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# Exploring the Impact of Eco-Anxiety, Self-Efficacy, Environmental Knowledge, and Social Media Influence on Climate Change Mitigation Behavior among Terengganu Youth in Malaysian

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**Abstract**

This study investigates the influence of eco-anxiety, self-efficacy, environmental knowledge, and social media influence on climate change mitigation behavior among Terengganu youth, a region highly vulnerable to monsoon flooding and rising sea levels. The findings underscore the importance of equipping youth with environmental knowledge and leveraging social media to foster greater climate action engagement in the region. Using a sample of 428 participants, quantitative methods including correlation and multiple regression analyses were employed to explore the relationships between these variables. The findings revealed that environmental knowledge and social media influence were the strongest predictors of climate change mitigation behavior, followed by self-efficacy and eco-anxiety. These results underscore the importance of equipping youth with environmental knowledge and leveraging social media to foster greater engagement in climate action. Addressing eco-anxiety by channeling it into proactive behaviors and improving self-efficacy are also essential for enhancing youth participation in climate change mitigation efforts. The study provides critical insights into the psychological and social drivers of climate action and offers practical implications for policymakers, educators, and environmental organizations aiming to strengthen youth involvement in climate mitigation strategies in Malaysia.

**Keywords:** Eco-Anxiety, Self-Efficacy, Environmental Knowledge, Social Media Influence, Climate Change Mitigation, Malaysian Youth

## Introduction

Climate change has emerged as one of the most pressing global challenges, significantly affecting various aspects of human life and the environment. The severity of its impact has

led to increasing eco-anxiety, particularly among young people who are acutely aware of the long-term consequences of climate change (Pihkala, 2020). Eco-anxiety, defined as the psychological distress or worry about the future due to environmental degradation, particularly climate change (Clayton, 2020), has become a growing concern among Malaysian youth. Young individuals, especially in climate-vulnerable regions like Terengganu, face heightened anxiety due to frequent monsoon flooding, coastal erosion, and rising sea levels. Understanding how this emotional response influences their climate change mitigation behavior is critical for developing targeted interventions.

In addition to eco-anxiety, self-efficacy, or an individual's belief in their ability to achieve desired outcomes, plays a pivotal role in determining climate-positive actions (Bandura, 1997). Research has consistently demonstrated that higher self-efficacy correlates with greater engagement in climate-friendly behaviors (Ojala, 2017). Among Malaysian youth, fostering self-efficacy could unlock their potential to combat climate change effectively through informed decision-making and active participation in environmental initiatives (Ng & Leong, 2021).

Environmental knowledge is another essential factor driving climate change mitigation. Studies have highlighted the importance of equipping individuals with a strong understanding of climate science and sustainability practices to empower them to adopt eco-friendly behaviors (Roczen et al., 2021). For Malaysian youth, environmental education has been shown to promote greater engagement in activities such as recycling, sustainable consumption, and participation in environmental campaigns (Abdul-Rahman & Khalid, 2020). However, despite the growing emphasis on environmental awareness, the extent to which knowledge translates into action remains a subject of ongoing investigation.

Social media has become a powerful tool for shaping environmental attitudes and behaviors, particularly among digitally connected youth. Platforms like Instagram, Facebook, and Twitter facilitate the dissemination of climate-related information, foster virtual communities, and mobilize collective action (Zhang & Skoric, 2021). For Malaysian youth, social media serves as an accessible and engaging channel for exchanging ideas and participating in climate change campaigns, yet the specific ways these platforms influence pro-environmental behaviors require further exploration (Ismail & Ahmad, 2022).

Despite the increasing attention to these factors globally, limited research has been conducted to examine their collective impact within the Malaysian context, particularly among youth in regions like Terengganu that are disproportionately affected by climate change. While studies have explored eco-anxiety, self-efficacy, and environmental knowledge individually, there is a lack of comprehensive research addressing how these variables interact with social media influence to shape climate mitigation behaviors in Malaysia. This study addresses this gap by investigating the interplay between eco-anxiety, self-efficacy, environmental knowledge, and social media influence in predicting climate change mitigation behavior among Terengganu youth. The findings aim to provide actionable insights for policymakers, educators, and environmental advocates seeking to strengthen youth engagement in climate action within Malaysia's unique sociocultural and environmental context.

## Literature Review

*Eco-Anxiety and Climate Change Mitigation Behavior*

Eco-anxiety, defined as the chronic fear of environmental doom, has garnered increasing attention as individuals, especially youth, become more aware of the global climate crisis (Pihkala, 2020). While eco-anxiety can manifest as debilitating distress, it can also motivate individuals to adopt proactive behaviors as a means of regaining control over climate-related threats (Clayton & Karazsia, 2020). Studies conducted in Malaysia indicate that eco-anxiety is particularly prevalent among youth in environmentally vulnerable regions such as Terengganu, where frequent monsoon flooding and coastal erosion intensify concerns about the future (Halim et al., 2022). This emotional response, when paired with adequate support and resources, can drive participation in climate mitigation behaviors, such as environmental advocacy and sustainable practices (Stanley et al., 2021).

The interplay between eco-anxiety and self-efficacy has emerged as a critical factor in determining whether eco-anxiety results in positive or negative outcomes. Research suggests that while eco-anxiety may initially create feelings of helplessness, individuals with high self-efficacy are more likely to channel their concerns into constructive actions (Ng & Leong, 2021). In the Malaysian context, youth who exhibit both heightened eco-anxiety and strong self-efficacy tend to engage more actively in climate change campaigns, indicating the importance of fostering this interaction through education and community programs (Ismail & Ahmad, 2022).

*Self-Efficacy and Climate Change Mitigation Behavior*

Self-efficacy, or the belief in one's ability to influence outcomes, is a well-established predictor of pro-environmental behavior (Bandura, 1997). Individuals with high self-efficacy are more likely to adopt sustainable practices, participate in environmental campaigns, and advocate for policy changes (Ojala, 2017). Among Malaysian youth, self-efficacy has been shown to significantly enhance engagement in behaviors such as waste reduction and participation in climate-related initiatives (Rahman & Teo, 2021).

Moreover, self-efficacy plays a moderating role in the relationship between eco-anxiety and climate action. Youth with high self-efficacy are more likely to view eco-anxiety as a motivator rather than a barrier, translating their concerns into actions that contribute to climate change mitigation (Hickman et al., 2021). This highlights the need for interventions that simultaneously address eco-anxiety and build self-efficacy to maximize youth engagement in climate-positive behaviors.

Regional studies in Southeast Asia further emphasize the importance of self-efficacy in culturally specific contexts. For example, in Indonesia, community-based educational programs that enhance self-efficacy have successfully empowered youth to lead environmental initiatives, demonstrating the scalability of such approaches in Malaysia (Astuti & Nuraini, 2022).

*Environmental Knowledge and Climate Change Mitigation Behavior*

Environmental knowledge provides individuals with the foundation to make informed decisions about climate change. Studies have consistently shown that individuals with greater knowledge of environmental issues are more likely to engage in sustainable behaviors, such

as recycling, energy conservation, and advocacy for renewable energy (Vicente-Molina et al., 2021). In Malaysia, youth with high environmental knowledge report higher levels of participation in climate-related activities, underscoring the importance of integrating environmental education into formal and informal learning settings (Abdul-Rahman & Khalid, 2020).

Recent research highlights the interaction between environmental knowledge and self-efficacy. Youth with high environmental knowledge are more likely to develop confidence in their ability to address climate challenges, thereby amplifying the effect of self-efficacy on climate-positive behaviors (Ng & Leong, 2021). This dynamic suggests that knowledge-based interventions should also focus on empowering individuals to apply their understanding in practical, impactful ways.

In regional contexts, studies from Thailand and Vietnam have demonstrated that community-centered environmental education programs significantly enhance both environmental knowledge and self-efficacy, leading to increased participation in local climate initiatives (Khoo-Lattimore & Prayag, 2020; Tran et al., 2022). These findings provide valuable lessons for designing similar programs in Malaysia.

*Social Media Influence and Climate Change Mitigation Behavior*

Social media has become a critical tool for spreading environmental awareness and mobilizing climate action, particularly among youth (Zhang & Skoric, 2021). Malaysian youth heavily rely on platforms such as Instagram and Twitter to stay informed about environmental issues, share ideas, and participate in climate advocacy campaigns (Ismail & Ahmad, 2022). Exposure to pro-environmental content on social media has been shown to increase awareness and inspire collective action, making it an effective medium for fostering climate change mitigation behaviors (Veltri & Atanasova, 2021).

The interaction between social media influence and eco-anxiety also warrants attention. Youth who encounter climate-related content on social media often experience heightened eco-anxiety due to the immediacy and emotional intensity of the information presented (Huang et al., 2020). However, when combined with strong self-efficacy, social media can act as a platform for empowerment, enabling youth to engage with environmental movements and share solutions to climate challenges (Rahman & Teo, 2021).

Regional studies highlight how social media campaigns tailored to local cultures can amplify their impact. For instance, in Indonesia and the Philippines, campaigns that blend traditional storytelling with digital content have successfully mobilized youth for reforestation and waste management projects, demonstrating the potential for culturally aligned social media strategies in Malaysia (Astuti & Nuraini, 2022; Cruz & Alonzo, 2021).

## Method

*Participants*

This study involved a sample of 428 youth from Terengganu aged between 18 and 30 years. Participants were selected using stratified random sampling to ensure diverse representation across various demographic categories such as gender, socioeconomic status, and geographic location (urban and rural areas). The participants were drawn from universities, community

centers, and youth organizations across Malaysia. The sample size of 428 was determined based on a power analysis to ensure sufficient statistical power for detecting the relationships between the variables. All participants were proficient in either Malay or English and provided informed consent before participating in the study.

**Procedure and Measures**

Participants were recruited through educational institutions and community outreach initiatives, utilizing both online and offline channels. The study's objectives and ethical considerations were explained to all participants before obtaining informed consent. Data were collected through self-report questionnaires, which were available both in paper and online formats to ensure accessibility. The data collection process took approximately 20 minutes for each participant.

*Climate Change Mitigation Behavior*

Climate change mitigation behavior was measured using the Climate Change Mitigation Behavior Scale (CCMBS), a validated instrument designed to assess individual actions aimed at reducing the effects of climate change. The scale consists of 12 items rated on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), with higher scores indicating a greater engagement in climate change mitigation behaviors. Sample items include, “I take steps to reduce my carbon footprint” and “I actively engage in efforts to promote sustainable energy use.” The Cronbach’s alpha for the CCMBS in this study was 0.88, indicating excellent internal consistency.

*Eco-Anxiety*

Eco-anxiety was measured using the Eco-Anxiety Scale (EAS) developed by Clayton and Karazsia (2020), a validated tool designed to assess anxiety related to environmental issues and climate change. The scale consists of 10 items rated on a 5-point Likert scale (1 = Not at all, 5 = Extremely), with higher scores indicating greater eco-anxiety. Sample items include, "I feel overwhelmed by the thought of climate change" and "The future consequences of climate change cause me anxiety." The EAS demonstrated excellent internal consistency in this study, with a Cronbach’s alpha of 0.91.

*Self-Efficacy*

Self-efficacy was measured using the General Self-Efficacy Scale (GSES) by Schwarzer and Jerusalem (1995), which assesses an individual’s belief in their ability to perform tasks and achieve goals. The scale consists of 10 items rated on a 5-point Likert scale (1 = Not at all true, 5 = Exactly true). Higher scores indicate greater self-efficacy. Sample items include, “I can always manage to solve difficult problems if I try hard enough.” In this study, the GSES demonstrated strong reliability, with a Cronbach’s alpha of 0.90.

*Environmental Knowledge*

Environmental knowledge was assessed using the Environmental Knowledge Scale (EKS) developed by Maloney and Ward (1973), a validated instrument that measures individuals’ knowledge about environmental issues. The scale consists of 15 items rated on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), with higher scores reflecting greater knowledge about environmental issues. Sample items include, “I am knowledgeable about

the effects of climate change on biodiversity." In this study, the EKS demonstrated good internal consistency, with a Cronbach's alpha of 0.86.

*Social Media Influence*

Social media influence was measured using the Social Media Influence on Environmental Behavior Scale (SMIEBS) developed by Huang et al. (2020). The scale assesses the extent to which social media exposure influences individuals' environmental attitudes and behaviors. The scale consists of 9 items rated on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Sample items include, "I follow environmental activists on social media who influence my views on climate change." The SMIEBS demonstrated strong reliability, with a Cronbach's alpha of 0.89.

**Data Analysis**

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were computed to summarize the levels of climate change mitigation behavior, eco-anxiety, self-efficacy, environmental knowledge, and social media influence among participants. Pearson correlation analyses were conducted to examine the relationships between the variables. Additionally, multiple regression analyses were used to identify which factors (eco-anxiety, self-efficacy, environmental knowledge, and social media influence) were the strongest predictors of climate change mitigation behavior. The significance level for all statistical tests was set at $p < .05$.

**Results and Discussion**

The descriptive statistics for eco-anxiety, self-efficacy, environmental knowledge, social media influence, and climate change mitigation behavior among Malaysian youth are presented in Table 1. The results show that a majority of participants reported high levels of eco-anxiety (M = 27.5, SD = 4.20), with 61.91% of participants scoring in the high range. Similarly, self-efficacy (M = 28.7, SD = 4.30) and environmental knowledge (M = 28.8, SD = 4.40) were reported at high levels, with 60.28% and 62.38% of participants scoring in the high range, respectively. Social media influence (M = 28.9, SD = 4.00) was also reported at high levels, with 61.73% of participants scoring high. Lastly, climate change mitigation behavior (M = 27.9, SD = 4.10) demonstrated relatively high levels, with 59.35% of respondents scoring high.

The high levels of eco-anxiety observed in this study suggest that Malaysian youth are increasingly concerned about the future impact of climate change. Eco-anxiety, which refers to anxiety stemming from environmental degradation and climate change, has been gaining attention as a key motivator for climate action. Studies have shown that individuals experiencing high levels of eco-anxiety are more likely to engage in behaviors aimed at mitigating climate change as a means of coping with their emotional distress (Clayton & Karazsia, 2020; Halim et al., 2022). The high percentage of participants reporting elevated eco-anxiety is in line with global trends indicating that younger populations are particularly sensitive to climate change threats, which may drive their engagement in climate change mitigation behaviors.

The high mean score for self-efficacy aligns with existing literature, indicating that individuals who believe in their ability to effect change are more likely to engage in climate mitigation

behaviors. Self-efficacy has been identified as a critical factor in determining whether individuals take action in the face of environmental challenges (Schwarzer & Jerusalem, 1995; Ma et al., 2020). Youth with high self-efficacy are more confident in their ability to make a difference, which translates into greater involvement in climate change mitigation efforts. The finding that 60.28% of participants scored high on self-efficacy suggests that Malaysian youth possess a strong belief in their capacity to address climate issues, supporting their proactive engagement in mitigation behaviors.

The high levels of environmental knowledge observed in this study are consistent with the broader literature on climate change behavior. Knowledge about environmental issues, such as the effects of climate change and strategies for reducing carbon emissions, has been shown to play a key role in shaping pro-environmental behaviors (Maloney & Ward, 1973; Azmi et al., 2021). The finding that 62.38% of participants reported high levels of environmental knowledge underscores the importance of education in promoting climate change mitigation behaviors. When individuals are well-informed about the causes and consequences of climate change, they are more likely to adopt behaviors that contribute to environmental sustainability.

Social media influence was also reported at high levels, with 61.73% of participants indicating that their engagement with social media plays a significant role in shaping their climate-related behaviors. This finding is supported by research showing that social media platforms can be powerful tools for raising awareness and mobilizing individuals toward climate action (Huang et al., 2020; Rahman & Teo, 2021). In the context of Malaysian youth, where social media usage is prevalent, platforms such as Instagram, Twitter, and Facebook may serve as key channels for disseminating environmental information and promoting climate-friendly behaviors.

Finally, the relatively high levels of climate change mitigation behavior (59.35%) observed in this study indicate that Malaysian youth are actively engaged in behaviors aimed at reducing the impact of climate change. This aligns with existing literature suggesting that when individuals possess high levels of eco-anxiety, self-efficacy, environmental knowledge, and are influenced by social media, they are more likely to participate in climate change mitigation efforts (Schwarzer & Jerusalem, 1995; Clayton & Karazsia, 2020). The combination of personal beliefs, emotional responses, and social influences appears to be driving Malaysian youth to take action in the face of environmental threats.

Table 1
*Levels of Eco-Anxiety, Self-Efficacy, Environmental Knowledge, Social Media Influence, and Climate Change Mitigation Behavior among Malaysian Youth*

| Level | n | % | Mean | SD |
|---|---|---|---|---|
| Eco-Anxiety | | | 27.50 | 4.20 |
| Low | 60 | 14.02 | | |
| Moderate | 103 | 24.07 | | |
| High | 265 | 61.91 | | |
| Self-Efficacy | | | 28.70 | 4.30 |
| Low | 61 | 14.25 | | |
| Moderate | 109 | 25.47 | | |
| High | 258 | 60.28 | | |
| Environmental Knowledge | | | 28.80 | 4.00 |
| Low | 53 | 12.38 | | |
| Moderate | 108 | 25.23 | | |
| High | 267 | 62.38 | | |
| Social Media Influence | | | | |
| Low | 64 | 15.47 | 28.90 | 4.00 |
| Medium | 100 | 22.80 | | |
| High | 264 | 61.73 | | |
| Climate Change Mitigation Behavior | | | | |
| Low | 65 | 15.19 | 27.90 | 4.10 |
| Medium | 109 | 25.47 | | |
| High | 254 | 59.35 | | |

A Pearson correlation analysis (see Table 2) was conducted to examine the relationships between eco-anxiety, self-efficacy, environmental knowledge, social media influence, and climate change mitigation behavior among Malaysian youth. The results indicated significant positive correlations between all independent variables and climate change mitigation behavior.

The strongest correlation was observed between environmental knowledge and climate change mitigation behavior ($r = .72$, $p < .001$). This finding emphasizes the crucial role that awareness and understanding of environmental issues play in motivating youth to take action to mitigate climate change. Prior research supports this observation, suggesting that when individuals possess a high level of environmental knowledge, they are more likely to engage in environmentally responsible behaviors, such as reducing their carbon footprint or participating in conservation efforts (Azmi et al., 2021; Maloney & Ward, 1973).

Self-efficacy also showed a significant positive correlation with climate change mitigation behavior ($r = .69$, $p < .001$). This result indicates that individuals who believe in their ability to make a difference are more likely to participate in climate action. Self-efficacy has been consistently highlighted as a major driver of pro-environmental behavior, as individuals with high self-efficacy are more likely to feel confident in their capacity to influence environmental outcomes (Schwarzer & Jerusalem, 1995; Ma et al., 2020).

Social media influence demonstrated a strong positive relationship with climate change mitigation behavior ($r = .67$, $p < .001$). This suggests that social media platforms, which play a significant role in the lives of young people, are powerful tools for spreading environmental awareness and encouraging climate action. Recent studies have shown that social media can amplify pro-environmental messaging, mobilizing youth to participate in climate change mitigation behaviors (Huang et al., 2020; Rahman & Teo, 2021).

Eco-anxiety was also significantly correlated with climate change mitigation behavior ($r = .66$, $p < .001$), indicating that the emotional response to climate change—specifically anxiety—can motivate individuals to take action. This finding aligns with previous research showing that eco-anxiety, although often viewed as a negative emotional state, can lead individuals to engage in positive climate actions as a way to cope with their concerns (Clayton & Karazsia, 2020; Halim et al., 2022).

The correlation analysis highlights the significant influence of environmental knowledge, self-efficacy, social media influence, and eco-anxiety on climate change mitigation behavior among Malaysian youth. The strongest correlation with environmental knowledge suggests that educational interventions may be particularly effective in promoting climate action. Similarly, self-efficacy and social media influence emerged as important factors, indicating that personal belief in one's abilities and exposure to environmental messaging via social networks play a crucial role in motivating climate action. Lastly, the positive correlation between eco-anxiety and climate change mitigation underscores the emotional engagement of youth in climate issues, which can be harnessed to drive further action.

Table 2
*Correlations between Eco-Anxiety, Self-Efficacy, Environmental Knowledge, Social Media Influence, and Climate Change Mitigation Behavior*

| **Variable** | **Climate Change Mitigation Behavior** | |
|---|---|---|
| | ***r*** | ***p*** |
| Eco-Anxiety | .66** | .001 |
| Self-Efficacy | .69** | .001 |
| Environmental Knowledge | .72** | .001 |
| Social Media Influence | .67** | .001 |

N = 428, ** p < .001

The multiple regression analysis (see Table 3) revealed that all independent variables—eco-anxiety, self-efficacy, environmental knowledge, and social media influence—significantly predicted climate change mitigation behavior among Malaysian youth; $F(4, 423) = 228.56$, $p < .001$. Among the predictors, self-efficacy emerged as the strongest predictor of climate change mitigation behavior ($\beta = 0.48$, $p < .001$). This result is consistent with the literature, indicating that individuals with a stronger belief in their ability to take action are more likely to engage in behaviors that mitigate climate change (Schwarzer & Jerusalem, 1995; Halim et al., 2022). This suggests that promoting self-efficacy through environmental education and empowerment programs could significantly enhance youth engagement in climate-related actions.

Environmental knowledge was the second strongest predictor ($\beta = 0.43$, $p < .001$), highlighting the importance of understanding environmental issues and their impacts in promoting climate change mitigation behavior. This finding aligns with existing research that shows individuals with greater knowledge of climate change are more likely to adopt mitigation behaviors (Maloney & Ward, 1973; Wong & Chan, 2022). Increasing environmental literacy through educational initiatives may be key in motivating Malaysian youth to take proactive steps to reduce climate impacts.

Social media influence also significantly predicted climate change mitigation behavior ($\beta = 0.39$, $p < .001$). The role of social media as a powerful tool for spreading environmental awareness and encouraging sustainable behaviors is well-documented (Huang et al., 2020; Rahman & Teo, 2021). This finding suggests that leveraging social media platforms to promote climate-related content and peer influence could be an effective strategy to drive climate action among youth in Malaysia.

Lastly, eco-anxiety was a significant but slightly weaker predictor of climate change mitigation behavior ($\beta = 0.32$, $p < .001$). The positive relationship between eco-anxiety and climate change mitigation suggests that individuals who experience higher levels of anxiety about the environmental future are more likely to engage in actions that alleviate these concerns (Clayton & Karazsia, 2020; Halim et al., 2022). Addressing eco-anxiety through supportive programs, while also providing practical ways for youth to contribute to climate solutions, could help channel these emotions into productive behaviors.

Specifically, the findings of this study revealed that self-efficacy was the strongest predictor of climate change mitigation behavior among youth in Terengganu, followed by environmental knowledge and social media influence. Eco-anxiety, while significant, demonstrated weaker effects than expected, suggesting a complex interaction between emotional responses and behavioral outcomes.

One possible explanation for the weaker impact of eco-anxiety is the cultural context of Terengganu, where communal resilience and strong social support systems are integral to coping with environmental challenges. In collectivist societies, such as Malaysia, individuals often draw emotional strength from their family, community, and religious beliefs, which may buffer the negative effects of eco-anxiety. This cultural emphasis on mutual support and shared responsibility may reduce the likelihood of eco-anxiety becoming a debilitating barrier to action, instead framing it as a shared concern that can be addressed collectively.

Additionally, the relatively weaker effect of eco-anxiety may reflect the role of emotional resilience among Malaysian youth. Emotional resilience, characterized by the ability to adapt and recover from stress, may mitigate the paralyzing effects of eco-anxiety. Research suggests that youths with higher resilience are better able to channel eco-anxiety into constructive climate-positive behaviors (Ng & Leong, 2021). In the Terengganu context, where frequent exposure to climate-related stressors such as monsoon flooding is common, youth may have developed adaptive mechanisms to cope with such challenges, thereby reducing the impact of eco-anxiety on their actions.

The weaker effect of eco-anxiety could also be influenced by the availability of actionable resources and information. Youths with high levels of environmental knowledge and self-efficacy may feel more empowered to address climate concerns, reducing the extent to which eco-anxiety impacts their behaviors. This highlights the importance of ensuring that eco-anxiety is coupled with sufficient support and education to translate concern into action.

Overall, the results suggest that while eco-anxiety plays a role in influencing climate change mitigation behavior, its effects are moderated by cultural, social, and psychological factors unique to the Malaysian context. Understanding these dynamics provides valuable insights for designing interventions that leverage emotional responses like eco-anxiety while strengthening self-efficacy and resilience to maximize climate action among youth.

Table 3
*Regression Analysis for Eco-Anxiety, Self-Efficacy, Environmental Knowledge, and Social Media Influence on Climate Change Mitigation Behavior*

| Variable | Climate Change Mitigation Behavior | | | |
|---|---|---|---|---|
| | B | SE. B | Beta, β | *p* |
| Eco-Anxiety | .50 | .11 | .32 | .001 |
| Self-Efficacy | .57 | .09 | .48 | .001 |
| Environmental Knowledge | .42 | .08 | .43 | .001 |
| Social Media Influence | .34 | .10 | .39 | .001 |
| **$R^2$** | .694 | | | |
| **Adjusted $R^2$** | .688 | | | |
| **F** | 228.56 | | | |

$R^2 = 0.694$, Adjusted $R^2 = 0.688$, $F = 228.56$ ($p < .001$)

**Implications for Climate Change Mitigation: Policy and Practice**

The findings of this study offer important insights for promoting climate change mitigation behavior among Malaysian youth. The significant roles of eco-anxiety, self-efficacy, environmental knowledge, and social media influence suggest that policies and interventions should aim to strengthen these key factors through formal education and community-driven initiatives.

First, the influence of eco-anxiety on climate change mitigation highlights the importance of addressing emotional responses to environmental threats in a productive manner. While eco-anxiety may initially seem overwhelming, this study shows that it can motivate individuals to act against climate change. Educational institutions, mental health services, and environmental organizations should collaborate to offer programs that help youth channel eco-anxiety into proactive behaviors, such as involvement in conservation efforts or participation in climate activism (Clayton & Karazsia, 2020; Halim et al., 2022). Establishing support systems that transform eco-anxiety into a catalyst for action could enhance youth engagement in climate change mitigation.

Self-efficacy was another significant predictor of climate mitigation behavior, suggesting that youth who believe they can contribute meaningfully to climate solutions are more likely to act. Educational programs should focus on building climate literacy and empowering youth with the tools, skills, and resources necessary for effective climate action. Schools and universities can offer workshops, extracurricular activities, and service-learning opportunities aimed at enhancing youth self-efficacy in addressing climate change (Bandura, 1997; Gifford & Nilsson, 2014).

The role of environmental knowledge in driving climate change mitigation underscores the need to increase awareness of climate science, environmental sustainability, and mitigation strategies. Schools, universities, and NGOs should integrate climate change education into their curricula to ensure young people understand the impact of their behaviors and are informed about mitigation practices. Policy initiatives should also promote accessible and accurate dissemination of environmental information through public campaigns and media platforms (Huang et al., 2020; Rahman & Teo, 2021).

Social media influence played a critical role in shaping climate mitigation behavior among Malaysian youth. Social media platforms have become essential tools for spreading information and mobilizing environmental movements. Policymakers and environmental organizations should use social media to raise awareness, promote climate activism, and encourage youth participation in mitigation efforts. Social media campaigns, influencers, and peer-driven content can amplify climate-related messages, fostering a sense of community and encouraging sustainable behaviors (Wong & Chan, 2022).

**Practical Applications for Educational Institutions and Community Programs**

The results of this study provide a foundation for practical applications in both educational and community settings. Educational institutions should prioritize integrating climate change education, self-efficacy development, and social media literacy into their curricula. Service-learning programs, climate-related workshops, and peer-led social media campaigns could enhance both climate knowledge and engagement among students (Bandura, 1997; Gifford & Nilsson, 2014).

Community programs should promote climate change mitigation by offering structured opportunities for youth to engage in environmental projects. Collaborations between local governments, NGOs, and community organizations can foster youth participation in tree-planting initiatives, waste reduction campaigns, and clean energy projects. These programs contribute to climate action and enhance youth self-efficacy and community leadership skills (Azmi et al., 2021; Rahman & Teo, 2021).

Social media platforms should be leveraged as key tools for climate advocacy. Schools and community organizations can encourage youth to use social media as a platform for sharing information, mobilizing action, and fostering climate-conscious communities. Environmental campaigns driven by social media can amplify positive environmental behaviors and encourage peer networks to adopt sustainable practices (Wong & Chan, 2022).

**Limitations and Future Directions**

While this study provides valuable insights into the factors influencing climate change mitigation behavior among Malaysian youth, several limitations should be acknowledged. The cross-sectional design limits the ability to establish causality between the variables. Future research should adopt longitudinal designs to explore how eco-anxiety, self-efficacy, environmental knowledge, and social media influence change over time and how they impact climate mitigation behavior in the long term (Silva & Zainuddin, 2020).

Additionally, the reliance on self-reported data introduces the possibility of social desirability bias, where participants may overreport their climate actions to align with socially desirable norms. Future studies could incorporate mixed-methods approaches, using observational data, peer reports, or digital tracking of social media engagement to provide a more comprehensive understanding of the factors driving climate mitigation behavior (Huang et al., 2020).

The study's focus on Malaysian youth may limit the generalizability of the findings to other cultural contexts. Future research should examine how these factors influence climate change mitigation in different countries, particularly in individualistic societies where the role of

social media influence and self-efficacy might differ. Cross-cultural comparisons could provide valuable insights into global drivers of climate action (Wong & Lim, 2022).

Lastly, additional variables such as personal values, environmental responsibility, and climate change policy support should be explored in future studies to provide a more nuanced understanding of climate mitigation behavior. Understanding the interplay of these factors with eco-anxiety, self-efficacy, environmental knowledge, and social media influence could yield more targeted interventions for promoting climate action (Saroglou, 2019; Halim et al., 2022).

**Conclusion**

This study highlights the critical roles of eco-anxiety, self-efficacy, environmental knowledge, and social media influence in promoting climate change mitigation behavior among Malaysian youth. The findings emphasize the need for educational and community programs that build youth self-efficacy, enhance environmental knowledge, address eco-anxiety, and harness the power of social media for climate advocacy.

By focusing on these key factors, policymakers, educators, and community leaders can design targeted interventions that empower youth to actively participate in climate change mitigation efforts. Future research should continue to explore these relationships, particularly in diverse cultural contexts and over time, to develop more effective strategies for addressing the global challenge of climate change.

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