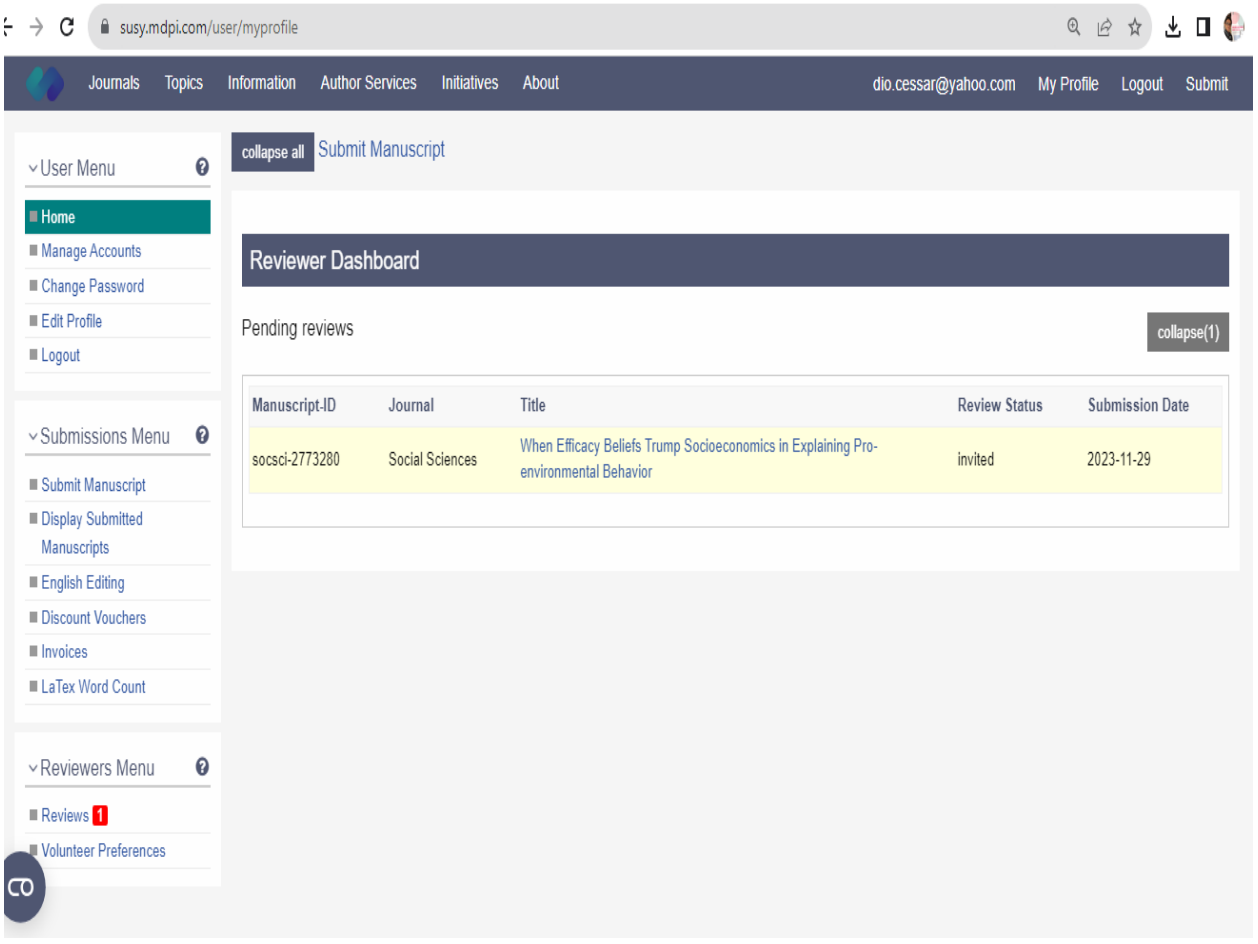
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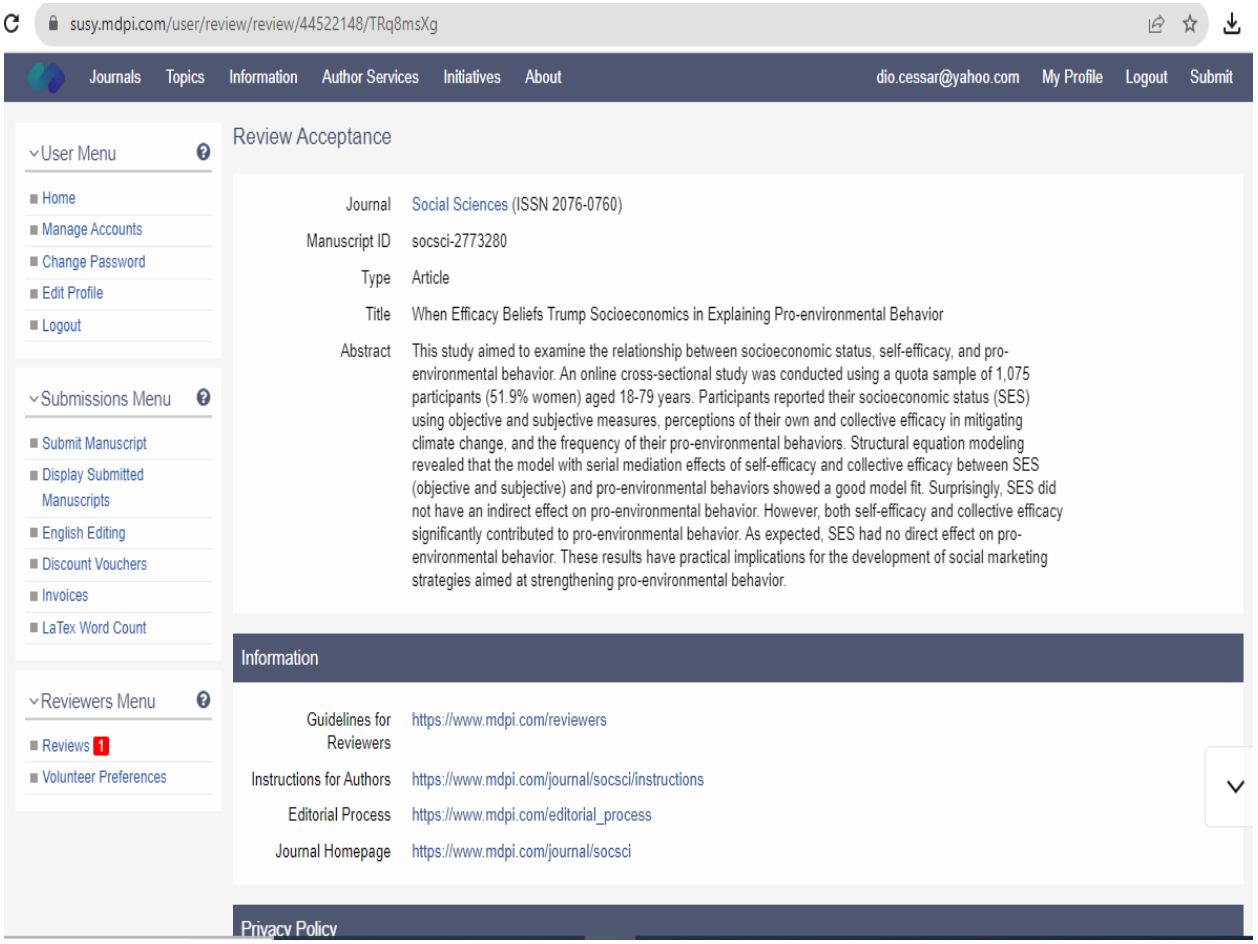
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When Efficacy Beliefs Trump Socioeconomics in Explaining Pro-environmental Behavior

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Keywords: SES; self-efficacy; collective efficacy; pro-environmental behavior

1. Introduction

Climate change is an urgent global issue requiring comprehensive engagement across all sectors of society. People play a significant role in the fight against climate change: by engaging in pro-environmental behaviors such as saving energy and buying recycled products (Stern et al. 1999; Stern 2000), they can collectively contribute to global efforts to reduce greenhouse gas emissions and create a more sustainable and resilient future (Gardner and Stern 2008). It is critical to closely examine the determinants of pro-environmental behaviors in order to promote them (Li et al. 2019). Some studies (Abraham et al. 2015; Chen 2015; Hamann and Reese, 2020) show that one of these determinants is self-efficacy, i.e. a person's belief that they are capable of performing a certain behavior. Self-efficacy, a cornerstone of social cognitive theory, plays a central role in human agency (Bandura 1982, 1989, 1999, 2000, 2002). Originally, the focus of the theory was on the personal agency of the individual, and much of the research was devoted to self-efficacy. Over time, the scope of the theory expanded to include collective agency, with collective efficacy as a central element (Bandura 1986). According to Bandura (1997), the individual is not an isolated being within society, and numerous challenges in life revolve around common problems that require joint efforts. In the context of environmental issues, collective efficacy is of particular importance because environmental sustainability inherently requires the collective efforts of all members of society (Bonniface 2003). There are two main approaches to measuring collective efficacy (Bandura 2000; Fernandez-Ballesteros et al. 2002). The first approach aggregates the perceived personal efficacies of group members. The second approach aggregates the members' assessments of the capabilities of the group as a whole. As the latter approach is holistic and encompasses the coordinative and interactive dynamics within groups (Bandura 2000; Fernandez-Ballesteros et al. 2002), we have chosen this approach.

Recognizing that efficacy should be examined in the context of specific behaviors in specific situations (Maddux 1995), this study examined both collective efficacy and self-efficacy in the context of climate change mitigation behaviors. Research has shown that collective environmental efficacy is a predictor of pro-environmental behaviors (e.g., Chen

2015; Hamann and Reese 2020), as is environmental self-efficacy (Abraham et al. 2015; Chen 2015; Hamann and Reese 2020). Several authors have found that collective efficacy plays a more important role than self-efficacy in predicting pro-environmental behavior (Chen 2015; Homburg and Stolberg, 2006). Collective efficacy may be particularly relevant to pro-environmental behavior because environmental sustainability requires the efforts of all members of society (Bonniface 2003). Jugert et al. (2016) suggested that the strength of these factors lies not in their individual contribution to explaining variance, but in their ability to influence each other and collectively motivate pro-environmental behavior. In a series of experiments examining the links between these two forms of efficacy and their influence on pro-environmental behavior, the authors examined the effects of collective efficacy on self-efficacy from a social identity perspective. In three of the four experiments, they found no direct effect of collective efficacy on pro-environmental intention. Their research showed that increasing perceived collective efficacy leads to pro-environmental intentions primarily through increasing self-efficacy.

In contrast to the social identity perspective, the social cognitive perspective assumes that self-efficacy precedes the individual's perception of collective efficacy (Fernandez-Ballesteros et al. 2002). This relationship was confirmed in the study by Fernandez-Ballesteros et al. (2002). They demonstrated that perceptions of collective efficacy are influenced in part by a strong sense of personal efficacy, particularly the belief that individuals can contribute to social change. The above-mentioned study by Jugert et al. (2016) also provided evidence that self-efficacy plays a crucial role in the perception of collective efficacy and consequently influences intentions for pro-environmental behavior. This relationship was found in two out of four experiments, although it was weaker than the one hypothesized from the social identity perspective. Jugert et al. (2016) focused on the triggering of social identification processes in small groups, e.g. young people in their home countries or students. These findings may not be directly transferable to larger groups (e.g., entire societies), which individuals may consider more relevant for coping with global climate change. In this study, we investigated people's beliefs about the functioning of these larger groups, i.e. society as a whole.

We also considered sociostructural factors to explain the effects of the studied variables on pro-environmental behavior. According to social cognitive theory (Bandura 1982, 1989, 1999, 2000, 2002), the relationship between personal agency and social structure is interdependent. Personal agency is shaped by socio-structural factors, including socioeconomic status (SES) (Bandura 2002). SES assesses a person's current access to various types of resources and is usually measured using objective indicators, such as income and education (Eastbrook et al. 2023). People with higher SES live in environments that provide them with more opportunities to align their outcomes with their desires, beliefs, and feelings (Eom et al. 2018). Conversely, individuals in lower-SES environments characterized by limited resources may not have such opportunities. Consequently, individuals with lower SES may perceive external factors as have the most important influence on their life outcomes, leading to a reduction in their self-efficacy (Eom et al. 2018).

Thus, in this study, we examined the relationship between SES, self-efficacy, and collective efficacy in predicting pro-environmental behavior. Given the ongoing debate in the literature (e.g., Antonopolis 2023) about the validity of objective SES relative to subjective SES measures (e.g., perceptions of standard of living), our study incorporates both measurement approaches.

Based on social cognitive theory, we hypothesized that a model with serial mediation effects of self-efficacy and collective efficacy between SES (objective and subjective) and pro-environmental behavior would have a good model fit (H1). We also hypothesized that SES (both objective and subjective) would have an indirect relationship with pro-environmental behaviors. Specifically, we hypothesized that individuals with a higher SES would have a stronger sense of self-efficacy. This, in turn, contributes to higher collective efficacy, which motivates them to engage in pro-environmental behaviors (H2). Since social cognitive theory (Bandura 2002) assumes that sociostructural influences operate

primarily through psychological mechanisms and have no direct effect on behavior, we also hypothesized that SES (both objective and subjective) has no direct relationship with pro-environmental behavior (H3).

2. Method

2.1. Participants

A total of 1075 participants (51.9% women) aged 18 to 79 years participated in this study. Quota sampling was used in this study, in which participants were selected from the adult population of Croatia. Quotas were determined based on the geographic location and sex of the participants.

Croatia is administratively divided into twenty-one counties, which were treated as separate categories for sampling purposes to account for climatic differences in the country (the country is exposed to three climatic zones) (Šegota and Filipčić 1996) and related differences in the pronounced effects of climate change (Eptisa Adria d.o.o. 2017), such as experience with extreme weather. Personal experiences of extreme weather events have been shown to influence engagement with environmental issues (e.g., van der Linden 2017).

Within each county, the participants were divided by sex to ensure that the proportion of males and females in the sample matched that of the overall population.

The sample size was determined by first calculating the required number of participants for a 95% confidence level and 3% margin of [illegible] 3,871,833 legal adults. This calculation resulted in a req[illegible] of 1,075 participants. A proportional allocation method was used to [illegible] pants in each subgroup. This method involved assigni[illegible] a proportionate number of participants based on the population size within each cou[illegible] and sex. Categories. Through this approach, we aimed to create a sample that accura[illegible] represents the composition of the overall population in terms of geographic location (county) and sex.

To determine the exact number of respondents in each subgroup, data from the State Agency for Statistics, specifically from the most recent 2021 census conducted by the Croatian Bureau of Statistics, were used.

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2.2. Measures

In this study, we used both objective and subjective SES measures. Objective SES was assessed using two indicators: current monthly household income and education level. Participants rated their household's current monthly income on an 8-point scale (1 = up to €600, 2 - €601-860, 3 = €861-1,130, 4 = €1,131-1,660, 5 = €1,661-2,190, 6 = €2,191-2,720, 7 = €2,721-3,250, 8 = more than 3,250 €) and indicated their highest level of education on a 5-point scale (1 = incomplete or completed elementary school, 2 = completed two- or three-year high school, 3 = completed four-year high school, 4 = bachelor's degree, 5 = master's or doctoral degree). For subjective SES assessment, a single item (*How would you rate your standard of living in terms of total household income?*) on a 5-point scale from 1 (significantly below average) to 5 (significantly above average). To assess the construct validity of the SES measure, a two-factor CFA measurement model of objective and subjective SES (Figure S1) was tested, where objective SES was represented by two indicators (income and education level), and subjective SES was represented by one indicator (perceived standard of living), with both factors allowed to covary. Because subjective SES is a latent variable with only one indicator, its error variance was set to zero, as suggested by Beaujean (2014). However, the fit of this model could not be verified because it only identified zero degrees of freedom. Therefore, its adequacy was examined in a more comprehensive overall measurement model with all constructs.

Efficacy was measured using seven items taken from Hornsey et al. (2015). Three items measured perceived self-efficacy in relation to climate change (e.g., "I believe my actions have an influence on climate change"), and four items measured perceived collective efficacy (e.g., "World governments and scientists, working together, can reduce the impacts of climate change"). Responses were recorded on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). To assess the construct validity of this scale, a two-factor CFA measurement model was specified, in which self-efficacy was represented by three items and collective efficacy by four items, and both factors were allowed to covary (Figure S2). This model showed poor fit to the data ($\chi2(13) = 277.308$; $p < 0.05$; CFI = 0.92; TLI = 0.86; RMSEA = 0.14; SRMR = 0.08). Inspection of the modification indices revealed that reporting a cross-load for the first self-efficacy indicator ("I believe my actions have an influence on climate change") would greatly improve the fit of the model. This could indicate the presence of method variance, as this item was the only reverse key indicator of the self-efficacy subscale; that is, it was the only positively worded item, whereas all indicators of collective efficacy were also positively worded. The other two indicators of self-efficacy ("It is hard to imagine that individuals like myself can make a difference with respect to a global phenomenon such as climate change" and "There is little point in me taking action against climate change because so many others will not") were negatively worded. Because the addition of cross-loading for the first self-efficacy item in the model specification was not justified from the standpoint of construct validity, this item was deleted from the model specification and a new model with six items was examined (Figure S3). Model fit improved greatly for most of the fit indices used ($\chi2(8) = 60.818$; $p < 0.05$; CFI = 0.98; TLI = 0.96; RMSEA = 0.08; SRMR = 0.03), with only the RMSEA index being slightly above the recommended threshold of 0.06. In addition, most standardized factor loadings exceeded 0.7. Furthermore, the structural equation modeling (SEM) -based reliability of the self-efficacy subscale was reasonable, given the smaller number of items, and remained virtually the same before (0.643) and after (0.647) item removal. The reliability coefficient of the Collective Efficacy subscale (0.880) based on SEM indicated excellent reliability.

Pro-environmental behavior was assessed using eight items from Ojala (2012, 2013) covering everyday actions (e.g., "biking or walking instead of using a car") and advocating for the environment to others (e.g., "encouraging friends to advocate for the environment"). Responses were recorded on a 5-point scale ranging from 1 (almost never) to 5 (almost always). The construct validity of this measure was assessed using an eight-item, single-factor CFA model (Figure S4). The fit of this model proved to be poor for all indices used ($\chi2(20) = 341.890$; $p < 0.05$; CFI = 0.81; TLI = 0.73; RMSEA = 0.12; SRMR = 0.07), with most standardized factor loadings below or just above 0.50. Therefore, we retained only the three indicators with the highest factor loadings and examined a new single-factor 3-item CFA measurement model (Figure S5). However, it was not possible to assess the goodness of fit of this model, because it was identified only with zero degrees of freedom. Therefore, it was further examined in the context of a comprehensive measurement model that included all the latent variables. After removing these five indicators, the reliability coefficient of the scale based on SEM decreased slightly from 0.745 (8-item) to 0.705 (3-item), indicating that the reliability of this shorter measure was still adequate.

2.3. Procedure

The study was conducted online between March and June 2023 using the SoSci Survey Application (Leiner 2019). In the survey, the objectives of the study were explained and the confidentiality of the participants, anonymity, analysis at group level and the possibility to end participation without consequences were ensured. After the participants had given their consent to participate, they completed the questionnaire. It took about 20 minutes to complete the questionnaire.

2.4. Data analysis

To examine the relationships between the study constructs, we employed SEM using the lavaan package (Rosseel 2012) in R (R Core Team 2013). Visualizations were created using semPlot (Epskamp 2015) and Semptools (Cheung and Lai 2023). Owing to the high chi-square sensitivity to sample size (Kline, 2015), the model fit evaluation considered various indices (CLI, TLI, RMSEA, and SRMR), following Hu and Bentler's cut-off guidelines (1999). The reliability coefficients for the scales used were SEM-based ratios of explained to total variance in the latent variable indicators.

3. Results

The distribution of participants by household income and education level (indicators of objective SES) and by perceived standard of living as an indicator of subjective SES are shown in Table 1. Descriptive statistics on self-efficacy, collective efficacy, and pro-environmental behavior are shown in Table 2.

Table 1

Distribution of Participants by Frequency of Household Income, Education Le[illegible] Standard of Living

SES indicator		
Household income	Up to €600	[illegible]
	€601-860	3.3
	€861-1.130	12.7
	€1.131-1.660	16.7
	€1.661-2.190	18
	€2.191-2.720	18.9
	€2.721-3.250	10.3
	More than €3.250	14.1
Education	Incomplete or completed elementary school	1.5
	Completed two or three years of high school	4
	Completed four years high school	38.8
	Bachelor's degree	47.5
	Master's or doctoral degree	8.1
Standard of living	Significantly below average	1.2
	Below average	8.5
	Average	66.2
	Above average	22.9
	Significantly above average	1.2

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Extremely low or high per capita household income was less common among participants, with most between €1.131 and 2.720 per month. Moreover, most participants had finished four years of high school or achieved an undergraduate or graduate degree and assessed their standard of living as average.

Table 2

Descriptive Statistics of Responses About Self-efficacy, Collective Efficacy, and Pro-environmental Behavior

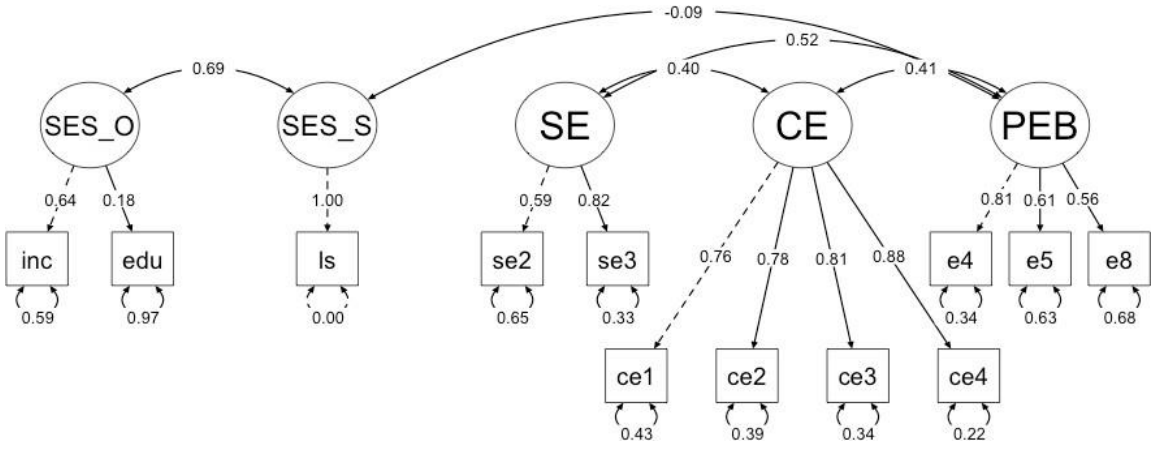
	M	*SD*	Minimum	Maximum
Self-efficacy	4.11	1.215	1	6
Collective efficacy	4.7	1.107	1	6
Pro-environmental behavior	3.13	0.900	1	5

On average, participants rated their perceived environmental collective efficacy as fairly high, while self-efficacy rates were somewhat lower, but were still above the scale midpoint. The average assessment of pro-environmental behavior was at the midpoint.

Before testing the study hypotheses using the full SEM model, the overall measurement model with all the constructs used in the study was specified, allowing for interlatent covariances and inspection. This overall model showed to have excellent fit to the data ($\chi 2(45) = 115.146$; $p < 0.05$; CFI = 0.98; TLI = 0.97; RMSEA = 0.04; SRMR = 0.03). As shown in Figure 1, there was a significant positive relationship between self-and collective efficacy, and both efficacy measures were positively related to pro-environmental behavior.

Figure 1

Overall Measurement Model With all Latent Constructs Included in the Study



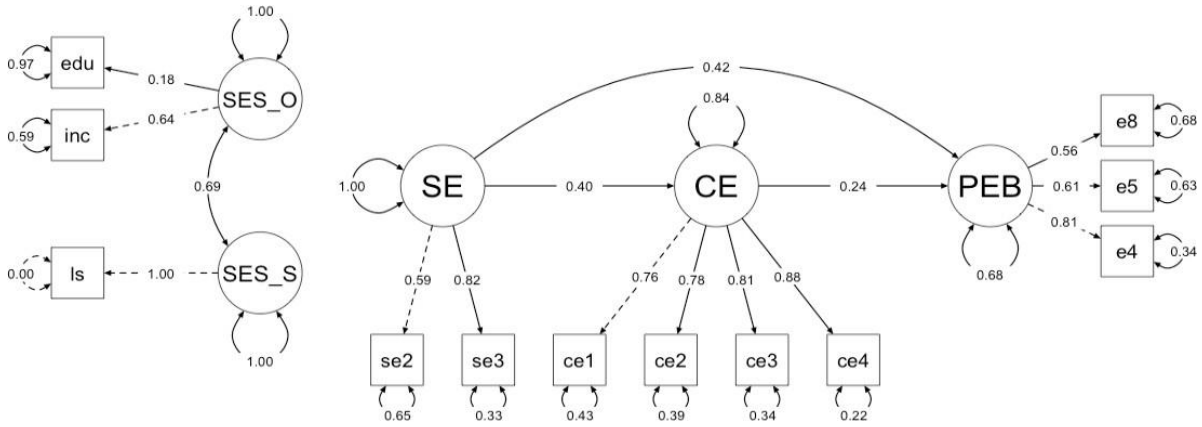
Note. Standardized coefficients are presented. Only significant covariances are shown. SES_O, objective SES; SES_S, subjective SES; SE, self-efficacy; CE, collective efficacy; PEB, pro-environmental behavior.

However, neither objective nor subjective SES were significantly related to either self- or collective efficacy, while only subjective SES was negatively related to pro-environmental behavior. There was also a significant and strong positive relationship between the objective and subjective SES.

To test whether self and collective efficacy serially mediated the relationship between objective and subjective SES and pro-environmental behavior, the full SEM model shown in Figure 2 was specified with nine directional paths.

Figure 2

Parameter Estimates of the Full Serial Mediation Model



Note. Standardized coefficients are presented. Only significant regression paths are shown. SES_O, objective SES; SES_S, subjective SES; SE, self-efficacy; CE, collective efficacy; PEB, pro-environmental behavior.

Self-efficacy and collective efficacy were regressed on objective and subjective SES scores. Collective efficacy was also regressed on self-efficacy, whereas pro-environmental behavior was regressed on all four latent constructs: objective and subjective SES, self, and collective efficacy. The covariance between the two exogenous predictor variables, objective and subjective SES, was also specified in the model.

To test whether this model fits the data, goodness-of-fit indices were inspected and all of them revealed excellent overall fit of the specified full structural model ($\chi 2(45) = 115.146$; $p < 0.05$; CFI = 0.98; TLI = 0.97; RMSEA = 0.04; SRMR = 0.03). These results confirm H1.

To test our hypothesis regarding the indirect effects of objective and subjective SES on pro-environmental behaviors via perceived self- and collective efficacy, we tested six mediation pathways: four with one mediator and two with multiples. As shown in Table 2, none of the indirect effects were statistically significant.

Table 2

Estimates of Objective / Subjective SES and Pro-Environmental Behavior Indirect Association Through Self- and Collective Efficacy

		b	*SE*	*z*	*p*	95% *CI* lower	95% *CI* upper
SES_O	SE	0.00	6.63	0.00	1	-0.113	0.163
	CE	-0.00	7.55	-0.00	1	-0.060	0.075
	SE and CE	0.00	4.41	0.00	1	-0.031	0.028
SES_S	SE	-0.02	9.11	-0.00	0.99	-0.226	0.142
	CE	-0.01	10.42	-0.00	0.99	-0.112	0.077
	SE and CE	-0.00	6.14	-0.00	1	-0.041	0.039

Note. Bootstrap confidence intervals based on 5000 samples are presented. SES_O – objective SES, SES_S – subjective SES, SE – self-efficacy, CE – collective efficacy.

Based on these results, we reject our H2. As shown in Figure 2, although higher self-efficacy was associated with higher collective efficacy, which, in turn, was associated with higher engagement in pro-environmental behaviors, contrary to initial expectations, neither SES indicator showed a correlation with self-or collective efficacy. Although this was not part of the objectives of our study, we tested an additional mediation model (Figure S6) that only included self-efficacy as a predictor, collective efficacy as a mediator, and pro-environmental behavior as an outcome. The results showed that this narrower model also had excellent and almost identical fit to the data ($\chi 2(24) = 82.698$; $p < 0.05$; CFI = 0.98; TLI = 0.98; RMSEA = 0.05; SRMR = 0.03).

As shown in Figure 2, neither the objective ($b = -0.07$, $SE = 0.07$, $z = -0.89$, $p > .05$) nor the subjective ($b = -0.01$, $SE = 0.11$, $z = -0.11$, $p > .05$) measures of SES had a direct effect on pro-environmental behavior, which is in accordance with H3.

4. Discussion

Efficacy beliefs are significant determinants of human behavior. Some studies (e.g., Chen 2015; Homburg and Stolberg, 2006) have shown that collective efficacy is particularly important in the context of pro-environmental behavior because the pursuit of environmental sustainability requires collective effort. Surprisingly, the relationship between self-efficacy and collective efficacy has received little attention in the literature. Within the framework of social cognitive theory (Bandura 2002), collective efficacy is closely related to individuals' perceptions of their self-efficacy, which are influenced by sociostructural factors such as socioeconomic status. The aim of this study was to examine the relationship between objective and subjective SES, environmental self-efficacy and collective

efficacy, and pro-environmental behaviors within the framework of social cognitive theory. Our research aims to improve the understanding of these dynamics and contribute valuable insights into promoting sustainable behaviors, ultimately fostering a more environmentally aware and responsible society.

The results showed that the model with serial mediation effects of self-efficacy and collective efficacy between SES (objective and subjective) and pro-environmental behavior showed a good fit, confirming the first hypothesis. However, the results also refute the second hypothesis that SES (objective or subjective) has an indirect effect on pro-environmental behavior through self-efficacy and collective efficacy. Specifically, our structural model showed that neither objective nor subjective SES predicted self-efficacy, although we found significant positive associations among self-efficacy, collective efficacy, and pro-environmental behavior. We went one step further and tested the model fit with only the efficacy variables and pro-environmental behavior, which yielded a good fit. These results confirm the importance of efficacy beliefs in predicting pro-environmental behavior and the existence of a relationship between self-efficacy and collective efficacy from the perspective of social cognitive theory, with self-efficacy being a predictor of collective efficacy.

In contrast to our study, the study by Fernandez-Ballesteros et al. (2002) found that objective SES significantly predicted self-efficacy, which in turn predicted collective efficacy. However, our study differs from the Fernandez-Ballesteros et al. (2002) study in two ways, both related to the measurement of key variables. First, Fernandez-Ballesteros et al. (2002) did not focus on environmental efficacy beliefs. Second, they assessed objective SES using a comprehensive index that took into account several aspects such as participants' educational level, family income, occupational status, and living environment. In our study, we conceptualized objective socioeconomic status (SES) by combining education and monthly household income. This approach is consistent with that used in previous studies (e.g., Eom et al. 2018; Kraus et al. 2009; Piff et al. 2010). Nevertheless, some researchers (e.g. Antonopolis 2023) have raised concerns about the use of objective SES as an aggregate measure for various indicators. First, there is uncertainty about which indicators should be included in the aggregate measure of objective SES. Different studies use different indicators, which raises the question of comparability between studies. Furthermore, this approach raises the question of whether the different indicators reflect information about the same inherent individual characteristic. The results of our study seem to confirm the relevance of this question. It was found that the latent construct of objective SES explains only a small part of the variation in education, but a relatively large part in household income.

In light of these considerations, some authors (see Antonopolis 2023) suggest reconsidering the typical method of conceptualizing objective SES, which combines different indicators. Instead, alternative measurement approaches for SES are proposed. For this reason, we also used the subjective SES measure in this study, i.e. the individual's assessment of their own SES (e.g. Adler et al. 2000). Subjective SES summarizes all relevant SES assessment information into a single score for researchers, taking into account unmeasured variables (e.g., school prestige) and reflecting participants' self-perceptions of their social class (Antonopolis 2023). However, the results of our study show that there is no significant relationship between SES measured in this way and environmental self-efficacy.

Therefore, we offer an alternative explanation for the non-significant relationship between SES and environmental self-efficacy in our study. The basis for this explanation is Pampel's (2013) hypothesis that the more affluent a nation is, the more pronounced the influence of SES on environmental concerns. In wealthier nations, individuals with higher SES often possess more resources and opportunities to engage in pro-environmental behaviors, such as supporting eco-friendly products or environmental causes. Conversely, in lower-income nations, individuals may primarily focus on basic economic survival, potentially resulting in less variation in environmental concerns across SES levels.

Recent data from a 2023 survey conducted by the Ipsos Plus agency show that Croatian citizens' concerns about climate change have decreased since 2022. In 2023, citizens showed increased concern about their economic well-being, particularly regarding declining living standards and the possibility of a global recession. The study found that 70 percent of Croatians surveyed were concerned about the rising cost of living, which included energy-related expenses such as heating, electricity, and transportation. Compared to other European Union (EU) countries, Croatia is among the six nations in which economy and growth are the most important issues influencing turnout in European Parliament elections (Zalc et al. 2019). In contrast, issues related to combating climate change and protecting the environment rank below the European average as motivators of voter turnout.

Our third hypothesis states that neither objectively nor subjectively measured SES has a direct relationship with pro-environmental behavior. Our results are consistent with the study's hypothesis based on Bandura's (1986, 1989, 2000, 2002) social cognitive theory. According to this theory, sociostructural factors like SES have indirect rather than direct effects on behavior. Although this hypothesis has been confirmed in other behavioral domains (e.g., Bandura et al. 1996), to our knowledge, this study is the first to examine the direct relationship between SES and pro-environmental behaviors.

This study has some limitations. First, it is a study with a cross-sectional design, which limits our ability to establish causality between variables. Second, our assessment of pro-environmental behavior was limited to the private sphere. To gain a more comprehensive understanding of pro-environmental behavior, it is imperative that future research include a broader range of measures. This expanded approach will allow for a more nuanced examination of pro-environmental behavior in different settings, both private and public, as well as in different contexts, such as at home and at work.

Despite these limitations, to our knowledge, this study is the first to examine how SES is related to environmental self-efficacy and collective efficacy to explain pro-environmental behavior. It also contributes to the literature on perceived collective efficacy by focusing on its relationship with self-efficacy. Although this was an online study, the use of quota sampling with quotas based on participants' geographic location and sex effectively addressed the shortcomings often associated with online research. For example, male participants tend to have a significantly lower response rate than their female counterparts, as demonstrated in previous studies (Porter & Umbach, 2006). This study also has practical implications. The results suggest that increasing the perceived self-efficacy and collective efficacy of climate action is an important aspect of social marketing campaigns designed to promote pro-environmental behavior.

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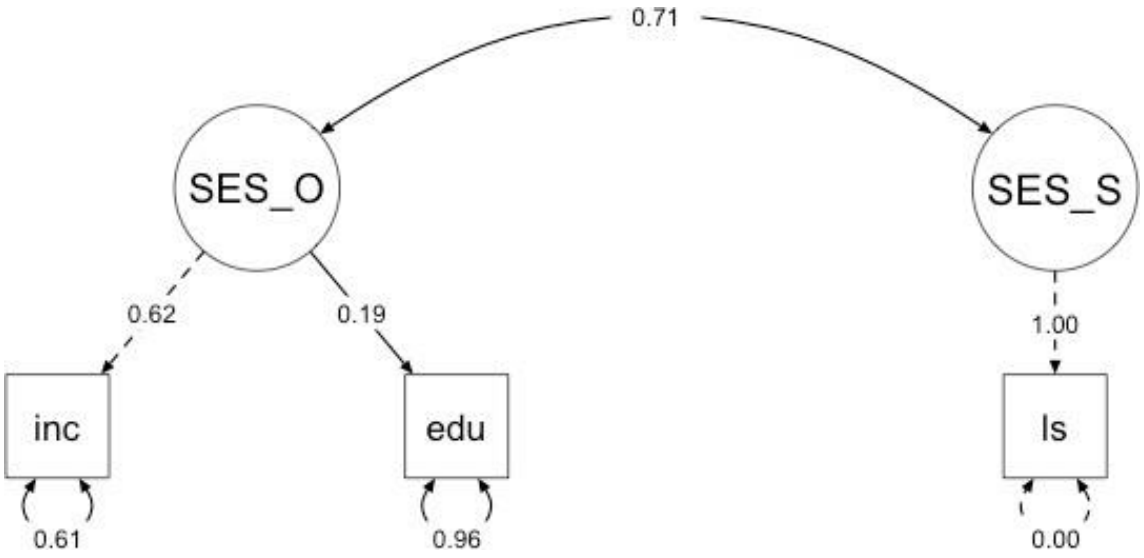
It is very fatal if authors ignore the conclusion. Conclusions are very important to include. I suggest to the authors to create a new chapter containing a conclusion. Later, the conclusion

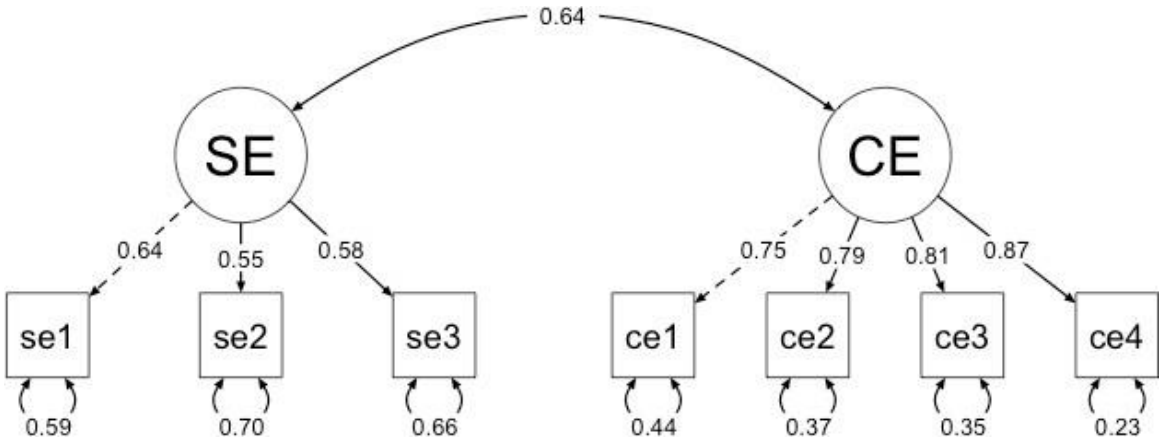
Supplementary material

Figure S1: Measurement Model for Objective and Subjective SES Latent Constructs



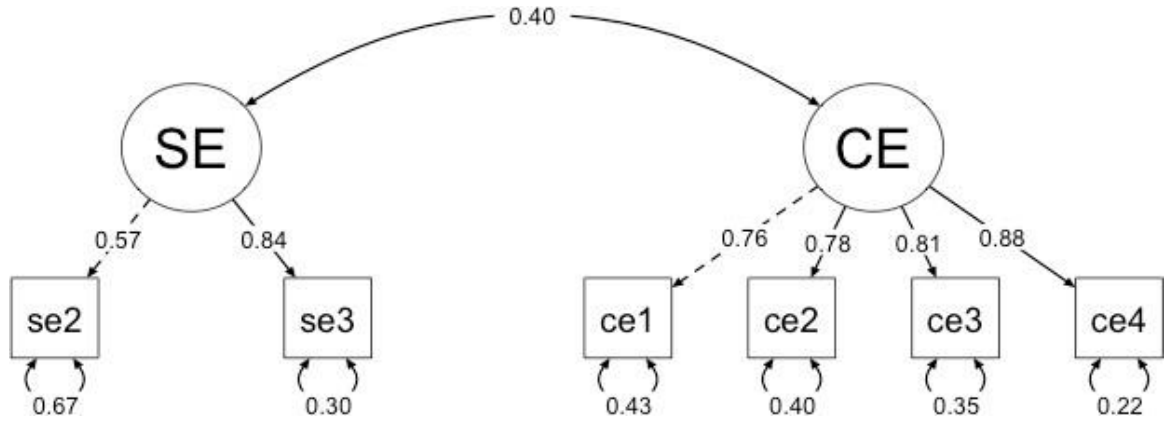
Note. Standardized coefficients are presented. SES_O, objective SES; SES_S, subjective SES; inc, income; edu, education; ls, life standards.

Figure S2: Measurement Model for Self and Collective Efficacy Latent Construct (7 items)



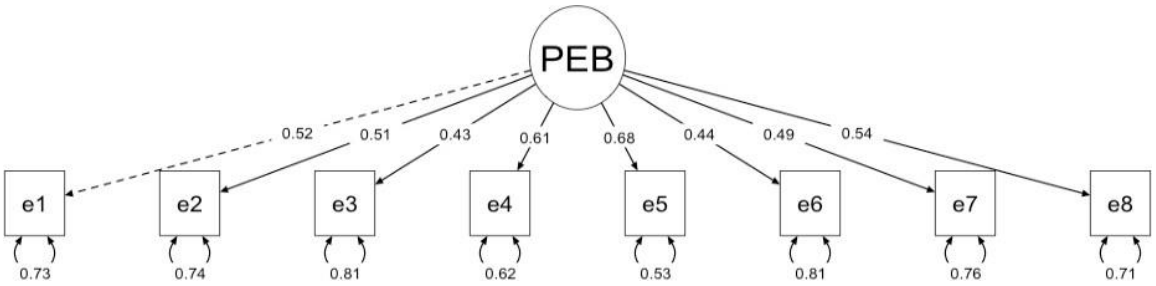
Note. Standardized coefficients are presented. SE, self-efficacy; CE, collective efficacy

Figure S3: Measurement Model for Self and Collective Efficacy Latent Constructs (6 items)



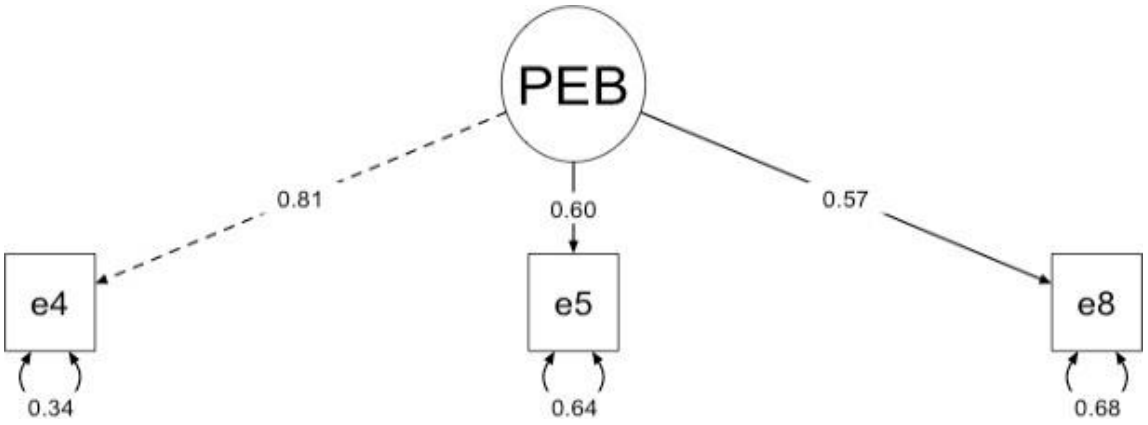
Note. Standardized coefficients are presented. SE, self-efficacy; CE, collective efficacy.

Figure S4: Measurement Model for the Eight-item Pro-environmental Behavior Latent Construct



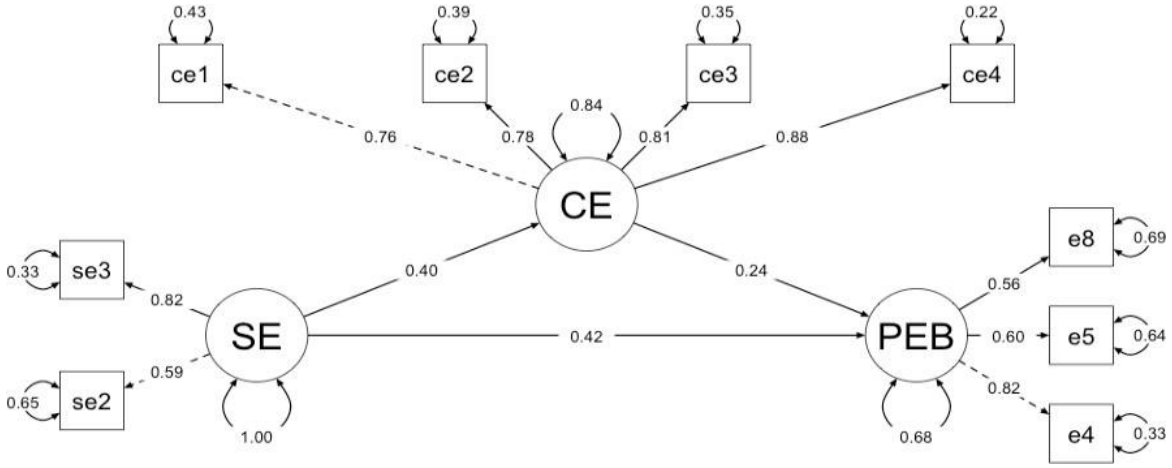
Note. Standardized coefficients are presented. PEB, pro-environmental behavior.

Figure S5: Measurement Model for the Three-item Pro-environmental Behavior Latent Construct



Note. Standardized coefficients are presented. PEB, pro-environmental behavior.

Figure S6: Parameter Estimates of the Narrower Full SEM Mediation Model



Note. Standardized coefficients are presented. SE, self-efficacy; CE, collective efficacy; PEB, pro-environmental behavior.

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Institutional Review Board Statement This study was approved by the Ethics Committee of the Catholic University of Croatia (Class: 641-03/22-03/035, No: 498-15-06-22-001), and it was conducted in accordance with the ethical standards of the Declaration of Helsinki.

Informed Consent Statement Informed consent was obtained from all subjects involved in the study.

Data availability statement The raw data file and R syntax have been uploaded to the Open Science Framework Repository and can be found at the following link https://osf.io/q8jb6/.

Acknowledgements Not applicable.

Conflict of interest The authors declare no conflict of interest.

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Too few references. Technically, there are many previous studies that can be explored. By adding several relevant studies, it is hoped that this study will be more optimal. Besides that, many scientific journals from reputable publishers have also discussed topics like this in the last decade.

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