



ARTICLE

Integrative Model of Shared Reality and Identity–Emotion–Efficacy Factors of Pro-Environmental Action

Muhammad Abdan Shadiqi

Universitas Lambung Mangkurat, Banjarbaru, Indonesia

Khaerullah Fadhli Arasy Hasan

Lambung Mangkurat, Banjarbaru, Indonesia; Universitas Indonesia, Depok, Indonesia

Nabila Regita Putri Mustafa

Universitas Lambung Mangkurat, Banjarbaru, Indonesia

Ahmad Saubari

Universitas Lambung Mangkurat, Banjarbaru, Indonesia

Husein Nafarin

Universitas Lambung Mangkurat, Banjarbaru, Indonesia

Ayub Faizal Asfajar

Universitas Lambung Mangkurat, Banjarbaru, Indonesia

Muhammad Iqbal Suryawan Putra

Lambung Mangkurat, Banjarbaru, Indonesia

Nining Fajaryanti

Lambung Mangkurat, Banjarbaru, Indonesia

Kamarul Hasan

Universitas Lambung Mangkurat, Banjarbaru, Indonesia

© 2024 Muhammad Abdan Shadiqi, Khaerullah Fadhli Arasy Hasan, Nabila Regita Putri Mustafa, Ahmad Saubari, Husein Nafarin, Ayub Faizal Asfajar, Muhammad Iqbal Suryawan Putra, Nining Fajaryanti, Kamarul Hasan
abdanshadiqi@ulm.ac.id, khaerullahfadhli@gmail.com,
nabilaregita023@gmail.com, ahmadsaubari0518@gmail.com,
huseinnafarin99@gmail.com, ayubfarizal022@gmail.com,
muhammadiqbalasp99@gmail.com,
ningfajaryanti1228@gmail.com, r132777@gmail.com

Received 14 October 2023

Accepted 12 February 2024

Published online 5 April 2024

ABSTRACT

Several theoretical models explain the influence of identity factors on pro-environmental action, but an integrative explanation of these factors is required, especially in nonactivist samples. This study aims to determine the mediating effects of social identity, group-based anger, and group efficacy on the relationship between shared reality and pro-environmental action. We use a correlational survey method on 258 and 305 students in Studies 1 and 2, respectively. The full structural equation model found that the model well fits both studies. Consistently in the two studies, shared reality positively predicts social identity, group-based anger, and group efficacy. We found that these factors mediate the relationship between shared reality and pro-environmental action. These findings conclude that ordinary people sharing the same environmental reality catalyze the formation of identity, emotion, and efficacy factors.

KEYWORDS

pro-environmental action, social identity, group efficacy, group-based anger, shared reality

ETHICAL RESEARCH STATEMENT

Informed consent was obtained from all individual participants involved in the study. This study had ethical clearance from the Ethical Committee of Faculty of Medicine of Universitas Lambung Mangkurat No. 185-186-188/KEPK-FKULM/EC/V/2020 (Study 1) and No. 672-673-674/KEPK-FKULM/EC/VI/2021 (Study 2).

ACKNOWLEDGMENT

We also appreciate to Social and Environmental Behavioral Laboratory (SnEBLAB) in Univeritas Lambung Mangkurat, Indonesia, for research and writing assistance on this article.

Introduction

Global crises, such as climate change or waste accumulation, are complex problems. This global challenge also requires a global response. Based on this notion, large groups of social communities need to be involved in collective action, and psychology needs to offer tools for overcome this action, one of which is pro-environmental action (Barth et al., 2021). Specifically, scholars define pro-environment as goal-directed behavior in which people strive to achieve explicit goals for environmental benefits and maximize the reduction of harm to the environment (Steg & de Groot, 2019; Steg & Vlek, 2009). Stern (2000) created a taxonomy of pro-environmental actions, two of which are implemented in the public (e.g., environmental activism) and private (e.g., recycling at the individual level) spheres. One theory that can be applied to

public- and private-sphere pro-environmental behavior is the social identity model of pro-environmental action (SIMPEA). Fritsche et al. (2018) suggest several factors of SIMPEA such as emotional and motivational factors, in-group identification, group norms and goals, and collective efficacy.

Research for developing SIMPEA models is required, but only a few studies tested integrated and structured variable dynamics models. Wallis and Loy (2021) in Germany only regressed variables on SIMPEA without structured modeling. Wenzel and Süßbauer (2021) took the qualitative approach to explain SIMPEA in a German sample. Moreover, Li et al. (2019) proposed using SIMPEA for intervention formulation in China but did not prove the relationship dynamics between variables. This article presents empirical evidence on using SIMPEA to explain the effects of environmental group identity, group-based anger, and group efficacy on pro-environmental action among Indonesian students. We endeavor to elucidate the process, through which ordinary people develop collective identity, emotion, and efficacy in relation to environmental issues with the objective of inspiring them to engage in action. We intend to extend SIMPEA by adding shared reality as a catalyst. Shared reality is one's experience that forms a common inner state with others about the world (Echterhoff, 2012; Echterhoff & Higgins, 2018; Echterhoff et al., 2009). In the context of the environment, individuals can undergo nature-related experiences that were proven associated with pro-environmental behavior (Rosa et al., 2018). For example, Garza-Teran et al. (2022) found that people with similar experiences in natural environments, such as a nature excursion, tend to exhibit a strong connection with nature. Thus, the current study hypothesized that people sharing a common reality related to nature experiences may form a specific identity, emotion, and efficacy that can explain pro-environmental action. Prior to delineating the hypotheses, we provide a concise overview of the existing literature on identity, emotion, efficacy, shared reality, and pro-environmental action.

Identity

The first factor is group identification or identity. This study examines the identity of an environmentalist group, which is one of the aspects that exists and is inherent in a person and a trait that distinguishes one from others (Barker, 2008). SIMPEA presents a different perspective by systematically describing the variables of group identity that influence perceived environmental damage in large numbers over time (Fielding & Hornsey, 2016). Dono et al. (2010) found a significant effect between the environmentalist social identity and environmental activism. Shadiqi et al. (2022) reported that environmental self-identity mainly strongly predicts pro-environmental behavior on the issue of global warming in Indonesia. The SIMPEA model adopts the social identity model collective action, or SIMCA (van Zomeren et al., 2008). In this model, social identity as the central variable can directly influence collective action or be firstly mediated by group efficacy and group-based emotion on a political issue. Tausch et al. (2011) and Saab et al. (2015) explain that anger is a response to motivation to take unfair action in addition to the belief that problems can be solved collectively (group efficacy), which, thereby, increases the likelihood of one being

part of a group (group identity) to participate in an action. The theoretical model of SIMCA explains several important concepts that influence collective action: identity as a central factor, mediating effect of group-based anger as a response to injustice, and mediating effect of group efficacy as an instrumental motivation (van Zomeren et al., 2008). The novelty of the current research is its explanation of the dynamics of the major factor of SIMPEA, that is, social identity along with two types of identity. We examine environment movement (politicized) identity and environmentalist identity in our model, similar to that conducted by Xing et al. (2022). The study poses the following hypotheses:

Hypothesis 1a (H_{1a}): Social identity predicts pro-environmental action.

Hypothesis 1b (H_{1b}): Social identity predicts group-based anger.

Hypothesis 1c (H_{1c}): Social identity predicts group efficacy.

Emotion

The second factor in SIMPEA is emotion. We examine group-based anger, which is defined as an emotional experience or feeling experienced by individuals during the identification of social groups. They can also experience these emotions when separated from the group (Becker et al., 2011). According to Fritsche et al. (2018), this emotion is a predictor variable that influences pro-environmental action. In addition, the findings of van Zomeren et al. (2011) indicated that emotion, especially group-based anger, exerts a significant role in mediating collective action. This finding is in line with that of Steg and Vlek (2009), who posit that emotion and motivation trigger collective processes associated with three central variables of social identity, namely, in-group identification, collective efficacy beliefs, and in-group behavioral norms and goals. These variables interact in influencing the assessment of environmental crises and public responses in the private and public spheres. The current model also endeavors to analyze group-based anger in pro-environmental action on the basis of the SIMPEA model. Thus, we put forward the following hypotheses:

Hypothesis 2 (H₂): Group-based anger predicts pro-environmental action.

Hypothesis 3 (H₃): Group-based anger mediates the relationship between social identity and pro-environmental action.

Efficacy

The last factor is group efficacy, which is a shared belief in the ability of the group to implement actions that produce certain levels of achievement (Bandura, 1997). Group efficacy is one of the predictors of the formation of pro-environmental action based on the SIMPEA (Fritsche et al., 2018). Early research on the SIMPEA regarding group efficacy depicts an increase in intention to engage in pro-environmental action in the public or private spheres with the increase in-group efficacy. The findings of Fritsche et al. (2018) confirm the role of group efficacy in motivating the intention to take pro-environmental action as proposed by SIMPEA. Leonard and Leviston (2017) state that group efficacy can indirectly increase the intention to engage in activities in the realm of consumption or pro-environment-based use at the private and civil

(public) levels. Lauren et al. (2016) also demonstrate that environmental identity was indirectly correlated with the intention of pro-environmental behavior activities, in which mediation by self-efficacy.

Hypothesis 4 (H₄): Group efficacy predicts pro-environmental action.

Hypothesis 5 (H₅): Group efficacy mediates the relationship between social identity and pro-environmental action.

Integrative Pro-Environmental Action and Shared Reality Theory

The research model develops the theory of pro-environmental action based on the SIMPEA (Fritsche et al., 2018; Masson & Fritsche, 2021), which complements the SIMCA by Thomas et al. (2012) and van Zomeren et al. (2012, 2018). SIMPEA and SIMCA use integrative models that emphasize identity factors. van Zomeren (2015) extends SIMCA by adding moral conviction as a catalyst of identity factors. Alternatively, the current study proposes an alternative catalyst, namely, shared reality. We place shared reality as the primary catalyst and the identity factor as the central variable.

Tory Higgins introduced shared reality theory (SRT) in the 1990s (Echterhoff, 2012). Jost et al. (2008) use SRT to explain how and why people are motivated to unite and struggle to change the social status quo through relational processes. This study deems that this explanation can strengthen the argument that shared reality can be related to group efficacy in the fight against environmental problems. Moreover, the explanation that people who take collective action have shared interests, feel angry, believe they can make changes, and identify with relevant social groups strengthens this argument (McGarty et al., 2014). One motive of shared reality is the epistemic motive to overcome uncertainty (Echterhoff, 2012; Echterhoff et al., 2009), which can explain why people identify and join a group (Hogg & Rinella, 2018). The second motive of shared reality is the relational motive, which causes people to affiliate and feel connected to others (Echterhoff et al., 2009). An experiment by Huntsinger et al. (2009) found that the affiliation motive causes mood contagion. This concept forms the basis of the posited relationship in the current study between shared reality and emotion. Moreover, the study aims to determine the mediating effects of social identity, group-based angry emotion, and group efficacy on the relationship between shared reality and pro-environmental action.

Hypothesis 6a (H_{6a}): Shared reality predicts social identity.

Hypothesis 6b (H_{6b}): Shared reality predicts group-based anger.

Hypothesis 6c (H_{6c}): Shared reality predicts group efficacy.

Hypothesis 7a (H_{7a}): Social identity mediates the relationship between shared reality and pro-environmental action.

Hypothesis 7b (H_{7b}): Group-based anger mediates the relationship between shared reality and pro-environmental action.

Hypothesis 7c (H_{7c}): Group efficacy mediates the relationship between shared reality and pro-environmental action.

Hypothesis 8a (H_{8a}): The relationship between shared reality and pro-environmental action exerts parallel mediation via social identity and group-based anger.

Hypothesis 8b (H_{8b}): The relationship between shared reality and pro-environmental action exerts parallel mediation via social identity and group efficacy.

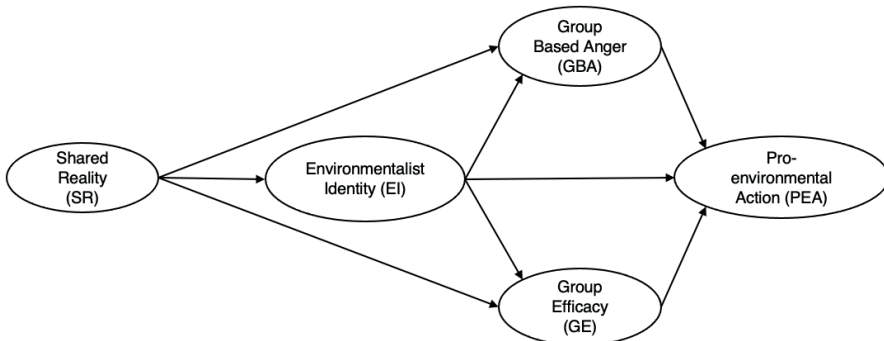
We chose Indonesian undergraduate students as a sample in Study 1 and Study 2. According to UNESCO, from 2008 to 2018, Indonesia had the highest number of undergraduate students in Southeast Asia (Salihu, 2020). The number of Indonesian undergraduate students has been increasing, reaching over nine million by 2022 (Rizaty, 2023). The increasing number of these students potentially increases environmental action. Research by van der Laarse (2016) indicated a growing environmental awareness among the young generation in Indonesia. In the study by Parker et al. (2018), more than 80% of 1,000 Indonesian youths identified themselves as environmentalists. In both studies, we gathered non-activist participants who had never experienced pro-environmental actions, such as protests. This was done to test how shared reality can shape the dynamics of predictors for action among participants who have no experience in pro-environmental action and no affiliation with specific environmental groups, such as the Save Meratus movement group. Hornsey et al. (2006) found that the factors influencing the intention to engage in collective action vary depending on whether the participants are affiliated with organizational groups or not.

Study 1: Pro-Environmental Action in the Public Sphere

Study 1 tests the theoretical model (Figure 1) in the context of an action to a local environmental problem, namely, Save Meratus, in South Kalimantan Province, Indonesia. This action is a protest against the local government in the province because a company intends to exploit the Meratus Mountains Geopark. On October 15, 2019, local environmental organizations succeeded in winning a cassation that prohibited mining companies from exploiting the Meratus Mountains; however, according to Bernie (2020), the struggle to save this geopark will continue indefinitely. Study 1 uses the identity of the environmental movement and environmental collective action regarding Save Meratus.

Figure 1

Theoretical Model



Method

Participants and Design

This research uses quantitative methods with a correlational approach. It conducted a correlational survey research using Google Forms on June 14–28, 2020. The sample comprise students of several universities in the South Kalimantan Province, Indonesia. Initially, we collected data from 475 respondents and eliminated 170 participants who were not students in the province. Finally, the sample consisted of 305 participants who were recruited using nonprobability sampling. Similar to Dono et al. (2010), we used a sample of university students aged 17 to 33 years (mean age 21.04 years; $SD = 1.606$). The sample included 114 (37.4%) males and 191 (62.6%) females; 289 (94.8%) Muslims and 16 (5.2%) people of other religions; 176 (57.7%) individuals were members of various organizations (e.g., civic, student, religious, and environmental) and 129 (42.3%) were not members of any organizations. All participants were enrolled at universities in South Kalimantan and were not affiliated with the Save Meratus movement group and never engaged in the Save Meratus action before. They also reported that never participated in other environmental actions, although they were aware of them.

Measurement

All measures were subjected to confirmatory factor analysis (CFA). The Appendix provides the details of all statements and the test results (Table A1). The self-reported questionnaire was in Bahasa Indonesia and consisted of research information, informed consent, instructions, measurements, and demographic data entries. The participants were briefed about the rescue action in one paragraph to help them understand the context prior to answering the questionnaire.

Shadiqi et al. (2018) developed the measure for collective action as a scale, which we modified to the environmental context. This tool determines whether a person wants to be involved in collective action to support the response to the Meratus rescue problem. 13 out of 15 items are valid and reliable (composite reliability = .945, Cronbach's alpha = .947), e.g., "Demonstration with peaceful speech." The measurement uses a seven-point Likert-type scale (1 = *totally disagree* to 7 = *totally agree*).

Based on a scale by Shadiqi et al. (2018), the politicized identity scale in the environmental movement was developed in this study. The tool measures the identification of participants in the Save Meratus environmental movement using four valid and reliable items (composite reliability = .921, Cronbach's alpha = .917), e.g., "I see myself as part of the Save Meratus movement." Items were rated using a seven-point Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

The measure for group-based anger used four items from Shadiqi et al. (2018) for measuring angry emotions based on membership in a group. Psychometric analysis indicated that the four items were valid and reliable (composite reliability = .895, Cronbach's alpha = .886), e.g., "As part of a group, I felt angry with what other groups did to Meratus." Items were rated using a seven-point Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Group efficacy was measured using three items from Shadiqi et al. (2018) for measuring one's belief in being part of a movement group to achieve a common goal. Analysis pointed out that the three items were valid and reliable (composite reliability = .940, Cronbach's alpha = .939), e.g., "In my view, our strength as a group can stop the Meratus problem." Items were rated using a seven-point Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

The shared reality scale was adapted from five items by Schmalbach et al. (2019) for measuring the description of shared experiences of inner states with a movement group (composite reliability = .958, Cronbach's alpha = .957), e.g., "I think that the members of the Save Meratus movement and I are on the same wavelength with regard to the Meratus case." Items were rated using a seven-point Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Procedure and Data Analysis

The research began with a cross-cultural adaptation measure from English to Indonesian based on Beaton et al. (2000) for the shared reality scale, pro-environmental action, and environmentalist identity scale. This stage consisted of translation, synthesis, back-translation, expert assessment, and a pilot study. Afterward, we collected data through an online survey. All measures were evaluated via Confirmatory Factor Analysis (CFA). We used structural equation modeling (SEM) with a maximum likelihood estimator through AMOS. We tested the full model using the indicators of each variable. The criteria used for model fit are as follows (Ghozali & Fuad, 2012; Hooper et al., 2008; Schumacker & Lomax, 2016). The first one, chi-square (χ^2), is close to zero, $p > .05$. A large chi-square is associated with larger numbers of participants; however, the size of data increases with the increase in the chi-square (Wijanto, 2008), thus explaining the fit on 305 participants using only the chi-square value is difficult. The second is the root-mean-square error of approximation (RMSEA), which should be close to zero or between .05 and .08. The criterion for a good model is a CI close to zero and no higher than .08 (Hooper et al., 2008). We also refer to the comparative fit index (CFI), Tucker-Lewis index (TLI), and goodness-of-fit Index (GFI) with values $> .90$. The last one is standardized root-mean-square residual (SRMR) $\leq .08$. We also added descriptive analysis and bivariate correlation to describe the data.

Results

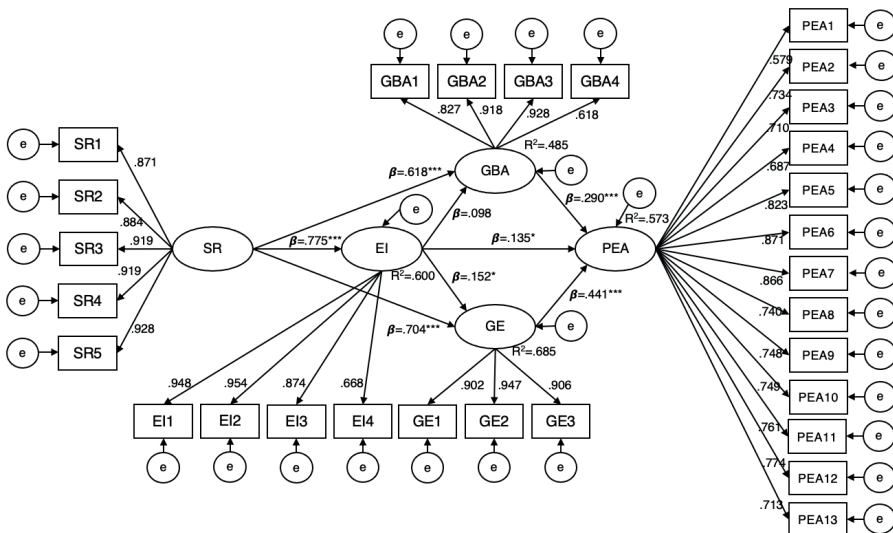
According to the correlation results (Table 1), the demographic factors of age and religion are not correlated with pro-environmental actions. However, organizational affiliation is positively correlated with pro-environmental action, and gender is negatively correlated with pro-environmental action. Based on the correlation coefficients, we found that shared reality, environmentalist identity, group-based anger, and group efficacy are positively correlated with pro-environmental action.

Table 1
Descriptive and Bivariate Correlation (Study 1)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
Gender	(Male = 1, Female = 2)		–	.033	–.126*	–.031	–.016	–.019	–.042	–.144*	–.037
Age	21.04	1.606		–	–.230**	–.043	–.044	–.004	–.012	–.066	–.021
Organizational affiliation	(Yes = 1, No = 0)				–	.023	.134*	.075	.043	.196**	.140*
Religion	(Muslim = 1, Non-Muslim = 0)					–	.068	–.001	–.018	.054	–.069
Group-based anger	5.20	1.259					–	.639**	.662**	.605**	.587**
Group efficacy	5.65	1.145						–	.792**	.647**	.723**
Shared reality	5.24	1.190							–	.657**	.794**
Environmental collective action	5.48	1.069								–	.607**
Environmental movement identity	4.98	1.274									–

Note. ** $p < .01$; * $p < .05$

Figure 2
Results of Analysis on Full Model of SEM (Study 1)



Note. SR = shared reality, EI = environmentalist identity, GBA = group-based anger, GE = group efficacy, PEA = pro-environmental action. *** $p < .001$; ** $p < .01$; * $p < .05$.

Based on the model in Figure 2, we find that the model fits the criteria well ($\chi^2/df = 2.620$, CFI = .938; TLI = .930, RMSEA = .073, but GFI = .827 indicates a marginal fit, and no indication exists that the chi-square value meets the fit criterion ($\chi^2(359) = 940.505$, $p = .000$). However, by considering the results of the test, the model can be considered a relatively good fit based on several criteria. For a number of indicators, we modify the model by correlating the error variance.

Analysis confirms that shared reality positively predicts environmental identity ($\beta = .775$, $t = 11.769$, $p < .001$; thus, H_{6a} is supported), group efficacy ($\beta = .704$, $t = 10.795$, $p < .001$; thus, H_{6b} is supported), and group-based anger ($\beta = .618$, $t = 7.699$, $p < .001$; H_{6c} is supported). The environmentalist identity only significantly predicts pro-environmental action ($\beta = .135$, $t = 2.039$, $p = .041$; H_{1a} is supported) and group efficacy ($\beta = .152$, $t = 2.449$, $p = .014$; thus, H_{1c} is supported) but not group-based anger (H_{1b} is rejected). Group-based anger ($\beta = .290$, $t = 4.658$, $p < .001$; H_2 is supported) and group efficacy ($\beta = .442$, $t = 5.874$, $p < .001$; H_4 is supported) positively predict pro-environmental action.

In the indirect effect, we performed bootstrapping with 1,000 iterations. Analysis confirmed that environmentalist identity (*indirect effect* = .073, 95% CI of $B = [.015, .158]$, $p = .042$; H_{7a} is supported), group-based anger (*indirect effect* = .126, 95% CI of $B = [.070, .205]$, $p = .001$; H_{7b} is supported), and group efficacy (*indirect effect* = .218, 95% CI of $B = [.124, .321]$, $p = .001$; H_{7c} is supported) mediated the relationship between shared reality and pro-environmental action. Furthermore, group efficacy (*indirect effect* = .068, 95% CI of $B = [.013, .142]$, $p = .042$; thus, H_5 is supported) mediated the relationship between environmentalist identity and pro-environmental action. In parallel mediation, environmentalist identity and group efficacy (*indirect effect* = .037, 95% CI of $B = [.008, .081]$, $p = .038$; H_{8b} is supported) mediated the relationship between shared reality and pro-environmental action. Other models of indirect effect proved nonsignificant (H_3 and H_{8a} are rejected).

Brief Discussion of Study 1

This study examines the factors of pro-environmental action in the public sphere on the Save Meratus issue. Social identity is relatively weak in explaining pro-environmental action. Ordinary people feel more confident in the success (efficacy) of the group, such that they are more robust and want to be involved in supporting the Meratus rescue action. Only group efficacy mediates the relationship between politicized identity and pro-environmental action. On local issues, people build a shared reality regarding the similarity of their identity, emotion, and efficacy regarding emerging environmental issues. In Study 1, social identity, group-based anger, and group efficacy mediated the relationship between shared reality and pro-environmental action.

Study 2: Pro-Environmental Action in the Private Sphere

Study 2 intends to confirm the theoretical model in Figure 1. We tested the model in the context of environmental problems in general instead of specifically, as in Study 1. This test was conducted to ensure that the proposed theoretical model effectively explained the phenomenon of pro-environmental action in general. Study 2 uses a different type of identity, that is, environmentalist identity. We examine pro-environmental action in the private sphere.

Method

Participants and Design

This study used quantitative methods with a correlational approach. A correlational survey was conducted using SurveyMonkey¹ website from June 16 to August 12, 2021. The population was composed of students in South Kalimantan Province, Indonesia. This study focused on ordinary people. Initially, we collected 311 data but eliminated eight participants who were not students in the province and 45 who participated in demonstrations/protests. The final sample comprised 258 participants aged 17 to 25 years who were identified using nonprobability sampling (mean age 20.04 years; $SD = 1.303$). The sample included 77 (29.8%) males and 181 (70.2%) females; 233 (90.3%) Muslims and 24 (19.7%) people of other religions; 167 (64.7%) individuals were members of various organizations (e.g., civic, student, religious, and environmental) and 91 (35.3%) were not members of any organizations. The participants were enrolled at universities in South Kalimantan and not affiliated with any environmental organization.

Measurement

All measures were subjected to CFA. The Appendix provides details of the statements and the results of the testing (Table A2). An online questionnaire was formulated in Bahasa Indonesia and consisted of research information, informed consent, instructions, measurements, and demographic data.

This study measured pro-environmental action using a scale by Eom et al. (2018), which intends to measure one's involvement in pro-environmental action in personal areas, such as recycling, energy and water conservation, and green purchasing, with 10 out of 16 valid and reliable items (composite reliability = .805, Cronbach's alpha = .812), e.g., "I collect and recycle waste paper." This measurement uses a five-point Likert type scale with agreement responses on items 1–4 (1 = *totally agree* to 5 = *totally disagree*) and answers with a frequency of 5–10 (1 = *never* to 5 = *very often*).

The environmental identity scale uses measurements from Klas (2016) and determines one's identification with environmentalist groups using five valid and reliable items (composite reliability = .852, Cronbach's alpha = .861), e.g., "I am a person who considers environmentalists important." Items are rated using a seven-point Likert-type scale ranging from 1 (*never*) to 7 (*always*).

¹ <https://www.surveymonkey.com>

The scales for group-based anger, group efficacy, and shared reality used the same measurement tools as those in Study 1 but in the context of environmentalist groups. CFA indicated that the three scales displayed satisfactory validity and reliability as follows: group-based anger (composite reliability = .908, Cronbach's alpha = .904), group efficacy (composite reliability = .881, Cronbach's alpha = .876), and shared reality (composite reliability = .868, Cronbach's alpha = .881).

Procedure and Data Analysis

The entire research procedure is the same as that of Study 1, and analysis also used the full-model SEM with the same estimators and model fit criteria as those in Study 1.

Results

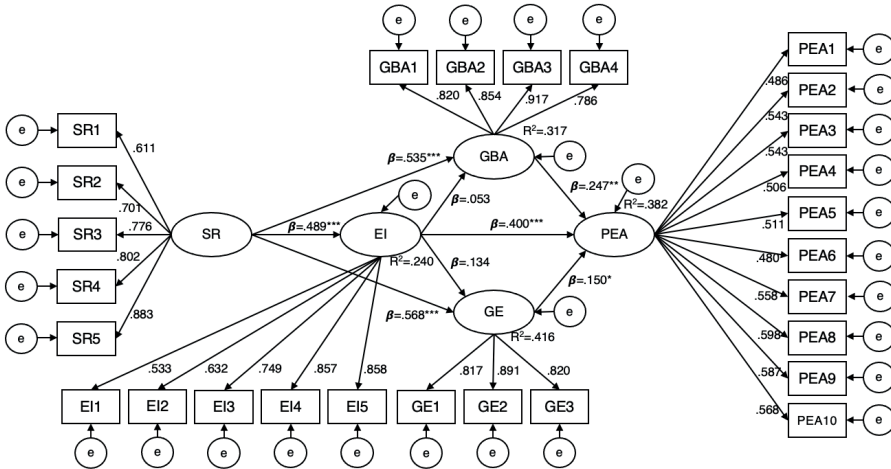
The results (Table 2) demonstrate that gender, age, organizational affiliation, and religion are not correlated with pro-environmental action. Based on the correlation coefficients, we found that shared reality, environmentalist identity, group-based anger, and group efficacy are positively correlated with pro-environmental action.

Table 2
Descriptive and Bivariate Correlation (Study 2)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
Gender	(Male = 1, Female = 2)		–	-.061	.086	.015	.037	.028	.085	.152*	.062
Age	20.040	1.303		–	-.325	-.001	.106	.013	.023	-.053	.048
Organizational affiliation	(Yes = 1, No = 0)				–	-.050	-.022	.193**	.032	.022	.083
Religion	(Muslim = 1, Non-Muslim = 0)					–	.060	.004	.025	.037	.040
Shared reality	5.288	.870					–	.465***	.511***	.546***	.462***
Environmentalist identity	4.917	1.031						–	.290***	.362***	.439***
Group-based anger	6.072	.951							–	.507***	.373***
Group efficacy	5.858	.879								–	.345***
Pro-environmental action	3.637	.604									–

Note. *** $p < .001$; ** $p < .01$; * $p < .05$.

Figure 3
Analysis Result With Full-Model SEM (Study 2)



Note. SR = shared reality, EI = environmentalist identity, GBA = group-based anger, GE = group efficacy, PEA = pro-environmental action. *** $p < .001$; ** $p < .01$; * $p < .05$.

Based on the model in Figure 3, we found that the model fits the criteria well ($\chi^2/df = 1.868$, CFI = .924; TLI = .914, RMSEA = .058; but GFI = .858 is a marginal fit, and no indication exists that the chi-square value meets the fit criteria ($\chi^2(312) = 582.921$, $p = .000$). However, by considering the results of the modeling test, the model can be considered a relatively good fit on several criteria. For a number of indicators, we modified the model by correlating the error variance.

In the model analysis, we prove that shared reality positively predicts environmental identity ($\beta = .489$, $t = 5.377$, $p < .001$; H_{6a} is supported), group efficacy ($\beta = .568$, $t = 6.806$, $p < .001$; H_{6b} is supported), and group-based anger ($\beta = .535$, $t = 6.183$, $p < .001$; H_{6c} is supported). Environmentalist identity only significantly predicts pro-environmental action ($\beta = .400$, $t = 4.142$, $p < .001$; H_{1a} is supported) but did not significantly predict group-based anger and group efficacy (H_{1b} and H_{1c} are rejected). Group-based anger ($\beta = .247$, $t = 3.269$, $p = .001$; H_2 is supported) and group efficacy ($\beta = .150$, $t = 1.974$, $p = .048$; H_4 is supported) positively predicts pro-environmental action.

In the indirect effect, we performed 1,000 bootstrapping. Analysis confirmed that environmentalist identity (*indirect effect* = .159, 95% CI of $B = [.088, .253]$, $p = .002$; H_{7a} is supported), group-based anger (*indirect effect* = .062, 95% CI of $B = [.054, .185]$, $p = .001$; H_{7b} is supported), and group-based anger (*indirect effect* = .069, 95% CI of $B = [.016, .143]$, $p = .048$; H_{7c} is supported) mediated the relationship between shared reality and pro-environmental action. The model of the indirect effect of others was confirmed to be nonsignificant (H_3 , H_5 , H_{8a} , and H_{8b} are rejected).

Brief Discussion of Study 2

This study examines the factor dynamics of pro-environmental action in the private sphere. Shared reality catalyzed identity, emotion, and efficacy, which is consistent with previous findings. The effects of group-based factors (group-based anger and group efficacy) were weaker than those in Study 1 due to the private nature of pro-environmental action. Consistent with Study 1, environmentalist identity, group-based anger, and group efficacy mediated the relationship between shared reality and pro-environmental action.

General Discussion

Both studies demonstrate that the identity of the environmentalist group plays a significant role in pro-environmental action. Whitmarsh and O'Neill (2010) explained that individuals who merge themselves as environmentalists generally act in a manner that is beneficial to the environment. Based on these findings, the study proposes that people who fuse or define themselves, as part of an environmentalist group will also behave appropriately as a group member; an example of this notion is protecting the environment. Study 2 reveals that the regression coefficient of environmentalist identity is strongly related to the private sphere of pro-environmental action compared with that in Study 1. We deem that the underlying reason is that nonactivist behavior expresses environmental needs more gently and emphasizes perceptions of environmental responsibility and obligation for moral reasons (van der Werf et al., 2013). Study 1 demonstrated that individuals in the public sphere will participate in environmental activism to affirm their identity or relieve discomfort related to such an identity (Lacasse, 2016). Interestingly, the two studies found that the mediating effects of emotion and efficacy were nonsignificant in the relationship between social identity and pro-environmental action. The reason for these findings may be that the entire sample is composed of non-activists who have not yet formed a strong identity, in which the social identity process contributes to the success of the social influence approaches, such as collective behavior (Wenzel & Süßbauer, 2020). Therefore, another corroborating variable is required, that is, shared reality.

This study considers shared reality a catalyst that strengthens social identity, group-based anger, and group efficacy. People are encouraged to express their feelings, beliefs, and environmental concerns (Higgins et al., 2021). Shared reality can strengthen social identity, because individuals who share a social identity will exhibit the same attitudes, feelings, perceptions, and values; in other words, individuals will share the same reality (Hogg et al., 2017). This concept aligns with one of the motives of shared reality, that is, connecting with other people or fellow community members. Thus, individuals are motivated to build a shared reality with others to gain validation for their identities and experiences. In addition, the emotions of group members can coalesce, although these emotions do not have the same target (Echterhoff et al., 2009). Thus, group-based anger emerging from events related to social identity as a member of a particular group can become more robust due to the similarity of feelings among one another. Shared reality can be a catalyst that strengthens group efficacy

due to shared beliefs and concerns between group members. Through this belief, individuals believe that problems can be solved in a collective manner. People who do not join environmental groups can build common views, feelings, and thoughts with environmental groups, because of the shared reality that occurs in the environment that also impacts daily life.

Humans express a strong motivation to share their understanding of the world (Higgins et al., 2017); thus, in realizing environmental care behavior, environmental activists exert many efforts such as campaigns and pro-environmental movements. The availability of various facts about environmental problems, which are spread through various media, provides awareness for individuals about current environmental conditions, which ultimately enables individuals to understand the views, feelings, and thoughts of members of environmental groups. In addition, individuals can exhibit inner similarities with a group, because of the perceived relevance of a concept in the form of feelings, beliefs, or an evaluation. Moreover, the experiences a person can foster the truth felt in the inner state (Echterhoff & Higgins, 2018).

These findings confirm that individuals who share a common reality and display a strong identification with an environmentally conscious group and belief in collective efficacy lead individuals to engage in pro-environmental action. This shared identity fosters responsibility and affiliation, while confidence strengthens the belief in the effectiveness of collective effort. In this regard, group-based anger potentially motivates action through a shared sense of injustice or urgency. This finding is in line with that of previous studies (Brügger et al., 2020; Fielding & Hornsey, 2016; Landmann & Rohmann, 2020; Pong & Tam, 2023). The localized nature of the problem in Study 1 may lead to a strong sense of shared identity and urgency among group members, which may be fueled by group-based anger at local environmental injustices. Additionally, group efficacy plays a critical role in motivating collective action for addressing this specific problem. Shared reality in Study 2 is more general but continues to foster a sense of responsibility and affiliation with the broad environmental cause. Group efficacy still plays a key role in motivating individuals to believe in the effectiveness of their collective effort, while group-based anger may stem from broad environmental challenges such as climate change or biodiversity loss.

The study successfully replicated the core tenets of SIMCA, which reaffirms the significance of group-based variables, such as social identity, group-based anger, and group efficacy, in motivating collective action. However, we introduce a novel twist to this model by replacing the traditional morality variable with *shared reality* as a catalyst. The findings elucidate how the collective understanding of shared reality within the group can act as a potential driver of collective action. This shift, that is, from morality to shared reality, marks a pivotal contribution that emphasizes the role of a shared perception of reality within the group as a motivating force. This study extends and refines the SIMCA by offering fresh insights into how group dynamics and the shared understanding of reality within a group can fuel collective action aimed to address critical issues.

The study observed a notable divergence in the mediation of group efficacy between Study 1 (which tackled specific and localized issues, such as saving

Meratus) and Study 2 (which examined general environmental concerns). In Study 1, we observed that group efficacy significantly mediated the relationship between environmental identity and pro-environmental action in the public sphere. This finding underscores the potency of beliefs in-group efficacy in motivating actions in the public sphere when addressing highly localized environmental challenges, particularly within the context of a politicized identity or movement, in which urgency and collective efficacy are notable. Conversely, in Study 2, we explored general environmental issues but were unable to identify the mediating effect of group efficacy in the relationship between environmental identity and pro-environmental action in the private sphere. This distinction may be attributed to the nature of the environmentalist identity, which is broader and less movement-oriented than those of the politicized identity in Study 1. A possibility exists that individuals with a general environmentalist identity may be more reliant a diverse set of motivation, including personal values and external influences, when engaging in pro-environmental action in the private sphere. Therefore, these findings underscore the contextual and identity-specific nature of the mediating effect of group efficacy on the relationship between environmental identity and pro-environmental action.

The desire to take pro-environmental action is fueled by the collective belief that collaboration can lead to environmental improvement. A compelling case study is the Save Meratus movement, which was initiated in 2017, in conjunction with local environmental efforts. The movement achieved a significant milestone when the Supreme Court granted cassation to revoke the mining license of PT MCM on February 4, 2021. This success significantly boosted the confidence of the people in the efficacy of group movement to accomplish common environmental goals. Nash et al. (2019) further supported this notion by emphasizing that local communities frequently prioritize local environmental issues over other concerns. Notably, positive changes in specific environmental issues typically translate into positive overall evaluations of the environment as a whole. Consequently, such enhanced perceptions can motivate individuals to positively contribute to environmental causes.

This research is limited the examination of identity, efficacy, and emotion in relation to SIMPEA. However, many other potential factors can motivate people to engage in pro-environmental action, such as in-group norms and goals (Fritsche et al., 2018), other types of identity (Milfont et al., 2020), and socio-economic factors (Eom et al., 2018). In addition, future research should use other research methods, such as experimental ones, to confirm whether the variables under study exert causal effects. This study is also limited to a nonactivist sample; thus, different findings may be generated when testing the model on activists.

Conclusion

This study confirms the extended SIMPEA by adding variables of shared reality. Analysis indicated that shared reality can catalyze identity, emotion, and efficacy. When ordinary people share similar views on environmental issues with environmental movement groups and environmentalists, they will tend to strengthen social identity,

group-based anger, and group efficacy. Social identity is a weak central factor in the ordinary (nonactivist) group, and it cannot strengthen group-based anger and group efficacy. The mediating effects of identity, emotion, and efficacy were only significant when linking shared reality and pro-environmental action. This model can explain how ordinary people (who never participated in actions and are not members of environmental organizations) want to engage in pro-environmental action. This model can be utilized to comprehend the factors driving individuals to participate in environmental action spanning from local to global scales, including climate action initiatives conducted in both the public and private spheres.

References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Barker, C. (2008). *Cultural studies: Theory and practice*. SAGE.
- Barth, M., Masson, T., Fritsche, I., Fielding, K., & Smith, J. R. (2021). Collective responses to global challenges: The social psychology of pro-environmental action. *Journal of Environmental Psychology*, 74, Article 101562. <https://doi.org/10.1016/j.jenvp.2021.101562>
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25(24), 3186–3191. <https://doi.org/10.1097/00007632-200012150-00014>
- Becker, J. C., Tausch, N., & Wagner, U. (2011). Emotional consequences of collective action participation: Differentiating self-directed and outgroup-directed emotions. *Personality and Social Psychology Bulletin*, 37(12), 1587–1598. <https://doi.org/10.1177/0146167211414145>
- Bernie, M. (2020, January 16). *Upaya Menyelamatkan Meratus Masih Panjang Meski Walhi Menang Kasasi* [There is still a long way to go to save Meratus even though Walhi won the cassation case]. Tirtoid. <https://tirtoid.id/upaya-menyelamatkan-meratus-masih-panjang-meski-walhi-menang-kasasi-es3m>
- Brügger, A., Gubler, M., Steentjes, K., & Capstick, S. B. (2020). Social identity and risk perception explain participation in the Swiss youth climate strikes. *Sustainability*, 12(24), Article 10605. <https://doi.org/10.3390/su122410605>
- Dono, J., Webb, J., & Richardson, B. (2010). The relationship between environmental activism, pro-environmental behaviour and social identity. *Journal of Environmental Psychology*, 30(2), 178–186. <https://doi.org/10.1016/j.jenvp.2009.11.006>
- Echterhoff, G. (2012). Shared reality theory. In P. A. M. van Lange, E. T. Higgins, & A. W. Kruglanski (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 180–189). Sage.
- Echterhoff, G., & Higgins, E. T. (2018). Shared reality: Construct and mechanisms [Editorial]. *Current Opinion in Psychology*, 23, A1–A4. <https://doi.org/10.1016/j.copsyc.2018.09.003>

Echterhoff, G., Higgins, E. T., & Levine, J. M. (2009). Shared reality: Experiencing commonality with others' inner states about the world. *Perspectives on Psychological Science*, 4(5), 496–521. <https://doi.org/10.1111/j.1745-6924.2009.01161.x>

Eom, K., Kim, H. S., & Sherman, D. K. (2018). Social class, control, and action: Socioeconomic status differences in antecedents of support for pro-environmental action. *Journal of Experimental Social Psychology*, 77, 60–75. <https://doi.org/10.1016/j.jesp.2018.03.009>

Fielding, K. S., & Hornsey, M. J. (2016). A social identity analysis of climate change and environmental attitudes and behaviors: Insights and opportunities. *Frontiers in Psychology*, 7, Article 121. <https://doi.org/10.3389/fpsyg.2016.00121>

Fritsche, I., Barth, M., Jugert, P., Masson, T., & Reese, G. (2018). A social identity model of pro-environmental action (SIMPEA). *Psychological Review*, 125(2), 245–269. <https://doi.org/10.1037/rev0000090>

Garza-Terán, G., Tapia-Fonllem, C., Frajjo-Sing, B., Borbón-Mendivil, D., & Poggio, L. (2022). Impact of contact with nature on the wellbeing and nature connectedness indicators after a desertic outdoor experience on Isla Del Tiburon. *Frontiers in Psychology*, 13, Article 864836. <https://doi.org/10.3389/fpsyg.2022.864836>

Ghozali, I., & Fuad. (2012). *Structural equation modeling: Teori, konsep, dan aplikasi dengan program Lisrel 8.80* [Structural equation modeling: Theory, concepts and applications with the Lisrel 8.80 program] (3rd ed.). Badan Penerbit Universitas Diponegoro.

Higgins, E. T., Rossignac-Milon, M., & Echterhoff, G. (2021). Shared reality: From sharing-is-believing to merging minds. *Current Directions in Psychological Science*, 30(2), 103–110. <https://doi.org/10.1177/0963721421992027>

Hogg, M. A., & Rinella, M. J. (2018). Social identities and shared realities. *Current Opinion in Psychology*, 23, 6–10. <https://doi.org/10.1016/j.copsyc.2017.10.003>

Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60.

Hornsey, M. J., Blackwood, L., Louis, W., Fielding, K., Mavor, K., Morton, T., O'Brien, A., Paasonen, K.-E., Smith, J., & White, K. M. (2006). Why do people engage in collective action? Revisiting the role of perceived effectiveness. *Journal of Applied Social Psychology*, 36(7), 1701–1722. <https://doi.org/10.1111/j.0021-9029.2006.00077.x>

Huntsinger, J. R., Lun, J., Sinclair, S., & Clore, G. L. (2009). Contagion without contact: Anticipatory mood matching in response to affiliative motivation. *Personality and Social Psychology Bulletin*, 35(7), 909–922. <https://doi.org/10.1177/0146167209335299>

Jost, J. T., Ledgerwood, A., & Hardin, C. D. (2008). Shared reality, system justification, and the relational basis of ideological beliefs. *Social and Personality Psychology Compass*, 2(1), 171–186. <https://doi.org/10.1111/j.1751-9004.2007.00056.x>

Klas, A. (2016). *Pro-environmentalism: Environmentalist social identity, environmentalist stereotypes, and green consumerism engagement* [Doctoral dissertation, Deakin University]. Deakin Research Online. <https://hdl.handle.net/10536/DRO/DU:30102817>

Lacasse, K. (2016). Don't be satisfied, identify! Strengthening positive spillover by connecting pro-environmental behaviors to an "environmentalist" label. *Journal of Environmental Psychology, 48*, 149–158. <https://doi.org/10.1016/j.jenvp.2016.09.006>

Landmann, H., & Rohmann, A. (2020). Being moved by protest: Collective efficacy beliefs and injustice appraisals enhance collective action intentions for forest protection via positive and negative emotions. *Journal of Environmental Psychology, 71*, Article 101491. <https://doi.org/10.1016/j.jenvp.2020.101491>

Lauren, N., Fielding, K. S., Smith, L., & Louis, W. R. (2016). You did, so you can and you will: Self-efficacy as a mediator of spillover from easy to more difficult pro-environmental behaviour. *Journal of Environmental Psychology, 48*, 191–199. <https://doi.org/10.1016/j.jenvp.2016.10.004>

Leonard, R., & Leviston, Z. (2017). Applying a model of collective efficacy for understanding consumer and civic pro-environmental actions. *Socijalna Ekologija, 26*(3), 105–123. <https://doi.org/10.17234/SocEkol.26.3.1>

Li, Q., Zhao, L., Zhao, Z., Yang, Y., & Wang, Y. (2019). The social identity model of pro-environmental action and its applicability analysis in China. *Advances in Psychology, 9*(6), 993–1001. <https://doi.org/10.12677/ap.2019.96122>

Masson, T., & Fritsche, I. (2021). We need climate change mitigation and climate change mitigation needs the "We": A state-of-the-art review of social identity effects motivating climate change action. *Current Opinion in Behavioral Sciences, 42*, 89–96. <https://doi.org/10.1016/j.cobeha.2021.04.006>

McGarty, C., Thomas, E. F., Lala, G., Smith, L. G. E., & Bliuc, A.-M. (2014). New technologies, new identities, and the growth of mass opposition in the Arab Spring. *Political Psychology, 35*(6), 725–740. <https://doi.org/10.1111/pops.12060>

Milfont, T. L., Osborne, D., Yogeewaran, K., & Sibley, C. G. (2020). The role of national identity in collective pro-environmental action. *Journal of Environmental Psychology, 72*, Article 101522. <https://doi.org/10.1016/j.jenvp.2020.101522>

Nash, N., Capstick, S., Whitmarsh, L., Chaudhary, I., & Manandhar, R. (2019). Perceptions of local environmental issues and the relevance of climate change in Nepal's Terai: Perspectives from two communities. *Frontiers in Sociology, 4*, Article 60. <https://doi.org/10.3389/fsoc.2019.00060>

Parker, L., Prabawa-Sear, K., & Kustiningsih, W. (2018). How young people in Indonesia see themselves as environmentalists: Identity, behaviour, perceptions and responsibility. *Indonesia and the Malay World, 46*(136), 263–282. <https://doi.org/10.1080/13639811.2018.1496630>

Pong, V., & Tam, K.-P. (2023). Relationship between global identity and pro-environmental behavior and environmental concern: A systematic review. *Frontiers in Psychology, 14*, Article 1033564. <https://doi.org/10.3389/fpsyg.2023.1033564>

Rizaty, M. A. (2023, February 15). *Jumlah Mahasiswa Indonesia Sebanyak 9,32 Juta Orang pada 2022* [The number of students in Indonesia will be 9.32 million in 2022]. DataIndonesia.id. <https://dataindonesia.id/pendidikan/detail/jumlah-mahasiswa-indonesia-sebanyak-932-juta-orang-pada-2022>

Rosa, C. D., Profice, C. C., & Collado, S. (2018). Nature experiences and adults' self-reported pro-environmental behaviors: The role of connectedness to nature and childhood nature experiences. *Frontiers in Psychology, 9*, Article 1055. <https://doi.org/10.3389/fpsyg.2018.01055>

Saab, R., Tausch, N., Spears, R., & Cheung, W.-Y. (2015). Acting in solidarity: Testing an extended dual pathway model of collective action by bystander group members. *British Journal of Social Psychology, 54*(3), 539–560. <https://doi.org/10.1111/bjso.12095>

Salihu, M. J. (2020). Demographic change and transition in Southeast Asia: Implications for higher education. *Universal Journal of Educational Research, 8*(2), 678–688. <https://doi.org/10.13189/ujer.2020.080241>

Schmalbach, B., Hennemuth, L., & Echterhoff, G. (2019). A tool for assessing the experience of shared reality: Validation of the German SR-T. *Frontiers in Psychology, 10*, Article 832. <https://doi.org/10.3389/fpsyg.2019.00832>

Schumacker, R. E., & Lomax, R. G. (2016). *A beginner's guide to structural equation modeling*. Routledge.

Shadiqi, M. A., Djuwita, R., Febriana, S. K. T., Septiannisa, L., Wildi, M., & Rahmawati, Y. (2022). Environmental self-identity and pro-environmental behavior in climate change issue: Mediation effect of belief in global warming and guilty feeling. *IOP Conference Series: Earth and Environmental Science, 1111*, Article 12081. <https://doi.org/10.1088/1755-1315/1111/1/012081>

Shadiqi, M. A., Muluk, H., & Milla, M. N. (2018). Palestinian solidarity action: The dynamics of politicized and religious identity patterns among student activists. *Makara Human Behavior Studies in Asia, 22*(2), 118–128. <https://doi.org/10.7454/hubs.asia.1140818>

Steg, L., & de Groot, J. I. M. (2019). *Environmental psychology: An introduction*. John Wiley & Sons. <https://doi.org/10.1002/9781119241072>

Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology, 29*(3), 309–317. <https://doi.org/10.1016/j.jenvp.2008.10.004>

Stern, P. C. (2000). New environmental theories: Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407–424. <https://doi.org/10.1111/0022-4537.00175>

Tausch, N., Becker, J. C., Spears, R., Christ, O., Saab, R., Singh, P., & Siddiqui, R. N. (2011). Explaining radical group behavior: Developing emotion and efficacy routes to normative and nonnormative collective action. *Journal of Personality and Social Psychology, 101*(1), 129–148. <https://doi.org/10.1037/a0022728>

Thomas, E. F., Mavor, K. I., & McGarty, C. (2012). Social identities facilitate and encapsulate action-relevant constructs: A test of the social identity model of collective action. *Group Processes & Intergroup Relations, 15*(1), 75–88. <https://doi.org/10.1177/1368430211413619>

van der Laarse, M. (2016). *Environmentalism in Indonesia today* [Master's Thesis, Leiden University]. Leiden University Student Repository. <https://hdl.handle.net/1887/42208>

van der Werff, E., Steg, L., & Keizer, K. (2013). The value of environmental self-identity: The relationship between biospheric values, environmental self-identity and environmental preferences, intentions and behaviour. *Journal of Environmental Psychology, 34*, 55–63. <https://doi.org/10.1016/j.jenvp.2012.12.006>

van Zomeren, M. (2015). Psychology processes in social action. In M. Mikulincer, P. R. Shaver, J. F. Dovidio, & J. A. Simpson (Eds.), *APA handbook of personality and social psychology. Volume 2: Group processes* (pp. 505–533). American Psychological Association. <https://doi.org/10.1037/14342-019>

van Zomeren, M., Kutlaca, M., & Turner-Zwinkels, F. (2018). Integrating who “we” are with what “we” (will not) stand for: A further extension of the *Social Identity Model of Collective Action*. *European Review of Social Psychology, 29*(1), 122–160. <https://doi.org/10.1080/10463283.2018.1479347>

van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin, 134*(4), 504–535. <https://doi.org/10.1037/0033-2909.134.4.504>

van Zomeren, M., Postmes, T., & Spears, R. (2012). On conviction's collective consequences: Integrating moral conviction with the social identity model of collective action. *British Journal of Social Psychology, 51*(1), 52–71. <https://doi.org/10.1111/j.2044-8309.2010.02000.x>

van Zomeren, M., Postmes, T., Spears, R., & Bettache, K. (2011). Can moral convictions motivate the advantaged to challenge social inequality?: Extending the social identity model of collective action. *Group Processes & Intergroup Relations, 14*(5), 735–753. <https://doi.org/10.1177/1368430210395637>

Wallis, H., & Loy, L. S. (2021). What drives pro-environmental activism of young people? A survey study on the Fridays For Future movement. *Journal of Environmental Psychology, 74*, Article 101581. <https://doi.org/10.1016/j.jenvp.2021.101581>

Wenzel, K., & Süßbauer, E. (2021). Exploring domestic precycling behavior: A social identity perspective. *Sustainability, 13*(3), Article 1321. <https://doi.org/10.3390/su13031321>

Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviours. *Journal of Environmental Psychology, 30*(3), 305–314. <https://doi.org/10.1016/j.jenvp.2010.01.003>

Wijanto, S. H. (2008) *Structural equation modeling dengan Lisrel 8.8: Konsep dan tutorial* [Structural equation modeling with Lisrel 8.8: Concepts and tutorial]. Graha Ilmu.

Xing, Y., Li, M., & Liao, Y. (2022). Trust, identity, and public-sphere pro-environmental behavior in China: An extended attitude-behavior-context theory. *Frontiers in Psychology, 13*, Article 919578. <https://doi.org/10.3389/fpsyg.2022.919578>

Appendix

Table A1

The Results of the CFA Test, Validity, and Reliability of Study 1

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
Pro-Environmental Action Scale					
PEA1. Demonstration with peaceful speech [<i>Demonstrasi disertai orasi damai</i>]	.578	.587	$\chi^2(58) = 170.054$, $p = .000$, $\chi^2/df = 2.932$ CFI = .969, TLI = .958, GFI = .926, RMSEA = .080 SRMR = .0374	Composite reliability = .945 Cronbach Alpha = .947	AVE = .574
PEA2. Signing a petition (either online or offline) [<i>Tanda tangan petisi (baik online atau offline)</i>]	.725	.747			
PEA3. Creating flyers containing information about the Meratus case [<i>Membuat selebaran yang berisikan informasi kasus Meratus</i>]	.713	.724			
PEA4. Distributing flyers containing information about the Meratus case [<i>Menyebarkan selebaran yang berisikan informasi kasus Meratus</i>]	.693	.703			
PEA5. Writing a letter and sending it to authorities (government leaders) [<i>Menulis surat dan mengirimkan kepada otoritas (pemimpin pemerintahan)</i>]	.835	.815			
PEA6. Making a support banner [<i>Membuat spanduk dukungan</i>]	.883	.855			
PEA7. Displaying a support banner [<i>Membentangkan spanduk dukungan</i>]	.878	.849			
PEA8. Raising funds [<i>Menggalang bantuan dana</i>]	.735	.697			
PEA9. Participating in informal discussion meetings [<i>Ikut serta pada pertemuan diskusi informal</i>]	.754	.746			
PEA10. Participating in formal discussion meetings (advocacy) with the government/other parties [<i>Ikut serta pada pertemuan diskusi formal (advokasi) dengan pemerintah/pihak lain</i>]	.761	.763			
PEA11. Inviting others (friends/family/close acquaintances) to participate in the Save Meratus Action [<i>Mengajak orang lain (teman/keluarga/kenalan dekat) untuk ikut serta pada Aksi Save Meratus</i>]	.755	.739			
PEA12. Spreading information about the action through social media (Line, etc.) [<i>Menyebarkan informasi aksi melalui media sosial (Line, dll)</i>]	.774	.751			

Table A1 Continued

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
PEA13. Participating in group religious activities to support Meratus (for example, group prayer sessions like Muslim Pray) [<i>Ikut kegiatan agama secara berkelompok demi mendukung Meratus (misalnya sholat istighosah bersama)</i>]	.708	.677	$\chi^2(58) = 170.054$, $p = .000$, $\chi^2/df = 2.932$ CFI = .969, TLI = .958, GFI = .926, RMSEA = .080 SRMR = .0374	Composite reliability = .945 Cronbach Alpha = .947	AVE = .574
Environmental Movement Identity Scale					
EI1. I see myself as part of the Save Meratus movement [<i>Saya memandang diri saya sebagai bagian dari anggota pergerakan Save Meratus</i>]	.946	.894	$\chi^2(2) = 4.103$, $p = .129$, $\chi^2/df = 2.052$, CFI = .998, TLI = .994, GFI = .994, RMSEA = .059 SRMR = .0084	Composite reliability = .921 Cronbach Alpha = .917	AVE = .749
EI2. I identify myself as a member of the Save Meratus movement [<i>Saya mengidentifikasi diri saya sebagai anggota dari pergerakan Save Meratus</i>]	.961	.895			
EI3. I feel a strong bond with the Save Meratus movement group [<i>Saya merasa memiliki ikatan yang kuat dengan kelompok pergerakan Save Meratus</i>]	.875	.838			
EI4. I am proud of the Save Meratus movement group [<i>Saya bangga dengan kelompok pergerakan Save Meratus</i>]	.640	.628			
Group-Based Anger Scale					
GBA1. As part of a group, I felt angry with what other groups did to Meratus [<i>Sebagai bagian kelompok, saya merasa geram dengan apa yang dilakukan oleh kelompok lain pada Meratus</i>]	.825	.751	$\chi^2(1) = .004$, $p = .947$, $\chi^2/df = .004$, CFI = 1.000, TLI = 1.007, GFI = 1.000, RMSEA = .000 SRMR = .0005	Composite reliability = .895 Cronbach Alpha = .886	AVE = .687
GBA2. As part of the group, I felt angry about the behavior of other groups that have threatened Meratus [<i>Sebagai bagian kelompok, saya merasa marah dengan perilaku kelompok lain yang telah mengancam Meratus</i>].	.932	.833			
GBA3. As part of the group, I felt frustrated by the Meratus issue caused by other groups [<i>Sebagai bagian kelompok, saya merasa kesal dengan masalah Meratus yang ditimbulkan oleh kelompok lain</i>].	.918	.861			
GBA4. As part of the group, I felt unhappy about the Meratus issue [<i>Sebagai bagian kelompok, saya merasa tidak senang dengan masalah Meratus</i>].	.596	.595			

Table A1 Continued

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
Group Efficacy Scale					
GE1. In my view, our strength as a group can stop the Meratus problem [Dalam pandangan saya, kekuatan kita sebagai kelompok dapat menghentikan masalah Meratus]	.887	.863	$\chi^2(1) = 1.574$, $p = .210$, $\chi^2/df = 1.574$, CFI = .999, TLI = .998, GFI = .997,	Composite reliability = .940 Cronbach Alpha = .939	AVE = .839
GE2. I believe that collective efforts can successfully prevent the Meratus problem [Saya berpikir bahwa upaya bersama dapat berhasil mencegah masalah Meratus]	.968	.908	RMSEA = .043 SRMR = .0051		
GE3. Our unity becomes strong as a group and can bring about many changes together [Persatuan kita menjadi kuat sebagai kelompok dan dapat banyak perubahan secara bersama-sama].	.891	.858			
Shared Reality Scale					
SR1. I think that the members of the Save Meratus movement and I are on the same wavelength with regard to the Meratus case [Saya pikir anggota pergerakan Save Meratus dan saya berada pada gelombang pikiran yang sama terkait dengan kasus Meratus].	.848	.866	$\chi^2(3) = 3.871$, $p = .276$, $\chi^2/df = 1.290$, CFI = .999, TLI = .998, GFI = .995,	Composite reliability = .958 Cronbach Alpha = .957	AVE = .816
SR2. I feel the same way about the Meratus case as members of the Save Meratus movement [Saya merasakan hal yang sama tentang kasus Meratus seperti anggota pergerakan Save Meratus].	.864	.877	RMSEA = .031 SRMR = .0062		
SR3. I agree with the perspective of members of the Save Meratus movement regarding the Meratus case [Saya setuju dengan sudut pandang anggota pergerakan Save Meratus mengenai kasus Meratus].	.936	.882			
SR4. Members of the Save Meratus movement and I see the Meratus case in the same way [Anggota pergerakan Save Meratus dan saya melihat kasus Meratus dengan cara yang sama].	.943	.881			
SR5. I agree with the perception of members of the Save Meratus movement about the Meratus case [Saya setuju dengan persepsi anggota pergerakan Save Meratus tentang kasus Meratus].	.921	.892			

Note. SLF = standardized loading factor, CITC = corrected item total correlation, RMSEA = root-mean-square error of approximation, GFI = goodness-of-fit index, CFI = comparative fit index, TLI = Tucker–Lewis index, AVE = average variance extracted, Bahasa version of items in given in square brackets.

Table A2*The Results of the CFA Test, Validity, and Reliability of Study 2*

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
Pro-Environmental Action Scale					
PEA1. I collect and recycle waste paper [Saya mengumpulkan dan mendaur ulang kertas bekas]	.491	.522	$\chi^2(34) = 63.965$, $p = .001$,	Composite reliability = .805	AVE = .293
PEA2. I collect empty bottles for the recycling process [Saya mengumpulkan botol-botol kosong untuk proses daur ulang sampah]	.559	.577	$\chi^2/df = 1.881$, CFI = .951, TLI = .935, GFI = .952,	Cronbach Alpha = .812	
PEA3. I often discuss environmental problems with friends [Saya sering berbincang dengan teman-teman tentang masalah-masalah yang berkaitan dengan lingkungan]	.532	.493	RMSEA = .059		
PEA4. In the past, I have reminded someone of their environmentally damaging behavior [Di masa lalu, saya pernah mengingatkan seseorang atas perilaku merusak lingkungan yang dilakukannya]	.465	.413			
PEA5. When you visit a grocery store, how often do you use reusable bags? [Saat Anda mengunjungi toko bahan makanan, seberapa sering Anda menggunakan tas yang dapat digunakan kembali?]	.509	.433			
PEA6. How often do you eat organic food? [Seberapa sering Anda makan makanan organik?]	.483	.430			
PEA7. How often do you eat local food (produced within 161 km or 100 miles)? [Seberapa sering Anda makan makanan lokal (diproduksi dalam jarak 161 km atau 100 mil)?]	.559	.486			
PEA8. How often do you turn off your personal electronic devices or put them in low-power mode when not in use? [Seberapa sering Anda mematikan alat elektronik pribadi Anda atau dalam mode daya rendah saat tidak digunakan?]	.609	.518			
PEA9. When buying light bulbs, how often do you purchase high-efficiency energy-saving bulbs? [Saat membeli bola lampu, seberapa sering Anda membeli bola lampu hemat energi dengan efisiensi tinggi?]	.615	.533			

Table A2 Continued

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
PEA10. How often do you take actions to conserve water when showering, doing laundry, washing dishes, watering plants, or using water for other purposes? [<i>Seberapa sering Anda melakukan tindakan untuk menghemat air pada saat mandi, mencuci baju, mencuci piring, menyiram tanaman atau penggunaan air lainnya?</i>]	.574	.493	$\chi^2(34) = 63.965$, $p = .001$, $\chi^2/df = 1.881$, CFI = .951, TLI = .935, GFI = .952, RMSEA = .059	Composite reliability = .805 Cronbach Alpha = .812	AVE = .293
Environmental Identity Scale					
EI1. I am a person who considers environmentalists important [<i>Saya adalah orang yang menganggap para pecinta lingkungan penting</i>]	.512	.512	$\chi^2(3) = 4.499$, $p = .222$, $\chi^2/df = 1.500$, CFI = .998, TLI = .992, GFI = .993, RMSEA = .044	Composite reliability = .852 Cronbach Alpha = .861	AVE = .544
EI2. I am someone known as an environmentalist [<i>Saya adalah orang yang dikenal sebagai pecinta lingkungan</i>]	.641	.674			
EI3. I am someone who feels a strong connection with environmentalists [<i>Saya adalah orang yang merasakan ikatan yang kuat dengan pecinta lingkungan</i>]	.755	.732			
EI4. I am someone who is proud to be part of environmentalists [<i>Saya adalah orang yang bangga menjadi bagian dari pencinta lingkungan</i>]	.847	.733			
EI5. I am someone who sees myself as part of environmentalists [<i>Saya adalah orang yang melihat diri saya sebagai bagian dari pecinta lingkungan</i>]	.872	.749			
Group-Based Anger Scale					
GBA1. As part of a group, I felt angry with what other groups did to damage the environmental [<i>Sebagai bagian kelompok, saya merasa geram dengan apa yang dilakukan oleh kelompok lain yang merusak lingkungan</i>]	.812	.778	$\chi^2(2) = 8.568$, $p = .014$, $\chi^2/df = 4.284$, CFI = .991, TLI = .972, GFI = .985, RMSEA = .113	Composite reliability = .908 Cronbach Alpha = .904	AVE = .713
GBA2. As part of the group, I felt angry about the behavior of other groups that have threatened the sustainability of the environment. [<i>Sebagai bagian kelompok, saya merasa marah dengan perilaku kelompok lain yang telah mengancam kelestarian lingkungan</i>]	.847	.786			
GBA3. As part of the group, I felt frustrated by the environmental damage caused by other groups [<i>Sebagai bagian kelompok, saya merasa kesal dengan masalah kerusakan lingkungan yang ditimbulkan oleh kelompok lain</i>]	.929	.856			

Table A2 Continued

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
GBA4. As part of the group, I felt unhappy about the environmental damage issue [<i>Sebagai bagian kelompok, saya merasa tidak senang dengan masalah kerusakan lingkungan</i>]	.782	.738	$\chi^2(2) = 8.568$, $p = .014$, $\chi^2/df = 4.284$, CFI = .991, TLI = .972, GFI = .985, RMSEA = .113	Composite reliability = .908 Cronbach Alpha = .904	AVE = .713
Group Efficacy Scale					
GE1. In my view, the strength of the group can stop environmental problems [<i>Dalam pandangan saya, kekuatan kelompok dapat menghentikan masalah lingkungan</i>]	.823	.749	$\chi^2(1) = .494$, $p = .482$, $\chi^2/df = .494$, CFI = 1.000, TLI = 1.004, GFI = .999, RMSEA = .000	Composite reliability = .881 Cronbach Alpha = .876	AVE = .712
GE2. I believe that collective efforts with the group can succeed in carrying out pro-environment actions [<i>Saya berpikir bahwa upaya bersama kelompok dapat berhasil dalam melaksanakan aksi pro-lingkungan</i>]	.905	.810			
GE3. The unity of the group becomes strong as one group, and can bring about many changes in the environment [<i>Persatuan kelompok menjadi kuat sebagai satu kelompok, dan dapat membawa banyak perubahan dalam lingkungan</i>]	.823	.736			
Shared Reality Scale					
SR1. I think that the members of environmentalist group and I are on the same wavelength with regard to environmental problem [<i>Saya pikir anggota kelompok pecinta lingkungan dan saya berada pada gelombang pikiran yang sama terkait dengan masalah lingkungan</i>]	.589	.624	$\chi^2(3) = 3.929$, $p = .269$, $\chi^2/df = 1.310$, CFI = .999, TLI = .996, GFI = .994, RMSEA = .035	Composite reliability = .868 Cronbach Alpha = .881	AVE = .572
SR2. I feel the same way about the environmental problem as members of environmentalist group [<i>Saya merasakan hal yang sama tentang masalah lingkungan seperti anggota kelompok pecinta lingkungan</i>]	.673	.741			
SR3. I agree with the perspective of members of the environmentalist group regarding the environmental problem [<i>Saya setuju dengan sudut pandang anggota kelompok pecinta lingkungan mengenai masalah lingkungan</i>]	.777	.729			

Table A2 Continued

Indicator	SLF (> .40)	CITC (> .40)	Fit Model Indices	Reliability (> .70)	Validity (> .50)
SR4. Members of the environmentalist group and I see the environmental problem in the same way [<i>Anggota kelompok pecinta lingkungan dan saya melihat masalah lingkungan dengan cara yang sama</i>]	.802	.714	$\chi^2(3) = 3.929$, $p = .269$, $\chi^2/df = 1.310$, CFI = .999, TLI = .996, GFI = .994, RMSEA = .035	Composite reliability = .868 Cronbach Alpha = .881	AVE = .572
SR5. I agree with the perception of members of the environmentalist group about the environmental problem [<i>Saya setuju dengan persepsi anggota kelompok pecinta lingkungan tentang masalah lingkungan</i>]	.903	.770			

Note. SLF = standardized loading factor, CITC = corrected item total correlation, RMSEA = root-mean-square error of approximation, GFI = goodness-of-fit index, CFI = comparative fit index, TLI = Tucker–Lewis index, AVE = average variance extracted, Bahasa version of items in given in square brackets.