

How Discrete Positive Emotions Promote Pro-Environmental Behavior: A Systematic Review

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Abstract: This study aims to systematically review the empirical literature on the role of positive emotions in encouraging pro-environmental behavior (PEB). Through the systematic literature review method, as many as 10 selected articles published between 2015–2025 were analyzed based on certain criteria, such as focus on specific positive emotions and relevance to pro-environmental actions. The results of the study showed that emotions such as anticipated pride, satisfaction, subjective happiness, compassion, and connection with nature had a significant influence on increasing individual intentions and involvement in pro-environmental actions. These emotions also act as mediators between other psychological factors, such as social norms, self-efficacy, and personal values, and actual behavior. This study highlights that positive emotions-based approaches are more effective and sustainable than approaches that emphasize guilt or fear. These findings contribute to the development of more empowering environmental communication and education strategies and support consistent eco-friendly behaviors.

Keywords: positive emotions, pro-environmental behavior, anticipated pride, well-being, systematic literature review

1 INTRODUCTION

The earth in recent decades has undergone various significant changes in the form of climate change, pollution, and other environmental crises that have had an impact on the emergence of a change in human mindset that emphasizes awareness of the importance of protecting the environment and re-evaluating an environmentally friendly lifestyle. To address this problem, governments, organizations, and industry players are beginning to emphasize the importance of encouraging pro-environmental behavior. Pro-environmental behavior has a substantial effect on individuals' views of prioritizing environmental protection over economic growth, as shown in research derived from World Values Survey data. The active participation of individuals in environmental organizations also contributes to increasing awareness and commitment to sustainability, leading to stronger pro-environmental attitudes (Bano et al., 2024). This pro-environmental attitude includes a variety of behaviors that aim to reduce environmental impacts and promote sustainability. According to Stern in Kuslantasi et al. (2022), there are four areas of pro-environmental behavior categories, namely in the form of personal domains such as daily habits in saving energy, water, and sorting waste, the public realm which is shown by supporting government policies that favor environmental conservation, the collective realm by being involved in environmental actions or communities, and finally in the organizational realm which is shown by contributing through work roles, such as environmentally friendly innovations. However, these behaviors are greatly influenced by various psychological and social factors. Research shows that emotions, social norms, and individual attitudes significantly shape these behaviors. Emotions are a strong predictor of pro-environmental behavior, positive emotions can increase motivation for environmental action, while negative emotions can lead to avoidance behaviors (Landmann, 2024; Tam & Chan, 2022).

Based on the positive psychology framework, positive emotions have an important role in reinforcing pro-environmental behavior. Positive emotions such as admiration, affection, and gratitude, which are often evoked by nature, can foster pro-social and pro-environmental behaviors. These self-transcendent emotions encourage

individuals to act in ways that benefit the environment and society (Zelenski & Desrochers, 2021). A number of studies show that individuals who have more subjective well-being or eudaimonic well-being tend to be more involved in pro-environmental behavior (Dillenseger & Mouminoux, 2024; Wullenkord & Reese, 2021). These findings support the idea that there is a virtuous circle between emotional well-being and environmental responsibility. More specifically, certain positive emotions have been shown to predict environmentally responsible decisions. As a result, anticipated pride can drive action more strongly than anticipated guilt, because pride reflects alignment with personal values and future self-image (Schneider et al., 2017; Shipley & van Riper, 2023).

Although these findings provide important insights, the existing body of literature still has limitations. Most previous studies have focused on single emotions (e.g., pride, guilt, or awe) or narrow contexts such as tourism or consumer behavior, while comprehensive reviews that integrate positive psychology with environmental research remain scarce (Steg et al., 2021). Moreover, there is limited exploration of how combinations of positive emotions might jointly influence sustainable action. Therefore, this article aims to systematically review the existing empirical literature on how certain positive emotions contribute to pro-environmental behavior, and to fill this gap by offering a more integrative perspective that connects positive psychology theory with sustainability research.

2 MATERIALS AND METHODS

This study employed a systematic literature review to investigate the influence of positive emotions on pro-environmental behavior. The method was chosen to synthesize empirical findings, identify emotional mechanisms, and highlight theoretical frameworks related to environmentally responsible actions. The literature search was conducted in several reputable databases, including Scopus, Web of Science, and Google Scholar, focusing on studies published between 2015 and March 2025. Keywords included combinations of emotional terms (“positive emotion”, “gratitude”, “awe”, “pride”) and behavioral terms (“pro-environmental behavior”, “green behavior”, “sustainable behavior”).

The initial search yielded 612 articles. After removing duplicates, 487 articles remained. Titles and abstracts were screened for relevance, resulting in 78 potentially eligible studies. A full-text review was then carried out based on the following inclusion criteria: (1) empirical research, (2) studies examining positive emotions in relation to pro-environmental behavior, (3) published in English, and (4) available in full-text. Theoretical papers, irrelevant topics, and studies lacking a clear emotional focus were excluded. Following this process, 10 articles were selected for final synthesis.

The selection process followed the general guidelines of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure transparency and replicability.

3 RESULTS

Most of the articles examined the influence of specific positive emotions on pro-environmental behaviors in various populations. Two studies explicitly recruited university students as participants, while three studies involved the general public, such as villagers or urban dwellers. The other five studies examined specific groups, including beekeepers, school teachers, consumers of green products, general adult respondents, and participants of sustainable tourism programs.

Some of the positive emotion variables identified and analyzed in these studies include:

Anticipated pride, satisfaction, eudaimonic wellbeing, subjective happiness, green trust, naturalistic intelligence, emotional connection to nature, compassion, and awareness of positive consequences. These emotions are studied both as a trigger factor (antecedent) and as a mediator in shaping pro-environmental behavior. In terms of the forms of behavior measured, all studies evaluated various types of pro-environmental actions, such as voluntary waste collection, purchase of environmentally friendly products, environmental citizenship, participation in sustainable tourism, loyalty to green products, and voluntary donations to environmental activities.

In addition to emotional variables, various psychological constructs also appear as associated variables, including:

behavioral intentions, normative beliefs (injunctive and descriptive norms), self-efficacy, place attachment, anxiety about climate change, meaning of life, and compassionate character. Most studies use quantitative methods such as surveys, regression analysis, or structural equation modeling (SEM), while some adopt experimental designs or qualitative interviews to delve deeper into the relationship between emotional

experiences and behavioral decisions. Emotional constructs such as anticipated pride and satisfaction consistently show strong predictive power of PEB, indicating a shift from a campaign approach based on negative emotions (e.g., guilt or fear) towards environmental messages that emphasize positive emotions and personal empowerment.

Table 1. Data Extraction

No	Article Title, Author & Year	Positive Emotions Studied	Sample Size	Context/Subject	Key Findings	Research Methods
1.	Under the Dome: Air Pollution, Wellbeing, and Pro-Environmental Behaviour Among Beijing Residents. Gu et al. (2015)	Eudaimonic wellbeing (meaning in life)	Study 1 = 50 undergraduates Study 2 = 288 working adults	Beijing Citizens	Air pollution increases PEB through increased meaning of life (EWB)	Quantitative field studies and ESM
2.	The Influence of Anticipated Pride and Guilt on Pro-Environmental Decision Making. Schneider et al. (2017).	Anticipated pride	300 US participants (experiment, recruited via MTurk)	Experiments on adult individuals	Anticipated pride is more effective than guilt in encouraging the intention to behave pro-environment	Lab experiment
3.	Towards Green Loyalty: The Influences of Green Perceived Risk, Green Image, Green Trust, and Green Satisfaction. Chrisjtmiko (2018).	Trust, satisfaction	155 green product customers	Consumers of green products	Satisfaction and trust drive loyalty to eco-friendly products.	SEM (Structural Equation Modeling).
4.	A Study of Pro-Environmental Behavior as a Component of Naturalistic Intelligence Amongst In Service School Teachers. Srinivasan & Borkar (2021).	Environmental satisfaction (implicit)	250 teachers from four English-medium private schools	Active teachers in India	Naturalistic intelligence supports higher pro-environmental behaviors	Quantitative studies with learning interventions
5.	Bee Well: Positive Psychological Impact of a Pro-Environmental Intervention on Beekeepers and Their Family Wellbeing. Burke & Corrigan (2024).	Pride, satisfaction, connection with nature	30 farmers (30 provided with beehives in the intervention; 12 interviewed qualitatively)	Bee breeders in Ireland.	Pro-environmental activities (beekeeping) improve psychological well-being and a sense of pride	Qualitative study with thematic interviews.

No	Article Title, Author & Year	Positive Emotions Studied	Sample Size	Context/Subject	Key Findings	Research Methods
6.	What's with the Attitude? Unravelling the Dynamics of Pro-Environmental Action in India. Salim & Khan (2023).	Behavioral intentions	308 individuals	Indian	Intentions, injunctive norms, and descriptive norms greatly affect PEB.	Regressi berganda
7.	The Effect of Pro-Environmental Destination Image on Resident Environmental Citizenship Behavior: The Mediating Roles of Satisfaction and Pride. Cao et al. (2024).	Satisfaction, pride	416 residents	Residents of tourist areas	Image positif destinasi → satisfaction & pride → environmental citizenship behavior	SEM (model CAB: cognition-affect-behavior)
8.	The Virtuous Loop Between Happiness and Pro-Environmental Behavior. Dillenseger & Mouminoux (2024).	Hedonic wellbeing	984 participants	French Students	Pro-environmental behavior increases happiness, and vice versa	Field experiments with randomization
9.	Measuring the Motivation: A Scale for Positive Consequences in Pro-Environmental Behavior. Ahn & Kim (2024).	Positive consequences for self & environment	335 participants	U.S. Consumers	Positive emotions and values mediate the purchase intention of green products	SEM scale development and analysis
10.	Compassion Towards Nature and Well-Being: The Role of Climate Change Anxiety and Pro-Environmental Behaviors. Prata & Matos (2025).	Compassion, climate pride, connection with nature.	522 participants	Portuguese citizens	Connection to nature → well-being → pro-environmental behavior (mediated by climate anxiety)	Moderated mediation model with CFA

Based on the extraction of 10 selected articles, a number of key findings were obtained which can be grouped into the following major themes:

3.1 Anticipated Pride as a Strong Predictor of Pro-Environmental Behavior

Several studies show that anticipated pride is one of the most powerful positive emotions in encouraging a person to care about the environment. That is, when a person imagines that they will feel proud after taking an

eco-friendly action, such as reducing plastic waste or planting a tree, that feeling can be a very effective motivation.

Research from Schneider et al. (2017) found that this anticipated sense of pride actually encourages people to act more than anticipated guilt. The reason is that pride makes a person feel that their actions are in line with the positive values they believe in, such as being a good, caring, and responsible person. This makes people more motivated to do good things for the environment because they want to maintain a positive self-image. This sense of pride can also encourage long-term commitments, not just momentary actions. If a person feels that taking care of the environment makes them a better person, then they will be more likely to make eco-friendly habits a part of their lifestyle.

That way, an approach that evokes pride can be a more effective strategy than one that emphasizes guilt or fear. Environmental campaigns that encourage people to feel proud of their contributions, even if small, can encourage more people to act voluntarily and consistently.

3.2 Satisfaction and Happiness as Factors Reinforcing Pro-Environmental Behavior Intentions

Satisfaction with the environment or environmentally friendly products turns out to have an important role in encouraging a person to continue to behave pro-environmentally. This satisfaction arises when a person feels happy, comfortable, or satisfied after doing something good for the environment—such as using products that don't harm nature or engaging in conservation activities. Research by Chrisjatkiko (2018) shows that the feeling of satisfaction after using environmentally friendly products (called green satisfaction) can make consumers more loyal to the product. This means that if consumers feel satisfied because they feel they are contributing to protecting the environment, they will be more likely to buy the green product back in the future, even recommending it to others.

In addition to satisfaction, subjective happiness has also been shown to be closely related to pro-environmental behavior. Dillenseger and Mouminoux (2024) found that people who engage in environmental actions, such as recycling or participating in nature activities, tend to feel happier. Interestingly, this sense of happiness then encourages them to continue doing similar actions. This is called the virtuous loop—the more often a person engages in actions that benefit the environment, the more satisfied and happy they feel, and the more likely they are to repeat it. In other words, satisfaction and happiness are not only the result of pro-environmental actions, but also the trigger to continue to do those actions. Therefore, creating a pleasant and satisfying experience in any effort to preserve the environment can be the key to building sustainable positive habits.

3.3 The Role of Transcendental Emotions and Connection with Nature

Research by Burke and Corrigan (2024) and Prata and Matos (2025) shows that deep emotions such as compassion, awe, and emotional connection with nature can encourage a person to care more about the environment. These emotions arise when a person feels emotionally connected to nature, for example when enjoying the beauty of nature, feeling the tranquility in the middle of the forest, or realizing the importance of protecting the earth for future generations. When a person has a strong emotional connection with nature, they not only feel happy, but also feel a responsibility to protect the environment. These feelings can trigger tangible actions such as reducing the use of plastics, participating in nature conservation activities, or spreading awareness to others. In addition, a sense of compassion or empathy for other living beings and for the future of the earth also encourages pro-environmental actions. For example, people who are concerned about the future impact of climate change on children will be more motivated to change their habits to be more environmentally friendly.

In other words, the more a person feels close and connected to nature, the greater their sense of care and desire to preserve the environment. Therefore, building an emotional connection with nature through direct experiences, education, or outdoor activities can be an important step in forming sustainable environmental awareness and behavior.

3.4 Awareness of Positive Consequences and Personal Value

Research by Ahn and Kim (2024) developed a measuring tool to see the extent to which a person is aware of the positive consequences of pro-environmental actions. That is, they examined whether a person is aware that what they do such as saving electricity, reducing plastic waste, or using environmentally friendly transportation can have a good impact, both for themselves and for the surrounding environment.

The results of this study show that the more a person realizes the positive benefits of their actions, the more likely they are to continue to engage in eco-friendly habits. For example, people who feel that using refillable drinking bottles can save money while reducing plastic waste will be more motivated to continue the habit. This awareness also does not appear out of nowhere, but is influenced by the personal values that a person has. Among them are biospheric orientation (i.e. the view that nature and living things should be protected), egoistic values (self-serving actions), and moral norms (beliefs about what is right and wrong). When these

three values support environmentally friendly actions, then a person will be more motivated and consistent in protecting the environment.

In other words, when people realize that their small actions can bring big benefits—both personally and for the planet, they will be more motivated to continue engaging in pro-environmental behavior. This is the importance of building awareness and belief that every green action has a real impact.

3.5 Social Dynamics and Other Psychological Factors

In addition to positive emotions, the results of the study also show that there are other psychological factors that play a role in encouraging someone to behave environmentally friendly. Some of them are the intention to behave (behavioral intentions), social norms, self-efficacy, and attachment to the place (place attachment). Behavioral intent describes how much a person is willing to perform a certain action. If a person already has a strong intention to, for example, reduce waste or use public transport, then he is likely to actually do so.

Then, social norms also have a big influence, namely unwritten rules about what is considered good and reasonable in the surrounding environment. Research by Salim and Khan (2023) found that people are more motivated to act in a green way when they see people around them doing the same thing. Conversely, if the social environment is not supportive, then even if a person has a positive attitude towards the environment, he may not feel sufficiently motivated to act.

Self-efficacy or self-confidence is also important. It is a person's belief that he is capable of doing something effectively. The more confident a person is that their actions can make a difference (e.g., "If I save energy, my house bills go down and it helps the environment too"), the more likely they are to act. Finally, place attachment also affects. People who feel they have an emotional connection to where they live such as feeling comfortable, proud, or having good memories tend to be more concerned about the preservation of the environment around them.

From this it can be concluded that positive emotions do not stand alone, but work together with other factors in shaping pro-environmental behavior. Therefore, strategies to encourage concern for the environment should not only foster positive feelings, but also build a supportive social environment, increase individual confidence, and strengthen emotional ties to the environment in which they live.

4 DISCUSSIONS

The results of this study show that positive emotions play an important role in encouraging pro-environmental behavior (PEB). Emotions such as anticipated pride, satisfaction, happiness, and connection with nature have been proven to encourage individuals to care more and act in an environmentally friendly manner. From several studies reviewed, anticipated pride emerged as the most powerful emotion driving pro-environmental intentions and actions. People tend to want to feel proud of the good deeds they do, including taking care of the environment. This makes pride a more effective motivation than guilt or fear.

In addition, satisfaction with the experience of using eco-friendly products or living in a clean environment can encourage sustainable behaviors. A satisfied individual will be more likely to repeat the action and even recommend it to others. Other emotions such as compassion and emotional connection with nature also promote environmental care. When individuals feel emotionally connected to nature, they tend to perceive moral responsibility to protect it. Some studies also show that while these connections can lead to anxiety about climate change, they nevertheless act as triggers for pro-environmental action. In addition to emotions, other factors such as behavioral intentions, social norms, and self-efficacy also support the formation of pro-environmental behavior. This suggests that positive emotions work side by side with other psychological and social aspects.

From the perspective of positive psychology theory, these findings affirm that emotions such as pride, gratitude, and awe function as self-transcendent emotions that expand individuals' sense of self and strengthen their intrinsic motivation to act beyond personal interests. Such emotions not only increase well-being but also direct individuals toward prosocial and pro-environmental goals. Similarly, value theory emphasizes that pro-environmental behavior is strongly linked to self-transcendence values (e.g., universalism, benevolence). Positive emotions may serve as the affective mechanism that activates and reinforces these values, making them more salient in daily decision-making. Thus, positive psychology and value theory jointly provide a useful framework to understand why emotions like pride and compassion can be reliable motivators of sustainability.

Nevertheless, this study has limitations. As with many systematic literature reviews, there is a risk of publication bias, where studies with significant results are more likely to be published than null findings. The search strategy was also limited to specific keywords, which may have excluded relevant studies using different terminology. In addition, although multiple databases were consulted, the review was restricted to English-

language publications, potentially overlooking valuable research in other languages. These limitations highlight the need for future reviews to adopt broader keyword strategies, include grey literature, and consider multilingual sources.

From a practical standpoint, these findings carry important implications. Campaigns and policies aimed at environmental protection may benefit from incorporating positive emotion-based strategies. For example, communication that emphasizes the pride and satisfaction of contributing to environmental sustainability may be more persuasive than fear-based appeals about ecological crises. Educational programs could foster gratitude and awe toward nature through immersive experiences such as eco-tourism, urban greening projects, or school-based outdoor learning. Policymakers may also design recognition systems that highlight community pride in sustainable achievements, thereby reinforcing collective identity and long-term commitment.

Overall, these findings suggest that positive emotion-based approaches offer not only an effective but also a more enjoyable strategy to encourage people to care more about the environment, complementing existing structural and normative interventions.

5 CONCLUSIONS

This study shows that positive emotions such as anticipated pride, satisfaction, happiness, compassion, and connection to nature play an important role in encouraging pro-environmental behavior. These emotions not only increase an individual's motivation to act, but also work in conjunction with other psychological factors such as intentions, social norms, and self-efficacy. Positive emotions-based approaches have been shown to be more effective than negative emotions in creating sustainable eco-friendly behaviors. However, most studies are still correlational and centered in developed countries, so further research is needed in various cultural contexts and with an experimental approach.

REFERENCES

- Ahn, I., & Kim, S. H. (2024). Measuring the motivation: A scale for positive consequences in pro-environmental behavior. *Sustainability*, 16(1), 250. <https://doi.org/10.3390/su16010250>
- Bano, S., Shair, W., Afzal, H., Nisa, B.-un, & Bashir, U. (2024). Pro-environmental behaviors and the prioritization of environmental protection over economic growth. *Journal of Social Sciences Advancement*, 5(4), 137–145. <https://doi.org/10.52223/jssa24-050414-112>
- Burke, J., & Corrigan, S. (2024). Bee well: A positive psychological impact of a pro-environmental intervention on beekeepers' and their families' wellbeing. *Frontiers in Psychology*, 15, 1354408. <https://doi.org/10.3389/fpsyg.2024.1354408>
- Cao, J., Qiu, H., Morrison, A. M., & Guo, Y. (2024). The effect of pro-environmental destination image on resident environmental citizenship behavior: The mediating roles of satisfaction and pride. *Land*, 13(7), 1075. <https://doi.org/10.3390/land13071075>
- Chrisjatismiko, K. (2018). Towards green loyalty: The influences of green perceived risk, green image, green trust, and green satisfaction. *IOP Conference Series: Earth and Environmental Science*, 106(1), 012085. <https://doi.org/10.1088/1755-1315/106/1/012085>
- Dillenseger, L., & Mouminoux, C. (2024). The virtuous loop between happiness and pro-environmental behaviors. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4820800>
- Gu, D., Huang, N., Zhang, M., & Wang, F. (2015). Under the dome: Air pollution, wellbeing, and pro-environmental behaviour among Beijing residents. *Journal of Pacific Rim Psychology*, 9(2), 65–77. <https://doi.org/10.1017/prp.2015.10>
- Kuslantasi, U., Pambudi, B., & Sawitri, D. R. (2022). The relationship between environmental policy and pro-environmental behavior: A systematic literature review. *Journal of R&D: Information Media for Research, Development and Science and Technology*, 18(1), 31–46. <https://doi.org/10.33658/jl.v18i1.671>
- Landmann, H. (2024). Emotions and pro-environmental action – Common misconceptions. *PsyArXiv Preprints*. <https://doi.org/10.31234/osf.io/e5mkf>
- Prata, A., & Matos, M. (2025). Compassion towards nature and well-being: The role of climate change anxiety and pro-environmental behaviors. *Sustainability*, 17(10), 4349. <https://doi.org/10.3390/su17104349>
- Salim, F., & Khan, A. (2023). What's with the attitude? Unravelling the dynamics of pro-environmental action in India. *Asian Journal of Environment & Ecology*, 22(4), 53–62. <https://doi.org/10.9734/ajee/2023/v22i4507>
- Schneider, C. R., Zaval, L., Weber, E. U., & Markowitz, E. M. (2017). The influence of anticipated pride and guilt on pro-environmental decision making. *PLOS ONE*, 12(11), e0188781. <https://doi.org/10.1371/journal.pone.0188781>
- Shipley, N. J., & van Riper, C. J. (2023). Anticipated emotions as predictors of pro-environmental behavior: Extending insights from pride and guilt. *Frontiers in Psychology*, 14, 1198452. <https://doi.org/10.3389/fpsyg.2023.1198452>
- Srinivasan, R., & Borkar, V. R. (2021). A study of pro-environmental behavior as a component of naturalistic intelligence amongst in-service school teachers. *International Journal of Scientific Research*, 10(12), 1–4. <https://doi.org/10.36106/ijsr/8324035>

- Steg, L., Perlaviciute, G., & van der Werff, E. (2021). Understanding and promoting pro-environmental behavior: A review and agenda for future research. *Annual Review of Psychology*, 72(1), 377–404. <https://doi.org/10.1146/annurev-psych-072720-094351>
- Tam, K.-P., & Chan, H.-W. (2022). Environmental psychology: Contributions of affective science to sustainability. *Current Opinion in Behavioral Sciences*, 44, 101108. <https://doi.org/10.1016/j.cobeha.2021.101108>
- Wullenkord, M. C., & Reese, G. (2021). Avoidance, rationalization, and denial: Defensive self-protection in the face of climate change. *Frontiers in Psychology*, 12, 640499. <https://doi.org/10.3389/fpsyg.2021.640499>
- Zelenski, J. M., & Desrochers, J. E. (2021). Can positive and self-transcendent emotions promote pro-environmental behavior?. *Current Opinion in Psychology*, 42, 31–35. <https://doi.org/10.1016/j.copsyc.2021.02.004>