student.rug.nl](mailto:v.g.wilborts@student.rug.nl)

Prof. dr. R. Spears (supervisor); [r.spears@rug.nl](mailto:r.spears@rug.nl)

## Appendix C

### SONA page of current study

Study Name	PSY-2425-S-0146 The financial crisis: A threat to students?
Study Type	 <b>Online Study</b> This study is an online study on another website. To participate, sign up, and then you will be given access to the website to participate in the study.
SONA Credits	0.4 SONA Credits
Duration	15 minutes
Abstract	This study examines how recent financial policy changes in Dutch higher education impact students' experiences, beliefs, and behaviours.
Description	<p>In this online study, you will complete a questionnaire about financial policies in education. The study consists of:</p> <ul style="list-style-type: none"> <li>- General demographic questions</li> <li>- Information about recent financial policy changes</li> <li>- Questions about your experiences, opinions, and perspectives related to these policies</li> </ul> <p>The study is conducted in <b>English</b> and takes place entirely online. Your responses are <b>anonymous</b> and used only for research purposes.</p> <p>For questions, you can contact the researcher at <a href="mailto:v.g.wilborts@student.rug.nl">v.g.wilborts@student.rug.nl</a>.</p>
Eligibility Requirements	18 years or older
Website	
Researcher	Veerle Wilborts  +31 6 82587133 

## Appendix D

### Assumption checks

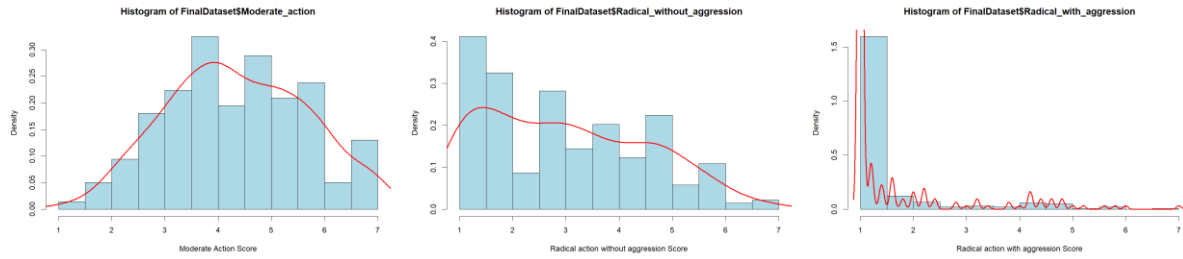
#### Hypothesis 1

The PFD, support for moderate action and radical action without aggression variables had no outliers. The combined collective action variable had two outliers [44, 155], and the radical action with aggression variable had 10 outliers [33, 44, 68, 93, 112, 133, 139, 145, 155, 206]. Because the differences between analyses with and without outliers were minor and the direction and significance of effects remained consistent, we retained the outliers in the dataset. The relationship between PFD and collective action appears to be linear, residuals appear to be normally distributed, and the assumptions of independence and homoscedasticity are met.

To examine whether the assumption of multivariate normality was met, Mardia's test for skewness and kurtosis was conducted on the three outcome variables: moderate action, radical action without aggression, and radical action with aggression. Results indicated significant deviations from multivariate normality, both in terms of skewness (Mardia's skewness = 354.80,  $p < .001$ ) and kurtosis (Mardia's kurtosis = 5.93,  $p < .001$ ). Additionally, the Anderson-Darling tests revealed that each of the three dependent variables individually violated the assumption of univariate normality (all  $p \leq .045$ ). Descriptive statistics showed particularly high skewness (2.64) and kurtosis (6.40) for radical action, suggesting a strong right skew and peaked distribution (see Figure 1). Despite these violations, multivariate multiple regression is generally robust to moderate departures from normality, especially with sufficiently large sample sizes. Nevertheless, these deviations should be considered when interpreting the results.

#### Figure 1

*Skewness and kurtosis of all three collective action types.*



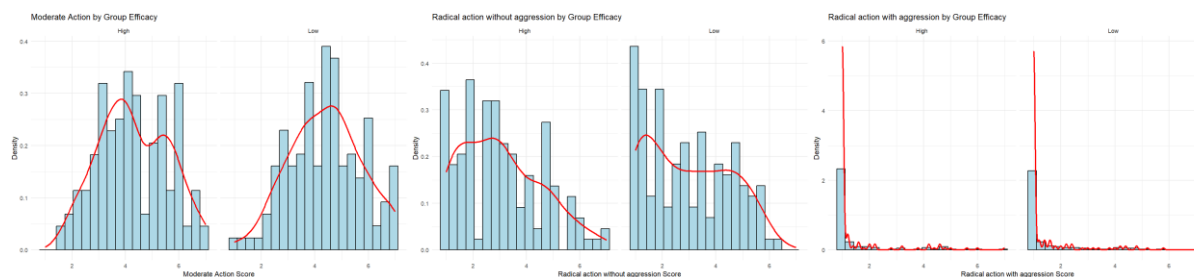
## Hypothesis 2

Again, the support for radical action variable had 10 outliers [33, 44, 68, 93, 112, 133, 139, 145, 155, 206]. But, because the differences between analyses with and without outliers were minor and the direction and significance of effects remained consistent, we retained the outliers in the dataset. When assessing for normality, support for moderate and radical action without aggression scores both demonstrated acceptable skewness and kurtosis across both conditions. However, support for radical action scores were highly positively skewed (skew > 2.5) and leptokurtic (kurtosis > 5.6) in both group efficacy conditions, indication substantial deviation from normality (see Figure 2). Levene's test showed no significant difference in variance across scenario conditions, indicating that the assumption of homogeneity of variances was met.

Three separate analyses of variance were conducted to assess the relationship between group efficacy scenario condition (high vs. low) and each of the three different action types (i.e., moderate, radical without aggression, and radical with aggression) individually. However, no significant effect was found of the low scenario condition on any of the action types; moderate:  $B = 0.106$ ,  $SE = 0.16$ ,  $t = 0.671$ ,  $p = .503$ , radical without aggression:  $B = -0.074$ ,  $SE = 0.18$ ,  $t = -0.40$ ,  $p = .69$ , radical with aggression:  $B = -0.047$ ,  $SE = 0.13$ ,  $t = -0.359$ ,  $p = .719$ .

## Figure 2

*Skewness and kurtosis of all three collective action types across both group efficacy conditions.*



After deleting both the participants who did not pass the weak manipulation check, and the outliers of the support for collective action variables, neither the main effect of the group efficacy scenario condition on action scores,  $F(1, 199) = 0.762, p = .383$ , nor of the interaction between the group efficacy scenario condition and action type on action scores,  $F(2, 398) = 0.847, p = .425$ , appeared to have changed in significance.

### Hypothesis 3

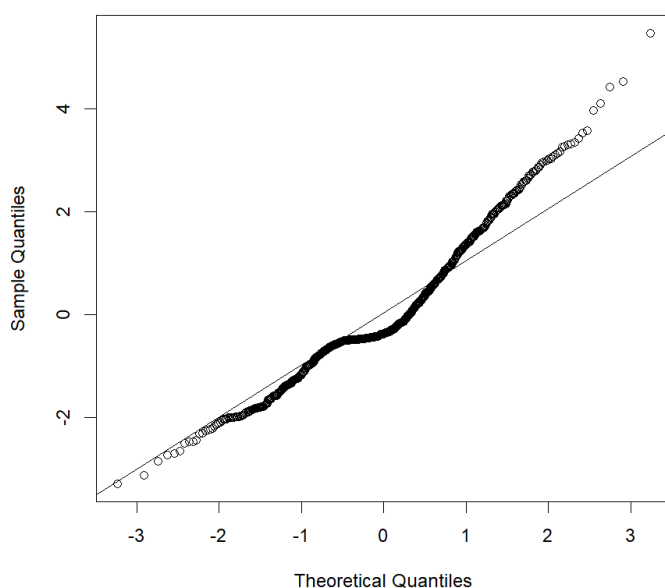
Besides the other previously checked assumptions, group identification appears to have two outliers [98, 109]. Linearity between the DV's, the three different types of support for collective action, and the covariate group identification is met. However, after conduction the repeated measures analysis, Mauchly's test revealed that the sphericity was violated  $W = 0.96, p = 0.004$ , so the results of the analyses should be interpreted with the Greenhouse-Geisser correction applied.

### Hypothesis 4

Besides previously checked assumptions, the Shapiro-Wilk test showed that the assumption of normality among residuals is violated,  $W = 0.95, p < .001$  (see Figure 3). However, due to a large sample size these minor deviations are no problem when conduction repeated measures ANOVA. Sphericity also appears to be violated,  $W = 0.95, p < .001$ , so the results should be interpreted after applying the Greenhouse-Geisser correction. Levene's test for homogeneity of variance also appears to be significant for nationality.

### Figure 3

*Normal distribution Q-Q Plot residuals 4-way repeated measures analysis.*

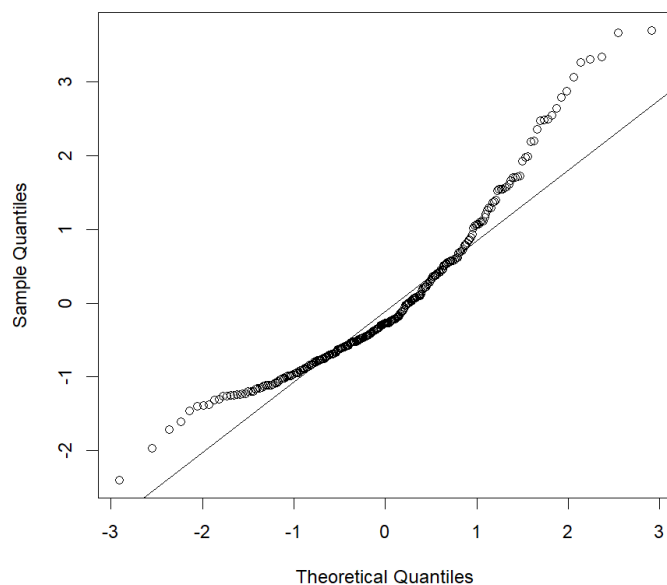


## Hypothesis 5

PFD and belief in conspiracy theories had no outliers. However, support for radical action had four outliers [44, 146, 155, 206], but since no difference was found in the direction or significance of the findings, the outliers were retained. The Shapiro-Wilk test was significant ( $W = 0.918$ ,  $p < .001$ ), indicating that the assumption of normality for the residuals was violated (see Figure 4). However, given the large sample size, this deviation from normality does not pose a significant threat to the validity of the results. The assumptions of linearity, homoscedasticity and multicollinearity were met. Although there are violations, moderation and mediation analysis typically remain robust to minor deviations. However, these deviations should be taken into account when interpreting the results.

## Figure 4

*Normal distribution Q-Q Plot residuals moderation analysis with belief in conspiracy theories.*



## Appendix E

### Extra tables and figures with data

**Table 1**

*Descriptive statistics outcome variables total sample ( $n = 277$ ).*

	n	%	Mean	SD	Range scale
Nationality					
Dutch	193	69.7			
International	84	30.3			
Group identification			5.14	0.71	1 - 7
Perceived financial disadvantage (PFD)			2.87	0.81	1 - 5
Group efficacy					
High group efficacy	139	50.2			
Low group efficacy	138	49.8			
Collective action			3.11	1.01	

Moderate action	4.35	1.31	1 - 7
Radical action without aggression	3.02	1.53	1 - 7
Radical action with aggression	1.47	1.09	1 - 7
Belief in conspiracy theories	4.35	2.09	1 - 9

**Table 2**

*Pearson correlations of outcome variables.*

	1.	2.	3.	4.	5.	6.	7.	8.
1. Nationality	-							
2. Group efficacy scenario	-0.029	-						
3. Group identification	0.147*	-0.055	-					
4. PFD	0.086	0.015	0.150*	-				
5. Moderate action	0.212***	0.040	0.236***	0.452***	-			
6. Radical action without aggression	0.150*	-0.024	0.085	0.323***	0.422***	-		
7. Radical action with aggression	0.020	-0.022	-0.040	0.178**	0.184**	0.55***	-	

## 8. Belief in

conspiracy theories	0.222***	-0.065	0.087	0.263***	0.190**	0.30***	0.20***	-
---------------------	----------	--------	-------	----------	---------	---------	---------	---

*Note.* PFD = Perceived financial disadvantage.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 3**

*Between Subjects Effects of 4-way repeated measures analysis on support for action scores.*

	SS	df	F	p
Group Efficacy x Group Identification	0.9	1, 269	0.307	.580
Group Efficacy x Nationality	3.2	1, 269	1.044	.308
Group Identification x Nationality	1.7	1, 269	0.557	.456
Group Efficacy x Group identification x Nationality	3.0	1, 269	1.002	.318

*Note.* Type 3 Sums of Squares

**Table 4**

*Moderation analysis of conspiracy beliefs on the relationship between PFD and support for radical action.*

	B	SE	t	p
Intercept	2.24	0.07	33.37	2e-16***
PFD	0.27	0.07	4.05	6.6e-5***
Conspiracy Beliefs	0.27	0.07	3.94	1e-4***
PFD × Conspiracy Beliefs	0.0	0.06	0.02	.986

*Note.* PFD = Perceived financial disadvantage. Both predictors were standardized (z-scores).

$R^2 = .14$ , Adjusted  $R^2 = .13$ ,  $F(3, 273) = 14.52$ ,  $p < .001$ .

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$



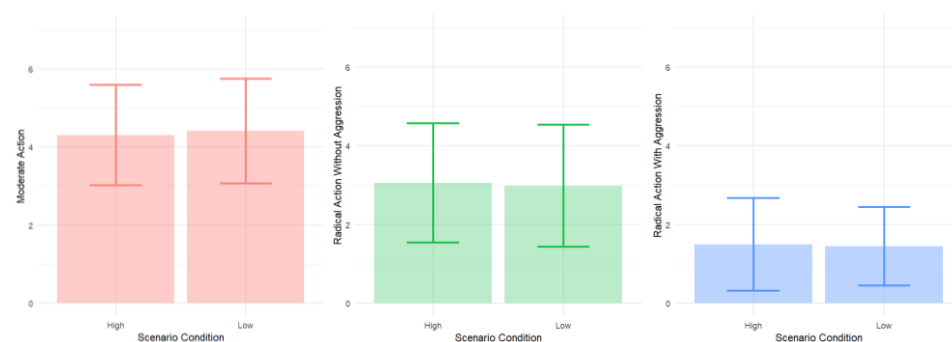
**Table 5**

*Descriptive Statistics of Perceived Financial Disadvantage by Nationality.*

Nationality	Perceived Financial Disadvantage	
	<i>M</i>	<i>SD</i>
Dutch	2.82	0.79
International	2.97	0.81

**Figure 1**

*Differences between support for collective action grouped by group efficacy condition.*

**Figure 3**

*Levels of support for different types of collective action.*

