WHAT DRIVES YOUTH TO PARTICIPATE IN CLIMATE PROTESTS? EXAMINING THE ROLE OF HOPE AND COLLECTIVE SELF-EFFICACY

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Abstract

Climate change represents a reality that can no longer be ignored. Many young people mobilize through strikes and protests to demand policy changes considered insufficient in addressing this phenomenon. While negative emotions guide behavior in climate action, little is known about how hope influences perceptions of collective action efficacy and protest participation. This study examined, in Italian university students, the mediating role of collective self-efficacy in the relationship between hope and participation in climate protests. Results show that hope increases collective self-efficacy, which in turn is associated with greater likelihood of protest participation. Practical implications and future perspectives will be discussed.

Keywords: hope; climate change; collective self-efficacy; climate protests; university students

1. *Introduction*

Climate change constitutes an undeniable reality primarily driven by human activities. Global warming, for instance, represents a clear example of anthropogenic climate change: extensive and intrusive human practices, including deforestation, fossil fuel combustion, and promotion of non-sustainable agricultural methods, have resulted in elevated concentrations of greenhouse gases, such as carbon dioxide (CO_2) in the atmosphere. This accumulation inhibits heat dissipation into space, causing temperatures

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to escalate and reach unprecedented levels with each passing year[1]. The impacts of this phenomenon result in significant consequences that destabilize the equilibrium of the entire ecosystem[2]. The consequences of climate change are increasingly evident and will afflict subsequent generations even more massively than currently observed. For example, the Intergovernmental Panel on Climate Change (IPCC) posits that, in 2050, those born in 2000 and beyond are likely to live in a climate reality with temperatures 0.8-2.6 °C higher than in 1990. Frightened and angered by the evident consequences of the phenomenon, many young people mobilize daily through climate strikes and protests to demonstrate against current policies, deemed inadequate in ensuring effective greenhouse gases reduction, and to demand greater involvement in decisions related to environmental sustainability. Therefore, understanding what drives youth to engage in climate protests is a critical issue for both psychological and social research.

While the literature has extensively explored the role of negative emotions (e.g., anger, sadness) as drivers of participation in collective actions for climate advocacy and as a common thread capable of contributing to the formation of norms and collective identity among young climate activists, the role of positive emotions in fostering climate protests participation remains relatively underexplored. Although the Social Identity Model of Pro-Environmental Action (SIMPEA)[3] has posited that negative emotions serve as initial triggers for environmental awareness and foster an initial motivation to act, positive emotions, such as hope, may function as sustainable motivational resources that foster long-term engagement and resilience against climate anxiety and despair. Nonetheless, research with respect to the role of hope in relation to participation in climate protests has returned mixed results. Indeed, while van Zomeren and colleagues[4] suggest that hope may serve as an emotion-focused coping mechanism, reducing perceived urgency and potentially undermining action, further

[1] L. Al-Ghussain, *Global warming: review on driving forces and mitigation*, in «Environmental Progress & Sustainable Energy», 38, 2019, pp. 13-21.

[2] A.V. Sanson-J. Van Hoorn-S.E. Burke, *Responding to the impacts of the climate crisis on children and youth*, in «Child Development Perspectives», 13, 2019, pp. 201-207.

[3] I. Fritsche-M. Barth-P. Jugert-T. Masson-G. Reese, *A social identity model of pro-environmental action (SIMPEA),* in «Psychological review», 125, 2018, pp. 245-269.

[4] M. Van Zomeren-I.L.Pauls-S. Cohen-Chen, *Is hope good for motivating collective action in the context of climate change? Differentiating hope's emotion-and problem-focused coping functions*, in «Global Environmental Change», 58, 2019, 101915.

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scholars[5] revealed that hope might act as a problem-focused coping strategy, particularly when individuals perceive the success of collective action as possible, albeit uncertain. Furthermore, Nairn[6] highlighted that hope functioned as a protective factor against extreme despair, helping to buffer it and preventing individuals from disengaging from climate activism movements.

The complex relationship between hope and participation in climate protests suggests the potential influence of additional factors not captured by the direct hope-climate strike/protest participation association. Therefore, in the current studies and based on the existing literature in the field, the potential mediating role of collective self-efficacy was taken into account, as it might elucidate the complex mechanisms through which hope influences engagement in climate activism.

According to Van Zomeren and colleagues[7], collective self-efficacy can be conceptualized as group's shared beliefs regarding their combined capacity to successfully pursue collective objectives and implement desired social transformations through coordinated action. This construct represents a key component in Van Zomeren's Social Identity Model of Collective Action (SIMCA), where it functions as one of three primary predictors of engagement in collective action, alongside social identity and perceived injustice. Within the SIMCA framework, collective self-efficacy encompasses the group's confidence in its collective capability to produce meaningful change, the perception that collective action can yield effective outcomes, and the belief that group members, through coordinated efforts, can successfully overcome challenges. Van Zomeren and colleagues[8] posits that groups with heightened collective self-efficacy demonstrate an increased propensity to engage in collective action aimed at social change, even when confronted with significant barriers or opposition. Furthermore, in line

[5] S.M. Bury-M. Wenzel-L. Woodyatt, *Against the odds: Hope as an antecedent of support for climate change action*, in «British Journal of Social Psychology», 59, 2020, pp. 289-310.

[6] K. Nairn, *Learning from young people engaged in climate activism: The potential of collectivizing despair and hope*, in «Young», 27, 2019, pp. 435-450.

[7] M. Van Zomeren-T. Postmes-R. Spears, *Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives,* in «Psychological bulletin», 134, 2008, pp. 504-535.

[8] M. Van Zomeren-C.W. Leach-R. Spears, *Protesters as "passionate economists" a dynamic dual pathway model of approach coping with collective disadvantage*, in «Personality and Social Psychology Review», 16, 2012, pp. 180-199.

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with Van Zomeren's conceptualization of collective self-efficacy Hamann and Reese[9] and Jugert and colleagues[10], have highlighted that individuals who believe in the efficacy of joint actions are more likely to engage in climate protests.

Furthermore, previous evidence supports the relationship between hope and self-perceptions of collective efficacy in climate action contexts. Ojala[11] have shown that among young people, hope specifically directed toward climate change solutions serves as a significant precursor to enhanced perceptions of collective efficacy. Specifically, individuals exhibiting the so-called constructive hope, characterized by confidence in society's collective problem-solving capacity, subsequently reported stronger beliefs in the efficacy of collective climate action than those experiencing passive or denial-based hope. In line with this findings, Feldman and Hart[12] have shown that exposure to hope-inducing climate solution messaging significantly elevated participants' perceptions of collective efficacy. Furthermore, Bamberg and colleagues[13] identified hope as a key emotional factor that converts general environmental concern into stronger perceptions of collective efficacy. Collectively, these findings suggest that cultivating hope regarding climate solutions may represent an important psychological lever for enhancing the perceived efficacy of collective efforts to address climate change.

1.2. Aim and hypothesis

Based on the abovementioned evidence, the current study sought to explore the relationship among hope, collective self-efficacy, and participation in the next climate protest/strike in a sample of Italian university

[9] K.R. Hamann - G. Reese, *My influence on the world (of others): Goal efficacy beliefs and efficacy affect predict private, public, and activist pro-environmental behavior*, in «Journal of Social Issues», 76, 2020, pp. 35-53.

[10] P. Jugert - K.H. Greenaway - M. Barth - R. Büchner - S. Eisentraut - I. Fritsche, *Collective efficacy increases pro-environmental intentions through increasing self-efficacy,* in «Journal of Environmental Psychology», 48, 2016, pp. 12-23.

[11] M. Ojala, *Hope and climate change: The importance of hope for environmental engagement among young people*, in «Environmental education research», 18, 2012, pp. 625-642.

[12] L. Feldman - P.S. Hart, *Using political efficacy messages to increase climate activism: The mediating role of emotions*, in «Science Communication», 38, 2016, pp. 99-127.

[13] S. Bamberg - J. Rees - S. Seebauer, *Collective climate action: Determinants of participation intention in community-based pro-environmental initiatives*, in «Journal of Environmental Psychology», 43, 2015, pp. 155-165.

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students. In detail, the mediating role of collective self-efficacy in the relationship between hope and participation in the next climate strike/protest was explored. The following hypothesis was formulated:

H1. Collective self-efficacy would mediate the relationship between hope and participation in the next climate strike/protest. Specifically, hope would lead to higher collective self-efficacy, which in turn would lead to an increased likelihood of participating in the next climate strike/protest.

The hypothesized model is depicted in Figure 1.

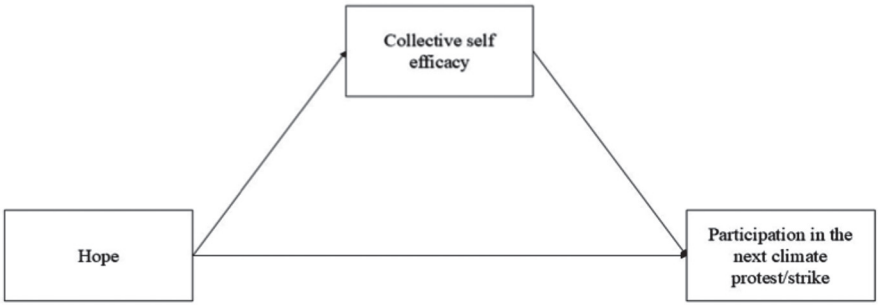

Figure 1. - Hypothesized mediation model

2. *Methods*

2.1. Participants and procedure

The study involved 200 Italian university students aged from 18 to 35 years (M_{age}= 24.06, SD= 4.06), of which 138 were women (69%) and 62 (31%) men. In detail, 5 students attended the first year (2.5%), 48 students attended the second year (24%), 26 students attended the third year (13%), 6 students attended the fourth year (3%), 29 students attended the last year (14.5%), 11 students were students outside the prescribed time (5.5%), and 75 (37.5%) preferred not to answer. Participants were asked to individually complete an online survey following the completion of the informed consent. No incentives were provided for their participation. The survey was anonymous, and anonymity and confidentiality standards were ensured at every data collection stage. The data collected was processed in accordance with Article 13 of EU Regulation No. 679/2016

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of 27.04.2016, the "General Data Protection Regulation" (GDPR), and Legislative Decree No. 196/2003, the "Personal Data Protection Code", as amended by Legislative Decree No. 101 of 10.08.2018. The research protocol adheres to the principles outlined in the Declaration of Helsinki of 1964 and its subsequent revisions.

2.2. Instruments

Hope. Two *ad hoc* items on a 5-point Likert scale (1= Completely disagree, 5= Completely agree) were adopted to assess hope. An item example is: "I am hopeful that we will be able to fight climate change". Cronbach's alpha was .78.

Collective self-efficacy. Two items on a 5-point Likert scale (1= Completely disagree, 5= Completely agree) from the Collective self-efficacy scale used in van Zomeren and colleagues' study[14] were adopted to assess collective self-efficacy. An item example is: "I believe that I, as an individual, can make a significant contribution so that, through joint actions, climate change activists can influence politicians to improve current climate change policies". Cronbach's alpha was .90.

Participation in the next climate protest/strike. An *ad hoc* item on a 7-point Likert scale (1= Completely disagree, 7= Completely agree) was used to assess participation in the next climate protest/strike. The item is: "I am going to participate in the next climate protest/strike".

3. *Results*

To verify the normality of the distribution, mean, standard deviation, minimum and maximum values, skewness, and kurtosis were checked using SPSS v. 21[15]. The normality of the distribution was established, as none of the study variables had skewness and kurtosis values greater than |2| and standard deviation values equal to 0, therefore a Pearson correlation matrix

[14] M. Van Zomeren - T. Saguy - F.M. Schellhaas, *Believing in "making a difference" to collective efforts: Participative efficacy beliefs as a unique predictor of collective action*, in «Group Processes & Intergroup Relations», 16, 2013, pp. 618-634.

[15] A.F. Hayes, *Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation*, in «Communication monographs», 85, 2018, pp. 4-40.

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was used to test the association between the variables for descriptive purposes. Results are depicted in Table 1.

Table 1. - *Descriptive statistics and correlation matrix*

	M	SD	Min-Max	SK	KU	2	3
1. HOPE	6.51	1.91	2-10	-0.14	-0.39	0.30**	0.17*
2.CSELF	6.01	2.27	2-10	0.08	-0.62		0.38**
3. PROTP	2.99	2.02	1-7	0.77	-0.71		

Note. *p<.05, **p<.01; CSELF= Collective self-efficacy, PROTP= Participation in the next climate protest/strike; M= Mean, SD= Standard deviation, SK= Skewness, KU= Kurtosis

Results from the correlation matrix revealed that hope was significantly and positively related to collective self-efficacy and participation in the next climate protest/strike. Moreover, collective self-efficacy was positively and significantly related to participation in the next climate protest/strike.

In order to verify our H1, we conducted a mediation analysis using Model 4 of the macro PROCESS v. 4.2. for SPSS v. 21[16]. The results are depicted in Figure 2.

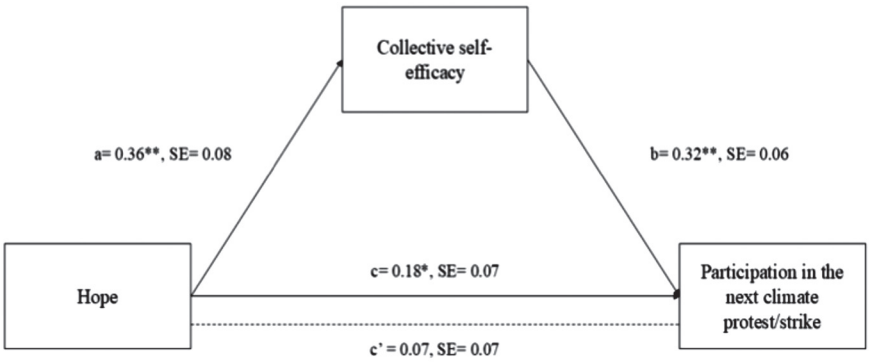

Figure 2. - *Mediation model results. Note. *p<0.05, **p<0.01; c= Total effect, c'= Direct effect*

[16] A.F. Hayes, *op. cit.*

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We estimated the indirect effect of hope on participation in the next climate protest/strike, quantified as the product of the ordinary least squares (OLS) regression coefficient estimating collective self-efficacy from hope (path a, Figure 2) and the OLS regression coefficient estimating participation in the next climate strike/protest from collective self-efficacy, controlling for hope (path b, Figure 2). Evidence of a significant indirect effect is established when the 95% percentile bootstrap confidence interval (CI) for the product of these pathways excludes zero[17] (Preacher & Hayes, 2008).

In the first step, hope was inserted as a predictor of collective self-efficacy. The model explained 9% of the variance of the outcome ($R^2 = 0.09$, $F = 20.62$, $p < 0.01$) and revealed that hope is positively and significantly related to collective self-efficacy (Figure 2, path a).

In the second step, hope and collective self-efficacy were posed as predictors of participation in the next climate protest/strike. The model explained 15% of the variance of the outcome ($R^2 = 0.15$, $F = 17.19$, $p < 0.01$) and revealed that collective self-efficacy was positively and significantly associated with participation in the next climate strike/protest (Figure 2, path b) over and beyond hope (b= 0.06, SE= 0.07, [95%CI= -0.07, 0.21]).

Furthermore, results showed a significant positive indirect association between hope and participation in the next climate protest/strike through collective self-efficacy (point estimate = 0.11; BootSE = 0.03, [95% Percentile BootCI = 0.05, 0.19]). This result indicated that hope leads to higher collective self-efficacy, which in turn is related to a higher likelihood of participation in the next climate strike/protest, confirming our H1.

4. *Discussion*

The current study aimed to examine, in a sample of Italian university students, the relationship between hope, collective self-efficacy, and participation in the next climate protest/strike. In detail, we sought to explore the indirect effect of hope and participation in the next protest/strike through collective self-efficacy. Our results confirmed H1, revealing that hope leads to an increase in collective self-efficacy, which in turn leads to an increased likelihood of participating in the next climate protest/strike.

[17] A.F. Hayes, *op. cit.*

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These results underscore the fundamental role of hope in fostering a sense of agency within collective action frameworks. Hope does not merely represent a passive emotional state but rather emerges as a dynamic motivational force that strengthens individuals' beliefs in their capacity to contribute to broader social movements. In line with prior research by Ojala and colleagues[18], our study highlights that hope serves as a crucial psychological resource, particularly among young individuals, in sustaining engagement with climate activism. By instilling confidence in the effectiveness of collective efforts, hope appears to act as a catalyst for translating concern about climate change into tangible participation in protests and strikes. Furthermore, the perception that one's individual contributions meaningfully enhance the efficacy of collective action in achieving desired outcomes emerges as a critical factor in mobilizing youth participation in climate protest movements. These results extend the theoretical framework proposed by the SIMPEA model of Fritsche and colleagues[19], demonstrating that positive, multifaceted emotional responses – particularly hope – function as significant catalysts for both community-based action motivation and enhanced perceptions of collective efficacy. Furthermore, the current findings suggest the need for educational institutions to integrate hope-based approaches into their educational programs and through structured and specific interventions. In this line, Finnegan and d'Abreu[20] propose the so-called hope wheel model, which outlines key strategies for fostering hope in climate education. These include confronting climate realities with honesty, fostering awareness of challenges, creating spaces for dialogue, and encouraging action. Their model further emphasizes the importance of acknowledging the complexity of climate issues, integrating social justice perspectives, and cultivating empathy while avoiding misinformation or false hope. Implementing these principles in academic settings can ensure that students are not only informed about climate change but also empowered to take meaningful action.

Despite the relevant findings, the study is not without limitations. Firstly, the cross-sectional nature of our study does not allow us to draw causal relationships among the study variables. Furthermore, it would be

[18] M. Ojala, *op. cit.*

[19] I. Fritsche - M. Barth - P. Jugert - T. Masson - G. Reese, *op. cit.*

[20] W. Finnegan - C. d'Abreu, *The hope wheel: a model to enable hope-based pedagogy in Climate Change Education*, in «Frontiers in Psychology», 15, 2024, 1347392.

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interesting to deepen the inter-relationship between the study variables through longitudinal approaches. Moreover, the sample is too small to generalize the results to the broader sample of university students. In future studies, it would be interesting to enlarge the sample and compare the results to those of both European and non-European countries.

In conclusion, the present study offers valuable insights into the psychological drivers of youth engagement in environmental movements. Encouraging and sustaining hope among young individuals may thus represent a key strategy for mobilizing large-scale collective efforts aimed at addressing the climate crisis.

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