

**The Moderating Role of Perceived Descriptive Norms in the Relationship Between
Moral Convictions and Collective Action**

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Abstract

Previous research has shown that moral convictions (i.e., absolute beliefs about right and wrong; Skitka et al., 2005) are one of the strongest motivations for collective action (Agostini & Van Zomeren, 2021). However, it is unclear under which conditions this relationship occurs. The current study addresses this by conceptually replicating previous findings that moral convictions and perceived descriptive norms are positively associated with collective action intentions, and by investigating the moderating effect of perceived descriptive norms on the relationship between moral convictions and collective action intentions. This was studied in the context of human-made climate change. We conducted an online study with an American sample ($N = 249$) using Academic Prolific. Our results confirmed that moral convictions and perceived descriptive norms are positively associated with collective action intentions. However, perceived descriptive norms did not moderate the relationship between moral convictions and collective action intentions. Potential explanations for this finding are discussed, as well as directions for future research.

Keywords: moral conviction, collective action, descriptive norms, climate change

The Moderating Role of Perceived Descriptive Norms in the Relationship Between Moral Convictions and Collective Action

On 11 March 2023, around 60 musicians gathered on the Dutch motorway A12 to play the second movement of Beethoven's seventh symphony (NPO Klassiek, 2023). A very unique sight, and perhaps somewhat inconvenient for drivers trying to get to their destination, but it was not without cause: They were part of a protest by the environmental movement Extinction Rebellion (XR), who organized the protest because the Dutch government subsidises fossil fuel companies with 17,5 billion euros each year (Extinction Rebellion, 2023). According to XR spokeswoman Anne Kervers, that amount is three times as much money as the amount that is budgeted for climate policy. The protesters therefore blocked the motorway to demand an immediate stop to these "fossil subsidies".

In this research, we aim to better understand what motivates people to engage in such types of collective action in the context of climate change. Collective action can be defined as any actions people engage in as a representative of a group which are meant to improve the conditions of that group (or of other groups; Furlong & Vignoles, 2021; Van Zomeren et al., 2012, Wright et al., 1990). Research shows that moral convictions (i.e., absolute beliefs about right and wrong; Skitka et al., 2005) are a strong motivator of collective action (e.g., Agostini & Van Zomeren, 2021). This means that when people are faced with a violation of their moral convictions (e.g., subsidising fossil fuel companies), they feel motivated to act on it and urge to defend their moral convictions (e.g., by protesting; Agostini & Van Zomeren, 2021; Pauls et al., 2022; Van Zomeren et al., 2018). However, little is known about the conditions under which this relationship occurs. The goal of this study is therefore to investigate whether and when moral convictions may relate to collective action intentions.

We propose that perceptions of descriptive norms may moderate this relationship. Descriptive norms describe what behaviours are "normal" or typical in a given setting – they

refer to what most people are doing, which is likely to be the most adaptive or effective behaviour in that setting (Cialdini et al., 1990). Research has shown that descriptive norms are positively associated with participation in collective action (e.g., González et al., 2021; Smith et al., 2021). However, research has not investigated whether they may relate to the relationship between moral conviction and collective action. Thus, we move beyond previous collective action and moral conviction research by focusing on how perceptions of descriptive norms may enhance the relationship between moral convictions and collective action intentions.

Moral Conviction

Attitudes grounded in moral conviction, or simply, *moral convictions* are a special class of strong attitudes that reflect absolute beliefs about right and wrong and are expressions of core values (Skitka et al., 2005, 2021; Skitka & Mullen, 2002). According to the Domain Theory of Attitudes (Nucci & Turiel, 1978; Skitka et al., 2005, 2021), these strong attitudes rooted in moral conviction can be differentiated from strong attitudes rooted in preference and convention. Preferential attitudes are based on subjective inclinations and personal taste (e.g., “I strongly oppose fossil subsidies because I feel like it”). Conventional attitudes, on the other hand, are rooted in norms, or the values and beliefs of ingroup members (e.g., “I strongly oppose fossil subsidies because all my friends and family also oppose it”). Finally, strong attitudes grounded in moral conviction are expressions of a moral imperative (e.g., “I strongly oppose fossil subsidies because I find it absolutely and morally wrong”). Thus, all moral convictions are expressions of strong attitudes, but not all strong attitudes are grounded in morality.

Moral convictions have several unique characteristics (for an overview, see Skitka et al., 2021). First, moral convictions are often perceived as being objectively true and universal (Morgan & Skitka, 2020; Van Bavel et al., 2012). Moreover, moral convictions are not easily

influenced by peers and authorities (Skitka, 2002; Skitka et al., 2009). Third, moral convictions come with a sense of obligation to act on them (Kouchaki et al., 2018; Sabucedo et al., 2018). Particularly, they have a strong motivational force, and provide justification for one's response or actions (Mackie, 1977; Skitka et al., 2005). Additionally, people are generally intolerant of others who disagree with their convictions (Skitka et al., 2005; Zaal et al., 2017), and they are unwilling to compromise when their moral convictions are at stake (Ryan, 2019; cf. Clifford, 2019). Finally, moral convictions are related to strong emotional responses (Arsenio & Lover, 1995, 1997).

It is important to understand the social psychological consequences of moral convictions because they are associated with a plethora of behaviours that can lead to social change. For example, moral convictions are related to voting behaviour (Skitka & Bauman, 2008), volunteerism (Kende et al., 2017), prosocial behaviours (Davis & Carlo, 2020), and collective action (Furlong & Vignoles, 2021; Pauls et al., 2022). In this research, we focus on whether and when moral conviction may relate to collective action intentions in the context of climate change.

Moral Conviction and Collective Action

In the current study, we aim to conceptually replicate the relationship between moral conviction and collective action intentions. Collective action is a form of activist support (also known as activism), which consists of actions aimed at challenging the system to reduce the disadvantage it maintains (Louis et al., 2019; Thomas & McGarty, 2017). Particularly, it refers to any actions (e.g., protests, signing petitions) that people engage in as a representative of a group which are meant to improve the conditions of that group (or of other groups; Furlong & Vignoles, 2021; Van Zomeren et al., 2012; Wright et al., 1990). Recent theories and research have suggested that moral conviction is a key predictor of collective action (the

extended Social Identity Model of Collective Action; E-SIMCA¹; Van Zomeren et al., 2012, 2018; see also Agostini & Van Zomeren, 2021). For example, Van Zomeren et al. (2012) showed that moral convictions predict collective action intentions in the context of student union protests, and actual participation in collective action in the context of Greenpeace protests. Additionally, in a recent quantitative research synthesis that included over 200 papers, Agostini and Van Zomeren (2021) found that out of four different motivations, moral convictions were one of the strongest motivations for collective action participation.

This means that when people are exposed to events that are experienced as a violation of their moral convictions or values, their sense of “who they are” and “what they stand for” becomes threatened, and they feel the need to protect and act on their moral convictions (Pauls et al., 2022; Van Zomeren et al., 2018). Therefore, when people perceive that their moral convictions are violated, they undertake collective action to validate their sense of identity (i.e., who they are) and to be consistent with their moral convictions (i.e., what they (will not) stand for; Van Zomeren et al., 2018). This idea is in line with Sabucedo et al.’s (2018) findings suggesting that people feel morally obligated to act in line with their moral convictions, which may translate into participation in collective action.

The Moderating Role of Descriptive Norms

Even though there is a growing body of research showing that moral conviction can drive collective action participation (for a research synthesis, see Agostini & Van Zomeren, 2021), we know little about the conditions under which this effect can occur. We propose that perceptions of descriptive norms may strengthen this relationship. Descriptive norms are a type of social norm that can be distinguished from injunctive norms (Cialdini et al., 1990). Descriptive norms refer to what most people are doing; they describe what behaviours are

¹ Other predictors of collective action are politicized identification, group efficacy, and group-based anger, with politicized identification taking up a central position in the model (Van Zomeren et al., 2018; see also Agostini & Van Zomeren, 2021).

“normal” or typical in a given setting, which is likely to be the most adaptive or effective behaviour in that setting (Cialdini et al., 1990). Injunctive norms, on the other hand, refer to what people believe *ought* to be done (Cialdini et al., 1990). The two types of norms often overlap: The behaviour that most people approve of (i.e., injunctive norm) is often the behaviour that is typically done (i.e., descriptive norm). However, they are separate constructs and can differ from one another. In such cases, descriptive norms appear to have a more direct effect on behaviour than injunctive norms. For example, Bicchieri and Xiao (2009) found that injunctive norms only influence behaviour if they are in line with the descriptive norms, whereas descriptive norms influence behaviour even when the two norms are misaligned.

Conforming to a social norm may lead to the anticipation of social support, which has been shown to motivate collective action participation (Klandermans, 1984, 2013; Van Zomeren et al., 2004). Social support validates the person’s convictions, making them feel encouraged to act on them (González et al., 2021; Van Zomeren et al., 2004). In a similar line of research, it has been demonstrated that descriptive norms are positively associated with participation in collective action (e.g., González et al., 2021; Smith et al., 2021). This means that when an individual perceives the descriptive norms to be supportive of collective action participation (i.e., when they believe that most other people from their social network participate in collective action), they are more likely to engage in collective action as well.

According to the social identity approach (Tajfel, 1978; Tajfel & Turner, 1979; see also Hornsey, 2008), people are more likely to follow social norms when they identify strongly with the group where the norms come from (Hogg, 2016; Kish Bar-On & Lamm, 2023). This strong identification is especially likely when there are moral similarities between the individual and the group members (i.e., similarity in moral values; Schneeberger & Krupka, 2021). This might be the case, for example, when an individual with strong moral convictions – who is thus likely to feel like they need to participate in collective action (Pauls

et al., 2022; Sabucedo et al., 2018) – perceives that most people from their social network *also* are supportive of collective action participation. This similarity may increase their identification with their social network, thereby increasing the likelihood that they will act in accordance with those norms. Since these descriptive norms indicate that collective action participation is the “normal” or “typical” behaviour, this results in the individual being more likely to also participate in collective action. In other words, it could be expected that the perceived presence of supportive descriptive norms strengthens the relationship between moral conviction and collective action.

The Current Study

The goals of this study are to conceptually replicate previous findings that moral convictions and perceived descriptive norms are positively associated with collective action intentions, and to investigate whether perceived descriptive norms moderate the relationship between moral convictions and collective action intentions, in the context of climate change. We hypothesize that (1) moral convictions are positively associated with collective action intentions, (2) perceived descriptive norms are positively associated with collective action intentions, and (3) perceived descriptive norms moderate the relationship between moral convictions and collective action intentions, such that for people who score highly on perceptions of descriptive norms, the relationship between moral conviction and collective action is stronger.

Method

Participants and Design

We recruited 249 American individuals who participated in our online study via Academic Prolific. As compensation, the participants received 0.75 USD for completing the study. The final sample consisted of 249 participants (120 female, 126 male, 3 reported other) ranging in age from 18 to 76 years old ($M_{\text{age}} = 38.17$, $SD = 13.69$). One hundred fifty-five

participants reported that they support the Democratic party, 47 reported that they support the Republican party, and 47 reported Other. The study had a correlational design in which the independent variable was moral conviction, the dependent variable was collective action, and the moderator was perceived descriptive norms².

Procedure

The Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Groningen approved the study. At the beginning of the study, participants' informed consent was obtained. In the first part of the questionnaire, participants were asked to answer several questions about their moral convictions about different societal issues, namely abortion, human-made climate change, Afghanistan's refugee crisis, and death penalty. We additionally included filler items by asking about their attitudes towards the aforementioned issues. The target issue of moral conviction was human-made climate change; the other three issues were not relevant to this study. In the second part of the study, participants completed a questionnaire stating their willingness to participate in collective action with regards to human-made climate change. Next, participants filled out a questionnaire about perceived descriptive norms³. Finally, participants provided information about their gender, age, and political ideology. At the end of the study, participants were paid, fully debriefed, and thanked for their participation.

Measures

Moral Conviction

The scale measuring moral conviction (Skitka et al., 2005, 2017) was adapted for the specific topic of human-made climate change, and included the following items: "How much is your opinion on human-made climate change: A reflection of your core moral beliefs and

² Since this study was part of a larger project, it also included other variables, which are not of interest for this study.

³ Since the study was part of a larger project, the participants also answered short questionnaires about other variables that are not relevant to this study.

convictions? Connected to your beliefs about fundamental right and wrong? Based on moral principle?”. Participants answered the questions using a 7-point Likert scale ranging from 1 (not at all) to 7 (very much). We averaged the items and created a composite score for moral conviction ($\alpha = .97$; $M = 5.04$, $SD = 1.71$).

Collective Action

Collective action was measured using items based on Tausch et al. (2011). Participants reported their willingness to take part in the following actions: “Participate in an upcoming protest related to human-made climate change”, “share some information about human-made climate change on my social media”, “change my profile picture on my social media to raise awareness about human-made climate change”, and “sign a petition to support legislation to limit the impact and furthering of human-made climate change”. Participants answered the questions using a 7-point Likert scale ranging from 1 (not at all) to 7 (very much). We averaged the items and created a composite score for collective action ($\alpha = .89$; $M = 3.83$, $SD = 1.89$).

Perceived Descriptive Norms

We used items adapted from Rimal & Yilma (2022) to measure participants’ perception of descriptive norms. The following items were used: “Most of the people from my social network... participate in protests related to human-made climate change; share information about human-made climate change on their social media; sign a petition to support legislation to limit the impact and furthering of human-made climate change.” Participants indicated their level of agreement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). We averaged the items and created a composite score for perceived descriptive norms ($\alpha = .88$; $M = 3.00$, $SD = 1.09$).

Results

Preliminary Analysis

First, we checked the assumptions for multiple linear regression. The assumption of normality was inspected via a P-P plot, which showed that the residuals were normally distributed (see Figure 1 in the Appendix). Next, we plotted the residuals on a scatterplot and their scattered distribution indicated that the assumption of homoscedasticity was not violated (see Figure 2 in the Appendix). Also, by inspecting the scatterplot, it is apparent that there is a linear relationship between moral conviction, perceived descriptive norms, and collective action. Furthermore, the residuals are independent since Durbin-Watson = 1.84. Finally, there appeared to be no multicollinearity between the variables ($VIF < 1.28$) and tolerance scores were above 0.2.

Table 1 reports the means, standard deviations, and correlations among the study's variables. All variables were significantly and positively correlated with each other ($p < .001$).

Table 1

Descriptive Statistics of Collective Action, Perceived Descriptive Norms, and Moral Conviction, and Correlations Between Variables

Variable	<i>N</i>	<i>M (SD)</i>	1	2	3
1. Collective action	249	3.83 (1.89)			
2. Perceived descriptive norms	249	3.00 (1.09)	.73***		
3. Moral conviction	249	5.04 (1.71)	.47***	.39***	

Note: *** $p < .001$

Main Analysis

As the assumptions were not violated, we continued with a multiple linear regression using IBM SPSS (Version 29). We centered the independent and moderating variables and computed an interaction between our centered independent variable (moral conviction) and our centered moderator (perceived descriptive norms).

For our main analysis, we conducted a multiple linear regression with the centered variables for moral convictions and perceived descriptive norms, as well as the computed interaction variable as predictors of collective action intentions. The overall model was significant ($F(3, 245) = 111.28, p < .001, f^2 = 1.36$). We found a significant relationship between moral conviction and collective action intentions ($\beta = 0.241, t(245) = 5.12, p < .001, 95\% \text{ CL } [0.16, 0.37], sr^2 = .21$) and a significant relationship between perceived descriptive norms and collective action intentions ($\beta = 0.645, t(245) = 14.32, p < .001, 95\% \text{ CL } [0.97, 1.27], sr^2 = .60$). However, we did not find a significant interaction effect ($\beta = 0.069, t(245) = 1.58, p = .155, 95\% \text{ CL } [-0.02, 0.15], sr^2 = .07$). Even though the interaction was not significant, we conducted a simple slope analysis to explore the data further⁴. We found that moral conviction was significantly associated with collective action intentions for both people who score low on perceived descriptive norms ($\beta = 0.177, t(245) = 3.39, p < .001, 95\% \text{ CL } [0.08, 0.31], sr^2 = .14$), and highly on perceived descriptive norms ($\beta = 0.304, t(245) = 4.34, p < .001, 95\% \text{ CL } [0.18, 0.49], sr^2 = .18$). This indicates that the relationship between moral conviction and collective action does not seem to differentially vary as a function of perceptions of descriptive norms (see Figure 4 in the Appendix).

Discussion

⁴ Additionally, we checked the variance for the moderator (perceived descriptive norms) by plotting a histogram; see Figure 3 in the Appendix.

The purpose of this study was threefold: (1) To conceptually replicate previous findings that moral convictions are positively associated with collective action intentions, (2) to conceptually replicate previous findings that perceptions of descriptive norms are positively associated with collective action intentions, and (3) to investigate whether perceptions of descriptive norms moderate the relationship between moral convictions and collective action intentions. This was studied in the context of human-made climate change. We hypothesized that (1) moral convictions are positively associated with collective action intentions, (2) perceptions of descriptive norms are positively associated with collective action intentions, and (3) perceptions of descriptive norms moderate the relationship between moral convictions and collective action intentions, such that for people who score highly on perceptions of descriptive norms, the relationship between moral conviction and collective action is stronger.

We found support for two of our three hypotheses: Moral convictions were positively associated with collective action intentions, and perceived descriptive norms were positively associated with collective action intentions as well. Our third hypothesis was not supported, however: We found no significant interaction effect between moral convictions and perceived descriptive norms. More specifically, the relationship between moral convictions and collective action intentions was present both for participants scoring high and low on perceived descriptive norms, indicating that this relationship does not vary as a function of different levels of perceived descriptive norms.

Theoretical Implications

This research offers some contributions to the literature. First, we conceptually replicated previous findings that moral convictions are positively associated with collective action intentions in a different context, namely climate change (Hypothesis 1). This is consistent with Agostini & Van Zomeren (2021), who found that out of four different motivations, moral convictions are one of the strongest motivations for collective action

participation. This means that when people perceive that their moral convictions are being violated, their sense of “who they are” and “what they stand for” becomes threatened, and they undertake collective action to validate their sense of identity and to be consistent with their moral convictions (Van Zomeren et al., 2018). This is in line with with Pauls et al.’s (2022) moral violation hypothesis, which states that perceptions of a strong violation of one’s moral convictions lead to engagement in collective action in defense of that moral conviction. It is also consistent with Sabucedo et al.’s (2018) findings that people feel morally obligated to act in line with their moral convictions. Our study adds to this literature by showing that moral convictions are positively associated with collective action intentions in the context of climate change.

Second, we conceptually replicated previous findings that perceptions of descriptive norms are positively associated with collective action intentions, in the context of climate change (Hypothesis 2). This is consistent with previous research that found support for this association in different contexts; for example, González et al. (2021) found that parents’ past and present participation in collective action (i.e., descriptive family norms) predicted children’s participation in collective action both directly and indirectly. Additionally, Smith et al. (2021) found that descriptive norms of close social networks (i.e., friends and family) are positively related to change in social movement participation over time, such that the more friends and family are perceived to participate in social movements, the more participants themselves participate in social movements at later stages. Our findings add to this literature by showing that perceived descriptive norms of participants’ social networks are positively associated with collective action intentions in the context of climate change. This indicates that collective action is in part driven by the social connections between people; the embeddedness of individuals within social networks seems to have an important influence on their willingness to participate in collective action.

We did not find support for our third hypothesis, which predicted that the relationship between moral conviction and collective action would be stronger for people scoring high on perceived descriptive norms. This means that perceived descriptive norms may not be a moderator in the relationship between moral conviction and collective action. A possible explanation can be found in one of the characteristics of moral convictions: Moral convictions are independent from the influence of authorities and peers (Skitka, 2002; Skitka et al., 2009), who may be part of one's social network (Mishra, 2019). Hence, the descriptive norms originating from one's social network may not have an influence on the relationship between moral convictions and collective action. Additionally, researchers like Sabucedo et al. (2018) have shown that moral convictions come with a strong sense of obligation to act on them, which might persist even when the descriptive norms are not perceived to support that behaviour. However, the nonsignificant interaction effect may have been caused by a low variance in the sample⁵, or by the potentially low statistical power of the study.

Limitations and Directions for Future Research

This study has some limitations. First, we measured participants' *intentions* (i.e., willingness) to participate in collective action, rather than actual collective action participation. Intentions to engage in a certain behaviour do not always translate into actual engagement in that behaviour, a discrepancy that is known as the intention-behaviour gap (for a research synthesis, see Sheeran & Webb, 2016). Future research may investigate how moral convictions and perceived descriptive norms relate to actual behaviour.

Second, it is also important to note that our findings are specific to the climate change context. This means that they may not generalize to different contexts. Furthermore, our sample consisted only of participants from the United States – a Western democracy (albeit a flawed one; see EIU, 2022). In such nations, according to Uluğ et al. (2022), collective action

⁵ See Figure 3 in the Appendix.

is “seen as a legitimate authority-challenging political behaviour” (p.16), so our research findings may not generalize to samples from countries where that is not the case. Future research is needed to test the generalizability of our findings.

Additionally, it is unclear what the underlying cause is for our non-significant interaction effect. As mentioned earlier, there are theoretical explanations as well as potential issues regarding variance and statistical power that may explain these findings. A follow-up study could therefore replicate our research with a bigger sample size, to investigate whether the interaction effect is significant or not when there is enough variance for perceived descriptive norms and when the statistical power of the study is high.

Finally, there are still some unanswered questions that future research may investigate. For example, researchers may test the stability of these findings over time, replicate the findings with regards to different societal issues, or investigate whether there are meaningful differences between people of different political and cultural backgrounds. This will help us better understand the relationship between moral conviction and collective action.

Conclusion

Climate change is a collective problem, so collective action is needed to reduce its threat (Furlong & Vignoles, 2021). It is therefore of critical importance that we understand how we can facilitate collective action. Our study contributes to this by replicating previous findings that moral convictions and perceived descriptive norms are positively associated with collective action intentions, and by investigating whether the relationship between moral convictions and collective action intentions is moderated by perceived descriptive norms, in the context of climate change. Based on our findings, it can be concluded that moral convictions and perceived descriptive norms are indeed positively associated with collective action intentions in the context of climate change. However, perceived descriptive norms did not moderate the relationship between moral convictions and collective action intentions.

Thus, it remains uncertain what the effects of perceived descriptive norms are on the relationship between moral convictions and collective action. Future research is needed to investigate this issue, which will improve our understanding of the conditions under which moral convictions relate to collective action participation.

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Appendix

Figure 1

Normality Assumption

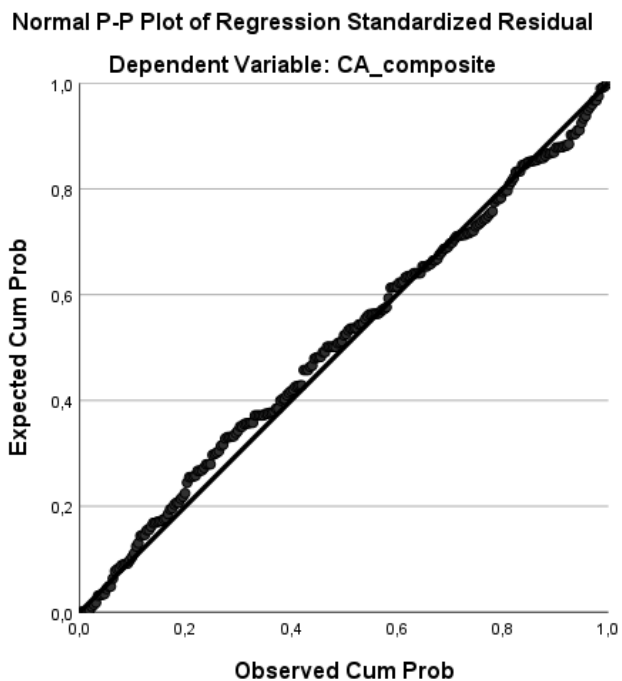


Figure 2

Homoscedasticity Assumption

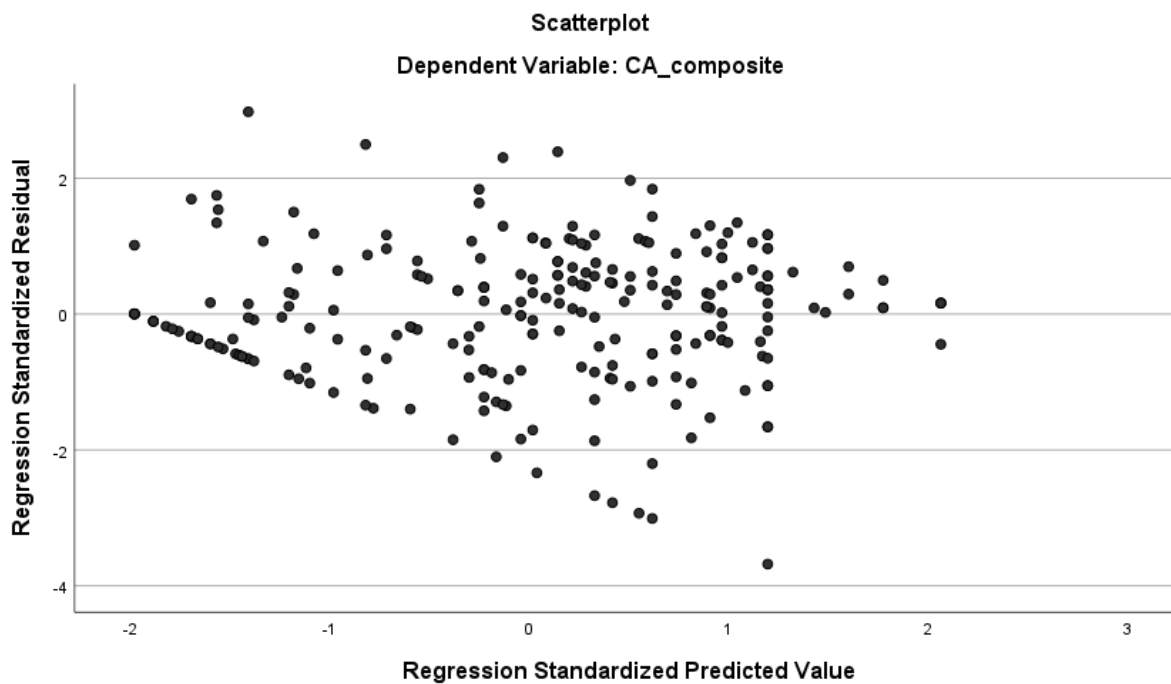
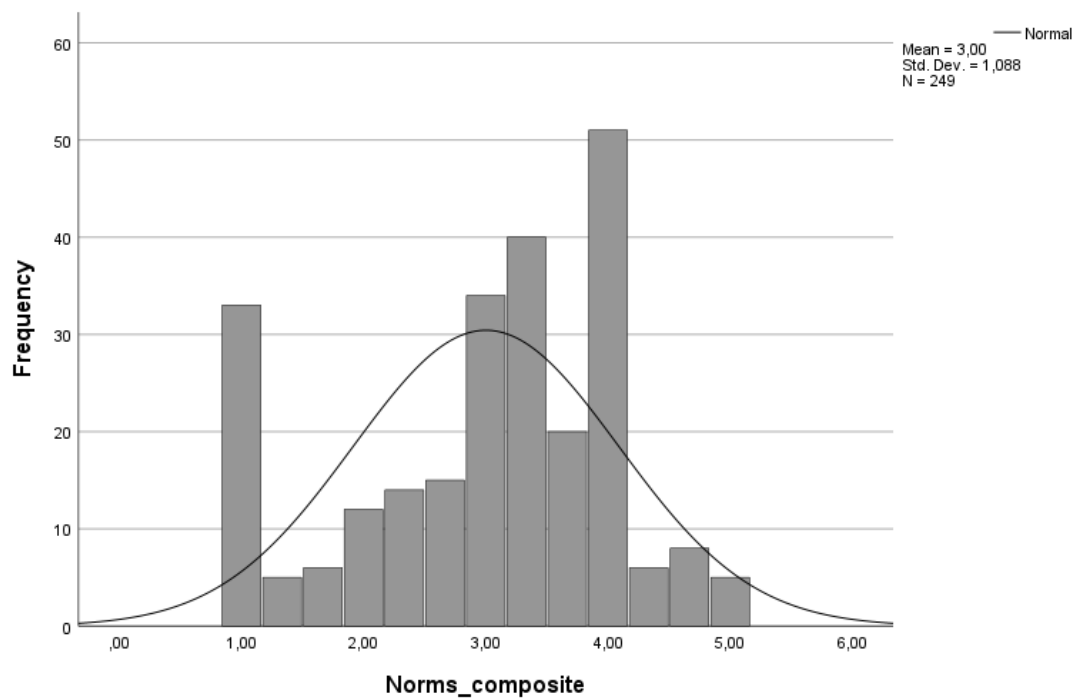


Figure 3*Histogram for Perceived Descriptive Norms***Figure 4***Simple Slopes Analysis*