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Life Skills and Green Behavior: A Narrative Review

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ABSTRACT

There is a growing interest in understanding how life skills education can foster pro-environmental behavior. Even with the progress being made, there is still a huge research gap. We examined 78 peer-reviewed studies published between 2003 and 2024 that focus on the link between life skills and environmentally sustainable behavior. While many believe that developing these skills can lead to meaningful changes in our environmental practices, we scrutinized the evidence available. This review prompts us to ask vital questions about this optimistic perspective and to investigate how life skills relate to sustainability.

By analyzing each key skill area, we strive to present a comprehensive overview of the findings and consider the challenges that might change our understanding of how life skills affect our relationship with the environment.

The WHO defined self-regulation as the ability to manage emotions and behaviors, while critical thinking entails assessing information to make accurate judgments. Communication skills refer to how individuals effectively express their thoughts and feelings through spoken and non-verbal means. Decision-making is a mental process of choosing the best course of action after careful thought. Interpersonal skills show how well individuals engage with others and connect positively. They grouped all these abilities under the category of core life skills.

We found that there is evidence that psychosocial competencies, specifically self-efficacy, emotional regulation, and structured problem solving, predict pro-environmental behaviors in a variety of cultural contexts. But these relationships are moderated by the socioeconomic status and dominant cultural values and the form of green behavior. It does not use TPB, SDT and Social Learning Theory (SLT) as the same theory, instead it handles differences and conflicts between the three. It ends with an integrative framework for future research and discussion, and identifies specific gaps that should be explored by future researchers.

Keywords: life skills, green behaviors, pro-environmental behaviors, self-efficacy, sustainability education

INTRODUCTION

Environmental problems often do not have clear cut solutions, and policymakers have gradually come to realize that sustained ecological progress depends on changes in how ordinary people think, choose, and act. Earlier literature on environmental problems tended to focus on regulation, pricing mechanisms, and engineering fixes (Kollmuss and Agyeman, 2002; Steg and Vlek, 2009). Now, there is a broad recognition that individual and community level behavioral actions are also necessary and that cultivating them requires attention to the psychological resources people bring to environmental decisions. In this context, life skills is a growing theoretical interest which could act as preliminary catalysts to pro-environmental behaviors (UNESCO, 2005; WHO, 1994).

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The WHO first articulated the concept of life skills in the early 1990s, primarily in the context of adolescent health promotion. The original framework identified ten core competencies and among them problem-solving, critical thinking, communication, self-awareness, and stress management enable individuals to deal with the challenges of everyday life. Historically, experts in social-emotional learning and health psychology have employed and adapted the WHO framework and its ten score competencies to fit with their own specific goals (UNICEF, 2012). However, there is a gap in whether life skills education is actually helpful when scrutinized against the empirical record on green behavior. This review seeks to address this gap.

Most research on life skills and various pro-environmental behaviors show a strong positive correlation (Chhokar et al., 2011; Ramsey & Rickson, 1976). However, upon closer inspection, there is a more complex and multifaceted picture. While some studies indicate weaker effects (Hines et al., 1987; Schultz et al., 2004), in other studies the effects depend upon the context while some show no consistent link at all with some even pointing towards a negative association (Gatersleben et al., 2002; Whitmarsh & O'Neill, 2010). This variability should not be discarded as random error but highlights a crucial pathway for further investigation.

The aims of this review are threefold: Firstly, the definition of 'life skills' and 'green behavior'. Second, gathering previous research on the effects of different life skills on pro- and contra-environmental behavior; and third, considering conflicting research as useful information. The review looks at the theoretical issues and constraints that affect the role of life skills in promoting environmental stewardship.

METHODOLOGY

Search Strategy and Inclusion Criteria

The narrative synthesis approach outlined by Popay et al. (2006) is followed. It is a technique aimed at advancing theory rather than compiling statistics. Electronic searches were done across PsycINFO, ERIC, Web of Science, Scopus, and Google. Keywords such as life skills, self-efficacy, green behaviors, pro-environmental behaviors, and sustainability education were used. These keywords helped restrict the search to peer-reviewed articles published in English from January 2003 to December 2024. To ensure the quality of the materials, we excluded conference abstracts, dissertations, and other information produced by organizations outside of traditional commercial or academic publishing channels. However, we included key theoretical works published before 2003 if they were relevant to the research.

Inclusion Criteria

Studies examining at least one life skill as a predictor, mediator, or moderator of pro-environmental attitudes, intentions, or behaviors across different demographics we included, while research that focused solely on environmental knowledge or attitudes without incorporating psychosocial competencies, as well as studies that considered only institutional or policy levels without providing individual-level outcome data, were excluded in this review. Following a comprehensive review of titles, abstracts, and full texts, we identified 78 studies that fulfilled our criteria, establishing a robust foundation for our analysis.

Analytical Approach

We conducted the analysis using an iterative thematic synthesis approach. Each study included in the review was carefully evaluated and classified according to its theoretical framework, competency variables, outcome measures, population characteristics, and key findings, including both null and negative results. Following the tradition of narrative reviews, researchers recognized commonalities among studies but did not view them as the only significant outcomes. We also highlighted differences and contradictions, emphasizing the conditions under which life skills fail to promote green behavior as well as understanding when they do.

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CONCEPTUAL FRAMEWORK

Defining Life Skills

The WHO's (1994) foundational taxonomy enumerated ten competencies namely problem-solving, critical thinking, effective communication, decision-making, creative thinking, Skills related to interpersonal relationships, self-awareness, the ability to empathize, managing emotions, and coping with stress and these remain the most widely cited reference point across health, education, and development sectors. According to UNICEF (2012), life skills can be categorized into cognitive, personal, and social domains. The importance of self-efficacy (Bandura, 1977), self-regulation (Zimmerman, 2000), and emotional intelligence (Goleman, 1995) stresses upon the multidimensional nature of psychosocial competence which transcends the original WHO framework.

In this review, life skills are defined as positive, adaptive behavioral skills that enable individuals to meet the demands and challenges of everyday life effectively. Thus, Life skills incorporate psychosocial competencies, which are those abilities that incorporate psychological skills, such as emotional regulation, decision-making skills, etc., with social skills, such as effective communication, to help maintain well-being. This definition encompasses both intrapersonal skills (self-awareness, emotional regulation, and self-efficacy) and interpersonal skills (communication, empathy, and problem-solving). The existing literature points to both of these skills as contributing to pro-environmental behavior.

Defining Green Behaviour

Green behavior, sometimes referred to as pro-environmental, ecological, or environmentally responsible behavior, are those action that mitigates environmental harm or actively fosters a healthier planet (Steg and Vlek, 2009). Within its wide-ranging domain, two critical distinctions are drawn i.e., private actions such as energy consumption, recycling, dietary choices, and transportation methods, and public actions which include environmental activism and community engagement. Organizational practices such as sustainable purchasing and other workplace initiatives are also included in its scope.

Understanding these classifications is important, as the rationale behind personal and private green behavior may differ from that of group, civic, or public actions.

THEORETICAL PERSPECTIVES

Theory of Planned Behavior

The Theory of Planned Behavior (Ajzen, 1991) is one of the most widely used frameworks to examine the relationship between life skills and environmentally friendly behaviours. According to TPB, attitudes, subjective norms and perceived behavioral control are immediate determinants of behavior intention, and predict actual behavior. Life skills, in general, seem to fit well in this model: Perceived behavioral control is closely related to decision-making and self-efficacy, and evidence from previous studies indicate a connection between stronger psychosocial skills and greater sense of control over environmental choices and, with this, stronger intentions to act more environmentally friendly (Chhokar et al., 2011; Kaiser et al., 1999).

In a meta-analysis of 57 studies, Bamberg and Moser (2007) found that the variance in pro-environmental behavior was about 27% explained by TPB components, and that PBC had the most consistent effect. That's a good number, but it's also embedded in a lot of variation: The TPB's prediction of behavior is weaker for more automatic and more constrained actions, where there is little or no conscious decision making involved (Bamberg and Moser, 2007; Verplanken and Wood, 2006).

Self-Determination Theory

The Theory of Planned (Ajzen, 1991) is improved by Self-Determination Theory (Deci and Ryan, 2000). Behavior focused on quality of motivation, not just on presence of motivation. From the perspective of SDT, green actions that stem from truly internalized values, rather than from Are more likely to persist and be carried over to A range of behaviours. It is recommended that life skills in self-awareness and clarification are involved in this. values help individuals connect ecological responsibility to their internalization of values. Overall identity and sense of purpose.

This was supported by early empirical studies by Pelletier et al. (1998) who found autonomous motivation to ENP to be correlated with a wider range of behaviors and higher attitude-behavior consistency. More recently, Ntoumanis et al. (2021) conducted a meta-analysis of studies that investigated internalized motivation as a key determinant of behavior change in health related areas of functioning, which has clear implications for internalized motivation within environmental contexts.

Social Learning Theory

Bandura's (1977, 1986) Social Learning Theory focuses on the process of skill acquisition in the social environment of observation, imitation and reinforcement. So, people do not learn skills alone, but learn partially through watching what they learn and partially through the confidence gained from their own mastery experiences. Schools are an important setting in this context as they are where young people develop psychosocial skills that are associated with autonomous motivation as described in Self-Determination Theory (SDT) and perceived behavioural control as described in the Theory of Planned Behaviour (TPB).

Theories that examine sustainability behaviors at the community level have also found theories that focus exclusively on the individual to be less effective and collective efficacy—the shared sense of a group's ability to generate meaningful results is particularly relevant when environmental challenges are fundamentally collective in nature. Collective efficacy is thus a potential avenue to fill this gap.

RESULTS

Self-Efficacy and Green Behavior: Consistent Evidence

The most consistent and strong relationship with pro-environmental behavior was found for the life skill of self-efficacy, in all of the literature reviewed. In studies ranging in size, cultural context, and outcome (from household energy conservation to nutrition to sustainable transportation), those who felt they could do green acts and make an environmental difference reported higher ecological intentions and were more likely to engage in environmental conservation practices (Fielding and Head, 2012; Tabernero and Hernandez, 2011).

The Tabernero and Hernandez (2011) study merits particular attention. In a Spanish adult sample, task-specific self-efficacy predicted conservation behavior more strongly than environmental knowledge did, a finding that directly challenges the prevalent 'information-deficit' framing of pro-environmental interventions. The study further foundthat coping self-efficacy, meaning individuals' confidence in their ability to manage obstacles to green action rather than to perform the actions themselves, partially mediated the broader self-efficacy–behavior relationship. This points toward a more differentiated view of self-efficacy than the simple belief-in-one' s-competence account that much of the literature has relied on.

Critical thinking helps empower individuals to assess and explore environmental challenges. Understanding that personal choices have far reaching consequences can help individuals make informed contributions to sustainability issues. In the end, developing these skills motivate individuals to take responsibility for their behaviors and help in

sustainable development. Ramsey and Rickson (1976) made a significant argument that engaging in environmentally responsible behaviors requires not only motivation and knowledge but also advanced cognitive abilities ; the ability to assess competing claims, identify systemic causes, and formulate effective responses. Throughout the years, environmental educators have supported and expanded upon this viewpoint (Chhokar et al., 2011; Orr, 1992), and the foundational idea behind it is quite logical.

It's more complicated in the real world. Larson et al. (2010) found that the capacity to assess environmental arguments and recognize fallacies in reasoning used in the evaluation of environmental arguments predicted civic environmental engagement (conservation organization membership and political advocacy) in part independent of environmental attitudes. This implies that critical thinking is not just a booster for existing attitudes and values, but possesses its own unique component to environmental action.

Certain studies have suggested that the role of pre-existing environmental value on critical thinking's impact on green behavior is quite high. For those who hold weak ecological values, an increase in critical thinking skills doesn't lead to greater environmental engagement. Rather, it can lead to heightened distrust of government or environmental information, and lower the intentions to adopt green behaviors (Ojala, 2015; Schultz and Zelezny, 2003).

People often employ analytical abilities in a biased way, to support their already held beliefs instead of critically analysing them (Chaiken and Trope, 1999; Evans, 2008). This may present problems for teachers because it implies that thinking critically is not a simple and neutral mental skill, but rather a skill that is often shaped by the external motivation factors.

Emotional Regulation, Eco-Anxiety, and Green Action

Emotional competencies have become the focal point of life skills–green behaviors dialogue in the context of the increasing worry about climate change among young people. Ojala's (2012, 2015) research program has been particularly fruitful in this regard, characterising three general emotional regulation strategies: problem-focused coping, meaning-focused coping, and avoidance and revealing the distinctly different implications of these strategies for environmental engagement.

Coping strategies that highlight the search for meaning such as positively reassessing one's situation, nurturing hope, and integrating environmental values are strongly associated with a range of consistent pro-environmental actions. These actions may be individual or a community involvement. However, problem-solving coping was somewhat related to eco-friendly coping but less consistent. Predictably, avoidance strategies were associated with not being involved with environmental issues. In general, these findings put emotional regulation on par with its importance and make it a key skill to differentiate healthy and unhealthy reactions to environmental demands.

Eco-anxiety is also another important factor to take into regard. Moderate worries about environmental damage can spark a person's interest in using protective behaviors that are beneficial to the environment. If the feelings of anxiety get to overwhelming, however, they may feel powerless and might avoid trying to address environmental issues.

According to research, our emotional reaction to environmental issues is not a direct one and is complex. There's a certain amount of concern that can make us make things happen, but too much concern can make us not want to do anything. It emphasizes the need to raise awareness of the issues facing the environment, as well as the need to teach people how to handle their emotions and feelings.

Communication and Interpersonal Skills: Social Dimensions of Green Behavior

A lot of the research on life skills and pro environmental behaviors has mainly emphasized on personal competencies. But, communication and interpersonal skills are also critical in the context of teamwork in environmental projects. The ability to have a constructive conversation about the environment, deal with conflicting views, and work together to solve environmental problems is increasingly acknowledged as essential for sustainability in our communities (Clayton et al., 2017; Stern, 2002).

Wals, et al. (2010) argued for a sustainability education that they termed transformative sustainability education, which seeks to promote a change in the way people think and act, as well as to foster systemic thinking and participative competence. Dialogue skills and collaborative problem solving are as central to their curriculum as critical thinking or emotional regulation; not soft-skills tacked onto the real curriculum. Chhokar et al. (2011) gave supportive empirical evidence: school-based life-skills programs that featured collaborative environmental projects had more positive and lasting pro-environmental effects than those that concentrated on the acquisition of individual knowledge and attitude change.

There are some negative consequences that may arise from the correlation between interpersonal skills and green behaviour. Social norm research showed that people who are socialized with peers that support non-eco-friendly behaviours tend to have difficulties to be eco-friendly, even when they hold pro-environmental values themselves (Nolan et al., 2008; Schultz et al., 2007).

Communication can begin the dialogue of sustainability, but does not necessarily instigate pro-environmental actions. Therefore, it is essential to understand the struggle between what people think and what society demands in designing effective strategies to encourage environmental responsibility and to facilitate sustainable behaviors.

DISCUSSION

Overall, the review shows that there is a real but complex relationship between life skills and pro environmental behaviour. Life skills such as self-efficacy, emotional regulation, critical thinking, and social skills can influence pro environmental attitudes but it is dependent on the type of skill, type of behavior, and the surrounding context. Some skills have a more consistent influnce. Self-efficacy and emotional regulation are the strongest predictors. However, skills like critical thinking, communication, and decision-making lead to pro environmental behaviour only when people care about environmental values, have supportive social groups, and have affordances available to act.

Theoretically, no single framework fully explains this relationship. The Theory of Planned Behavior (TPB) explains behavior through intensions and perceived control, but does not account for the emotions, habits or real-world contraints. The Self-Determination Theory (SDT) explains the importance of internal motivation and values but does not fully address external factors like lack of access to resourcers or poverty. The Social Learning Theory (SLT) emphasizes the role of oversational learning and social influence suggesting heavy reliance of behavior on context and environment.

Other factors in the review also provided crucial contradictions. Critical thinking can either increase or decrease pro environmental behavior depending on the how people view the environment i.e., high motivation lead to positive changes (Larson et al., 2010) while low motivation can lead to doubt or resistance in pro-environemntal behaviors (Ojala, 2015; Schultz and Zelezny, 2003).

Eco-anxiety's influence on pro-environmental behavior depend on the level of anxiety with moderate concern likely to encourage behavioural but too much may cause people to withdraw. Ojala's (2015) finding that coping mechanisms like finding meaning and hope can help maintain environmental involvement even during high anxiety which indicates that the regulation and integration of environmental emotions into one's self-concept are more crucial than the intensity

of those emotions. Programs focused on emotional skills would benefit from incorporating specific regulatory strategies rather than solely focusing on raising awareness.

Gender Differences show women are more likely to report pro-environemtal attitudes and behaviors (Zelezny et al., 2000). However, Whitmarsh and O'Neill (2010) found that these differences mostly disappear when examining environmental identity and values. Future studies should apply more clearly defined multivariate approaches to investigate this phenomenon further.

Socioeconomic status and background play a major role in shaping pro-environmental behaviors. Individuals from low income families and fewer resources often are not able to act on pro-environmental knowledge due to financial and structural barriers. Therefore, environmental education should not ignore larger structural barriers like poverty and lack of infrastructure.

Finally, Cultural orientation also adds another complexity to the discussion. Research in East Asian cultural settings has shown that interpersonal and cooperative life skills are more predictive of collective environmental actions than of private pro-environmental behaviors, a trend reversed in studies conducted within Western, individualistic cultures (Chen et al., 2011; Schultz et al., 2004). This indicates that life-skills frameworks, primarily developed in Western, educated, industrialized, rich, and democratic (WEIRD) contexts, cannot be assumed to apply universally.

Implications for Education and Policy

Several practical implications follow from this synthesis. First, effective life-skills programs for sustainability cannot focus narrowly on a single competency; they need to cultivate an integrated profile of psychosocial capabilities, including self-efficacy and emotional regulation as the most reliably green-predictive skills, as well as the interpersonal, communicative, and critical thinking dimensions that enable collective environmental action. Firstly, while enhancing personal abilities is important, it will not fully address the issue; without focusing on systemic factors like the availability of green options, supportive infrastructure, and policies that promote responsible actions ; initiatives may end up placing the burden of overarching ecological problems on individuals who lack the necessary means to take action. It is important to understand different cultures. Educators in non-Western or collectivist settings should assess the basic ideas found in popular life-skills programs and adjust their teaching methods. They may need to focus more on community and relationship skills rather than just personal achievement.

LIMITATIONS

Firstly, the emphasis on publications in English restricts the cultural diversity of the evidence we're examining. A lot of valuable research on environmental education and life skills is carried out and published in other languages, and this gap may affect our findings. The narrative synthesis method works well for building theory in this review, but has its own drawbacks i.e., its subjective nature, relying a lot on personal judgment during the coding and interpretation stages. Additionally, it also does not enable us to calculate effect sizes or provide formal estimates related to publication bias. Lastly, because different studies measured life skills and pro environmental behavior differently, it is hard to know which skills influence which pro environmental behavior and as such researchers need more consistent definitions and measures in the future.

CONCLUSION

This review looked at several studies showing the link between psychosocial skills like self-efficacy, emotional regulation, critical thinking, and interpersonal competence to pro-environmental attitudes, intentions, and behaviors. Overall, the findings suggest that these skills do influence pro environmental behavior, operating through perceived behavioral control, intrinsic motivation, and the quality of emotional regulation.

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However, The relationship state above is also not always straightforward, with exceptions and limitations. These complexities are important and should be understood as they affect how we apply them to real life.

Future research should focus on long-term studies that track how life skills evolve and how they connect with green behavior throughout different stages of life. It is also important to conduct cross-cultural comparative studies that use consistent methods and frameworks to identify what patterns are universal and which are unique to specific cultures. From a theoretical standpoint, integrating ideas from the Theory of Planned Behavior, Self-Determination Theory, and Social Learning Theory, along with ecological identity theory and a systems-thinking approach could yield valuable insights. This integration can help us understand how life skills education can effectively build the psychological foundations for sustainable behavior.

AUTHOR DECLARATIONS

CRediT Author Statement / Author contributions

Maisnam Julia Devi: Conceptualization, Methodology, Formal analysis, Investigation, Writing — original draft, Visualization, Writing — review & editing.

Gangmumei Kamei: Formal analysis, Visualization, Conceptualization.

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