

The Hidden Crisis of Climate Change: Distress, Entrapment, and Suicidal Ideation Among Bangladeshi Adolescents

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Abstract: Climate change distress (CCD) is an emerging psychological concern among adolescents, particularly in disaster-prone low- and middle-income countries. Despite growing evidence linking CCD to adverse mental health outcomes, the mechanisms connecting CCD to suicidal ideation (SI) remain poorly understood, especially in Global South contexts. Using a cross-sectional design, data were collected from 995 adolescents across Bangladesh. Participants completed validated measures of CCD, SI, depression (PHQ-9), and entrapment (Short Defeat and Entrapment Scale). Descriptive statistics, bivariate correlations, and mediation analyses were performed. Among adolescents with direct exposure to climate-related disasters, significant associations were found between CCD, depression, entrapment, and SI. These associations were absent among non-exposed adolescents. Mediation analysis revealed that entrapment fully mediated the relationship between CCD and SI, indicating that CCD elevates SI risk primarily by intensifying feelings of psychological entrapment. This study provides novel evidence that entrapment is a critical psychological pathway linking CCD to SI among disaster-exposed adolescents in Bangladesh. These findings underscore the urgent need for climate-sensitive mental health interventions and resilience-building programs tailored to vulnerable youth in disaster-prone regions.

Keywords — adolescents, Bangladesh, climate change distress, entrapment, suicidal ideation

SUGGESTED CITATION: Mahmud, M. J., Siddik, M. A. B., Ahamed, S. J., Masud, A. A., & Mila, S. S. (2026). The hidden crisis of climate change: Distress, entrapment, and suicidal ideation among Bangladeshi adolescents. *Proceedings of the International Crisis and Risk Communication Conference, USA, 14(1)*. <https://www.doi.org/10.69931/001c.164606>

INTRODUCTION

Climate change poses significant threats to mental health globally, with evidence linking environmental disasters to stress, depression, hopelessness, and post-traumatic stress [1]. Bangladesh is particularly vulnerable, facing recurrent cyclones, flooding, and sea-level rise that impose lasting psychological burdens on adolescents. Eco-anxiety—defined as anxiety about the consequences of climate change—disproportionately affects younger generations and is more frequently reported by females than males [2]. A Kenyan high school study found a direct link between climate change and emotional symptoms [4], and a German study identified a significant relationship between climate change distress (CCD) and suicidal ideation (SI) [3].

ISSN: 3068-6539

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<https://doi.org/10.69931/001c.164606>

This study examined whether entrapment mediates the CCD–SI relationship among Bangladeshi adolescents. Entrapment—the desire to escape an unbearable situation with the perception that all routes are blocked [5]—is central to eco-anxiety, generating feelings of powerlessness and helplessness [6]. Studies confirm entrapment as a core mechanism linking stressors to SI across clinical and non-clinical samples [7, 8], making it a critical target for understanding climate-related psychological harm.

METHODS OR PROCEDURES

This cross-sectional study recruited 995 adolescents (aged 13–19) across Bangladesh via purposive sampling (May–July 2024), including those who had and had not experienced climatic disasters. Ethical approval was granted by Noakhali Science and Technology University, Bangladesh. Participants completed: the Climate Change Distress and Impairment Scale (CC-DIS; $\alpha=0.790$) [1]; PHQ-9 for depression ($\alpha=0.80$) [4]; the Short Defeat and Entrapment Scale–Entrapment Subscale (SDES; $\alpha=0.853$) [5]; and the Suicide Ideation and Behavior Scale (SIBS; $\alpha=0.813$) [7]. Sociodemographic variables were also collected. Data were analyzed using SPSS 27.0 and AMOS 22.0. Bivariate correlations and mediation analysis (Process Model 4) were conducted, with age, gender, and depression as covariates.

RESULTS

DESCRIPTION OF PARTICIPANTS

Of 995 adolescents, 450 had experienced climatic events and 545 had not. The experienced group had a higher male proportion (55.78%), greater family unrest (66.89%), and higher smoking prevalence (13.56% vs. 9.72%). Both groups were predominantly Muslim (>92%) and unmarried (>92%), with mean ages of 16.8 and 16.2 years respectively.

CORRELATION AMONG VARIABLES

Among disaster-exposed adolescents, CCD correlated moderately with entrapment ($r=0.626$), and strongly with depression ($r=0.734$) and SI ($r=0.765$). Entrapment showed strong associations with depression ($r=0.812$) and SI ($r=0.887$). Among non-exposed adolescents, correlations were negligible: CCD–entrapment $r=0.025$; CCD–SI $r=0.112$ (Table 1).

Table 1
Bivariate Correlation Analysis

Variables	Experienced (n=450)				Not-experienced (n=545)			
	1	2	3	4	1	2	3	4
Climate change distress	.626**				.025			
Entrapment	.787**	.812**			.198	.098		
Depression	.734**	.691*	.839**		.563*	.342	.167	
Suicidal ideation	.765**	.887**	.769**	.895**	.112	.764**	.559*	.087

* $P<0.05$ ** $P<0.001$

MEDIATION ANALYSIS

Mediation analysis was conducted only for the disaster-exposed group. CCD significantly predicted SI ($p=.023$). Path a (CCD→entrapment: $b=.29$, $SE=.011$, 95% CI [0.009, 0.50], $p=.004$) and path b (entrapment→SI: $b=.228$, $SE=.065$, 95% CI [0.100, 0.357], $p=.001$) were both significant. After including entrapment, the direct effect of CCD on SI became non-significant (c' : $b=.021$, $SE=.012$, $p=.077$), indicating full mediation. The indirect effect was significant ($b=0.005$, $SE=0.003$, 95% CI [0.001, 0.014]). Fig 1 displays the mediation effects.

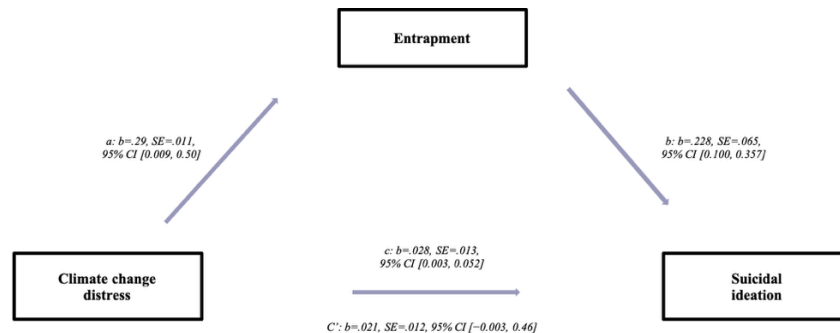


Figure 1
Mediation path between the variables

DISCUSSION

Two key findings emerged: (1) suicidal thoughts were correlated with CCD/impairment; and (2) this relationship was fully mediated by entrapment. Consistent with prior research [1], a strong correlation was found between low mental health indicators and CCD. Even after controlling for depressive symptoms, the CCD–SI association persisted [4], reflecting existential distress beyond general depression. Notably, suicidal thoughts do not always lead to suicide attempts [8], but the association warrants serious attention.

The full mediation by entrapment aligns with the IMV model of suicidal behavior [8], confirming that CCD elevates SI risk primarily by intensifying feelings of psychological entrapment [7]. Importantly, perceptions of entrapment in the climate context are not always irrational [6]—adolescents witnessing governmental inaction may reasonably feel trapped [6]—yet suicidal ideation remains a maladaptive response requiring intervention.

Proposed interventions include cognitive behavioral therapy, promoting climate activism, and cultivating radical hope [9]. Meaning-centered resilience has been linked to reduced climate anxiety in youth [10]. Special emphasis must be placed on treating SI among those distressed by climate change. Limitations include the cross-sectional design, self-reported data, and the Bangladesh-only sample. Future research should use longitudinal designs, broader samples, and multidimensional climate emotion measures.

CONCLUSION

CCD and entrapment significantly influence the psychological well-being of Bangladeshi adolescents, elevating depression and SI. Entrapment fully mediates the CCD–SI pathway, marking it as a critical intervention target. Mental health services must be integrated into climate adaptation programs. Policymakers, schools, and communities all have roles in building resilience among climate-vulnerable youth. Continued research and global cooperation are essential to develop effective, contextually tailored solutions.

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REFERENCES

- [1] Baudon, P., & Jachens, L. (2021). A scoping review of interventions for eco-anxiety. *Int J Environ Res Public Health*, 18, 9636. <https://doi.org/10.3390/ijerph18189636>
- [2] Brailovskaia, J., & Teismann, T. (2024). Climate change distress, entrapment, and suicidal ideation. *Climatic Change*, 177, 1–10. <https://doi.org/10.1007/s10584-024-03784-5>
- [3] Cianconi, P., Betrò, S., & Janiri, L. (2020). The impact of climate change on mental health: A systematic descriptive review. *Frontiers in Psychiatry*, 11, 74. <https://doi.org/10.3389/fpsy.2020.00074>
- [4] Clayton, S. (2020). Climate anxiety: Psychological responses to climate change. *Journal of Anxiety Disorders*, 74, 102263. <https://doi.org/10.1016/j.janxdis.2020.102263>
- [5] Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment in depression. *Psychological Medicine*, 28, 585–598. <https://doi.org/10.1017/S0033291798006710>
- [6] Hickman, C., Marks, E., Pihkala, P., et al. (2021). Climate anxiety in children and young people. *The Lancet Planetary Health*, 5, e863–e873. [https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)
- [7] Höller, I., Rath, D., Teismann, T., et al. (2022). Defeat, entrapment, and suicidal ideation: Twelve-month trajectories. *Suicide and Life-Threatening Behavior*, 52, 69–82. <https://doi.org/10.1111/sltb.12777>
- [8] Ndeti, D. M., Wasserman, D., Mutiso, V., et al. (2024). The perceived impact of climate change on mental health and suicidality in Kenyan high school students. *BMC Psychiatry*, 24, 117. <https://doi.org/10.1186/s12888-024-05568-8>
- [9] Ojala, M. (2012). Hope and climate change: The importance of hope for environmental engagement among young people. *Environmental Education Research*, 18, 625–642. <https://doi.org/10.1080/13504622.2011.637157>
- [10] Türk, N., Yassiman, M. B., & Kaya, A. (2024). Defeat, entrapment and suicidal ideation: An examination of the IMV model. *International Review of Psychiatry*. <https://doi.org/10.1080/09540261.2024.2319288>