Exploring Environmental Citizenship: A Comprehensive Review and Future Research Directions.

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Abstract: This comprehensive review explores diverse themes within Organizational Citizenship Behavior (OCB), focusing on its environmental aspects. The Impact of Technologies investigates sustainability apps' role, proposing a model for their interaction with ecological values. The Impact of Politics highlights government quality's role in moderating the link between environmental concern and behavior. Examining the Impact of Psychology, the research delves into the psychological determinants of environmental behavior. The Impact of Motivation explores how eudaimonic motivation fosters environmental citizenship. Investigating the Impact of Education, the study emphasizes education's role in fostering environmental awareness. Lastly, the Impact of Leadership examines the link between leadership, transformational leadership, and environmental stewardship. Despite valuable insights, noticeable gaps in existing literature warrant further research to advance our understanding of organizational behavior and environmental concerns.

Keywords: Organizational Citizenship Behavior, Environmental Aspects, Sustainability Apps, Politics, Psychology, Motivation, Education, Environmental Awareness, Transformational Leadership.

I. Introduction

In recent decades, swift economic progress has led to increased industrial operations and resource overconsumption, resulting in adverse impacts on the environment. The expanding body of scholarly works and contemporary patterns underscore the urgency of formulating strategies to alleviate the decline in environmental conditions (Ashfaq et al., 2021; Ren et al., 2021).

Promoting environmentally friendly or green practices within the workplace can instill a sense of responsibility among employees to address and mitigate environmental challenges. Critical issues like urban air and river quality, deforestation, household waste, and hazardous waste demand attention and action. Inculcating a culture of pro-environmental behavior among employees can significantly contribute to the collective effort to combat these pressing issues.

Given that organizations are recognized as influential contributors to climate change, the necessity for implementing both formal and informal environmental management systems becomes evident to foster ecological sustainability through responsible interaction with the environment (Al Halbusi et al., 2021).

The aim of this review is to systematically examine various thematic aspects of Organizational Citizenship Behavior (OCB), with a specific emphasis on its environmental manifestations. The goal is to analyze the intricate relationships underlying environmental problems.

Following this review, noticeable gaps in existing literature come to the forefront, indicating the necessity for further research and scholarly exploration. Subsequent sections meticulously delineate specific areas requiring additional scrutiny, thereby charting a course for future academic endeavors.

II. Review of Existing Studies

Environmental concerns are gaining moral significance in organizational activities, prompting businesses to adopt environmental management systems. Employee commitment to environmental causes is crucial for achieving organizational goals in sustainability. However, existing literature on employee environmental behavior lacks sufficient exploration of the impact of explicit environmental support from leadership and the underlying mechanisms shaping organizational citizenship behavior in the environmental context.

The resolution of environmental issues requires collaborative efforts among employees, emphasizing the necessity for effective environmental management to shift from centralized organizational rules to decentralized, individual attitudes regarding organizational citizenship behavior pertaining to the environment (OCBE).

This prompts an increased focus on research exploring the intricate connections between OCBE and corporate policies, leadership styles, environmental values, adherence to social norms, and the motivation of employees.

In examining the landscape of current research, it becomes evident that a multitude of categories have been explored, each shedding light on distinct facets of the complex relationship between individuals, the environment, and sustainable practices. This section reviews the strengths and weaknesses of previous studies across various domains, evaluating their research subjects and contributions to our

understanding of key environmental influences. Notably, these categories include:

Categories	Research subject	Research contribution
Impact of Technologies:	Investigates the role of sustainability apps in shaping environmental behavior.	Proposes a comprehensive model elucidating the intricate interaction between apps, ecological values, and behavior.
Impact of Politics	Explores the role of politics in moderating the relationship between environmental concern and behavior.	Provides compelling evidence that the quality of government efforts enhances this connection, operating at both organizational and societal levels.
Impact of Psychology	Examines the role of psychology in determining environmental behavior and identifies various types of environmental attitudes.	Focuses on studying the influence of diverse environmental aspects on psychological processes, emotions, life satisfaction, and individual well-being.
Impact of Motivation	Explores the role of motivation in promoting environmental citizenship.	Investigates how eudaimonic motivation, within the context of a sustainable lifestyle, fosters environmental citizenship through active engagement in green practices.
Impact of Education	Explores the role of education in environmental citizenship.	Highlights the significance of fostering environmental awareness and understanding contemporary ecological issues and their causes through educational interventions.
Impact of Leadership	Investigates the role of leadership and transformational leadership in environmental stewardship.	Explores the link between responsible leadership and Organizational Citizenship Behavior towards the Environment (OCBE) through employees' psychological responsibility.

1. The Impact of Technologies

The evolving relationship between technology and individuals not only introduces novel processes and values but also molds societal norms (Troisi et al., 2021). Within this paradigm, the role of applications in shaping environmental behavior emerges as a pivotal area of research, with a central model proposed to elucidate the dynamic interplay between apps, ecological values, and behavior.

A multitude of studies within this domain accentuates the transformative influence of mobile applications in advancing environmental sustainability. Mario D'Arco and Vittoria Marino's work (2022) accentuates the instrumental role of applications in realizing ecological goals. Equally noteworthy is the research led by Estrela Ferreira Cruz and A.M. Rosado da Cruz, exploring the intricate relationship between digital solutions and sustainable consumer engagement in the textile and clothing circular economy. This research offers invaluable insights that can inform governmental decisions, guide policy development, shape organizational strategies, and drive educational initiatives.

As we navigate the intersection of technology and environmental sustainability, the insights gleaned from these research endeavors provide a robust foundation for shaping a greener future through informed decision-making, innovative policies, and strategic initiatives across various sectors.

2. The Impact of Politics

The examination of the role of politics in shaping the nexus between environmental concern and behavior underscores the pivotal role of government activities in strengthening this connection on both organizational and societal levels. Joakim Kulin and Ingemar Johansson Sevä (2020) delve into the realm of pro-environmental behavior among citizens, exploring dimensions of trust and collaboration. Their study unravels the intricate relationship between government quality, environmental concern, and climate change mitigation across 23 European countries, shedding light on how the quality of government interventions impacts the correlation between environmental concern and climate change mitigation efforts.

Similarly, another study conducted by Swedish scholars, including Sverker C. Jagers, Simon Matti, and Johan Martinsson, unfolds the influence of government quality on the interconnection between environmental concern and ecological behavior. Government quality, as defined by the scholars, encompasses the government's ability to provide public goods and services, uphold legality, and be accountable for its actions. Within this framework, the researchers identify three critical facets of government quality: effectiveness (the government's prowess in achieving desired outcomes), democratic governance (its ability to reflect the will of the people), and corruption (the extent of power abuse for personal gain).

The synthesized insights from these studies elucidate that various dimensions of government quality play a decisive role in shaping the relationship between environmental concern and climate change mitigation.

3. The Impact of Psychology

This body of research delves into the multifaceted impact of environmental elements, encompassing the natural, social, and built environment, on psychological processes, emotional states, life satisfaction, and overall well-being.

In the context of escalating efforts to grapple with environmental management challenges, the study conducted by Anupam Kumar Das and Shetu Ranjan Biswas undertakes an exploration into the sway of corporate environmental strategy on employees' voluntary environmental conduct. The primary focus lies in orchestrating or facilitating their perceived psychological green climate. While the direct impact of corporate environmental strategy on voluntary environmental behavior may be statistically insignificant, the study reveals a notable indirect influence through mediation. Corporate environmental strategy shapes employees' voluntary environmental behavior by influencing their perception of the psychological green climate. Significantly, the study emphasizes that corporate environmental strategy substantially contributes to shaping the psychological green climate, subsequently enhancing voluntary environmental behaviors such as energy conservation, waste reduction, and resource recycling. Scholars emphasize that cognitive and motivational processes, such as risk perception, heuristics, norms, emotions, and self-efficacy, impact how individuals choose among various action alternatives concerning the environment. For example, Newell et al. (2014) examine various models and approaches to studying these factors.

The study by Stephen Joseph delves into the confluence of positive psychology and the person-centered approach, elucidating the unique standpoint of the person-centered approach within the broader positive psychology paradigm. The paper posits that aligning positive psychology with the humanistic image of individuals and influencing social environments for personal growth would signify a progressive step.

For researchers, this study encourages reflection on the potential uses and agendas associated with research findings in broader societal contexts.

4. The Impact of Motivation

Contemporary global challenges, notably the imperative to address climate change, have accentuated the importance of sustainable lifestyles and pro-environmental behaviors (PEBs) across various domains. Achieving this paradigm shift requires a nuanced understanding of the intricate interplay between motivation, leadership, and citizen engagement. This synthesis examines three distinct studies conducted by Dreijerink et al. (2022) and West et al., each contributing unique insights into the complexities of fostering sustainable practices. By unraveling the dynamics of motivation, leadership impact, and participant engagement, these studies collectively provide a comprehensive perspective on the multifaceted dimensions of environmental consciousness and behavior.

The study by Dreijerink et al. navigates the challenges of instigating sustainable lifestyles by scrutinizing the roles of motivation and effort in performing PEBs across diverse domains. By delineating the nuanced relationships between difficulty, effort, and motivation, the study emphasizes the importance of aligning behaviors with individual motivation levels. This strategic insight holds significant implications for developing targeted interventions to bridge the gap between motivation and the adoption of challenging pro-environmental practices.

West, Dyke, and Pateman delve into the motivations of environmental citizen scientists, categorizing participants based on their motivations and exploring associated demographic characteristics. The study identifies clusters dominated by Values motivations and an intriguing cluster combining Egoism motivations with Values motivations. This diversity suggests the need for tailored recruitment strategies to effectively engage and retain participants, particularly those from underrepresented groups.

In summation, these studies collectively illuminate the intricate landscape of environmental consciousness, underscoring the pivotal roles of motivation, leadership, and citizen engagement in promoting sustainable practices.

5. The Impact of Education

The role of education in fostering environmental citizenship aims at developing knowledge, skills, values, relationships, and competencies necessary for active participation in addressing environmental issues at both individual and societal levels. Lenny Christina Nawangsari and others highlight the nexus between efforts to enhance the quality of human resource management and the educational aspect. In the realm of sustainable organizations, every member, even at an individual level, plays a crucial role. Employees willing to go beyond their formal responsibilities in environmental matters are recognized as engaging in Organizational Citizenship Behavior towards the Environment (OCBE).

The study by Nicole M. Ardoin, Alison W. Bowers, and Estelle Gaillard offers insights into how environmental education not only leads to cognitive and affective changes but also contributes to establishing links between research and practice. Emphasizing the importance of creating synergistic spaces where all stakeholders can collaborate to address dynamic environmental issues over time, their research underscores that a comprehensive understanding of the impact of environmental education requires considering not only educational and cognitive changes but also establishing concrete connections with real-world outcomes in environmental conservation. Despite the significant amount of research in the field of Green Human Resource Management (GHRM), little attention has been given to its application in the education sector. The study by Japir Bataineh and others addresses questions about the impact of green training on organizational behavior, the role of behavior in influencing corporate environmental performance, and their interconnection.

The studies underscore the need for holistic approaches that integrate educational, cognitive, and behavioral aspects to achieve meaningful and lasting results in environmental sustainability.

6. The Impact of Leadership

Leadership plays a pivotal role in shaping Organizational Citizenship Behaviors for the Environment (OCBE) through dynamic interactions within an organization. A robust body of research suggests a positive correlation between responsible management and OCBE, mediated by employees' psychological responsibility and commitment to environmental causes. The research conducted by Muhammad Mansoor Asghar and Syed Anis Haider Zaidi affirms that leadership with transformational qualities can significantly amplify the impact of followers' participation in corporate citizenship practices, thereby enhancing psychological capabilities.

In the study by Lai et al. (2020), the motivational impact of transformational leadership on followers' task performance and helping behavior is explored, with a specific emphasis on work engagement as a crucial mediator. The research rigorously addresses alternate mediating mechanisms, shedding light on work engagement as a profound motivational factor deserving greater scholarly attention.

Li et al.'s (2019) research delves into the multifaceted impact of transformational leadership on innovative work behavior, highlighting trust and work engagement as mediators and empowerment as a moderator. The findings underscore the pivotal role of transformational leaders in fostering trust, work engagement, and innovative work behavior.

In conclusion, these studies collectively enrich our understanding of the intricate relationships between transformational leadership, trust, work engagement, empowerment, and various organizational behaviors.

III. Gaps in the Literature and the Need for Further Research

1. Further Research: The Impact of Technologies

The exploration of the nexus between technology and individual behavior, particularly within the context of environmental consciousness, has unveiled a transformative landscape. The studies highlighted in this analysis accentuate the instrumental role of mobile applications and digital platforms in shaping and advancing environmentally conscious behavior.

The imperative for further research in this domain is evident, as the evolving relationship between technology and environmental behavior necessitates ongoing exploration and understanding. Additional studies can contribute to refining strategies, fostering sustainable practices, and actively engaging individuals in environmental citizenship across diverse sectors, thereby shaping a greener and more sustainable future.

2. Further Research: The Impact of Politics

The highlighted studies emphasize the significant influence of government quality on the relationship between environmental concern and pro-environmental behavior. However, identified gaps suggest opportunities for further research. While existing research provides valuable insights into government interventions, including effectiveness, democratic governance, and corruption, a more detailed exploration of these aspects could enhance our understanding. Longitudinal studies tracking the evolution of government quality over time are needed to capture the dynamic nature of environmental concerns and interventions. Such analyses could reveal how shifts in political landscapes, policy implementations, or societal attitudes impact the connection between environmental concern and behavior. Additionally, broadening the focus to include local governance, community-level initiatives, and grassroots movements would provide a more comprehensive perspective, uncovering unique dynamics not apparent in broader analyses.

3. Further Research: The Impact of Psychology

The studies highlighted provide valuable insights into the complex relationship between environmental factors, human psychology, and behavior. However, certain gaps in the literature suggest the need for additional research.

In the study by Anupam Kumar Das and Shetu Ranjan Biswas, while the indirect influence of corporate environmental strategy on employees' voluntary environmental behavior is explored, further research could delve into specific psychological mechanisms and sector-specific nuances.

The study by Stephen Joseph introduces a novel perspective by merging positive psychology with the person-centered approach. However, more research is needed to assess the practical implications of non-directive interventions, conduct a comparative analysis of directive and non-directive approaches, and explore cultural variations in intrinsic motivation and growth-promoting climates.

Furthermore, the emphasis on intrinsic motivation in optimal social environments prompts the need for research that examines how these environments vary across diverse cultural settings. Investigating the cultural factors that influence individuals' perceptions of growth-promoting climates and their intrinsic motivation could offer a nuanced understanding of the universality or cultural specificity of these concepts.

4. Further Research: The Impact of Motivation

The studies presented contribute valuable insights into the complex dynamics of promoting sustainable practices and pro-environmental behaviors (PEBs) amidst contemporary global challenges. However, certain gaps in the literature suggest the need for additional research.

The study by Dreijerink et al. addresses the challenges of instigating sustainable lifestyles by examining the roles of motivation and effort in performing PEBs across diverse domains. While it offers a phased approach, more research is needed to explore specific factors influencing motivation and effort, and how interventions can be tailored to individual motivations.

In the research by West, Dyke, and Pateman, the categorization of environmental citizen scientists based on motivations provides valuable insights. However, further exploration is warranted to understand the nuanced dynamics within each motivational cluster, enabling the development of more targeted and effective recruitment strategies.

Future research should delve deeper into the specific drivers of motivation, the impact of leadership styles, and strategies for fostering inclusive engagement, ultimately guiding practical interventions for a more sustainable and conscientious world.

5. Further Research: The Impact of Education

Existing research highlights education's pivotal role in fostering environmental citizenship, yet discernible gaps require scholarly attention. Key gaps include the absence of standardized frameworks to comprehensively evaluate the holistic impact of environmental education. A structured approach is vital to assess its influence on behavior, organizational practices, and conservation outcomes. Understanding the enduring sustainability of behavioral changes from environmental education initiatives is notably deficient, urging nuanced exploration of longitudinal effects for informed strategies.

Current research insufficiently addresses contextual intricacies in implementing environmental education, necessitating comprehensive investigation into diverse settings, cultural nuances, and regional challenges for tailored strategies. The concept of Organizational Citizenship Behavior towards the Environment (OCBE) lacks universally accepted metrics, requiring further dedicated research for a robust foundation.

In conclusion, addressing these gaps is paramount. Additional research will contribute to a nuanced understanding of education's role in fostering environmental citizenship and fortify strategies promoting ecological consciousness and conservation efforts.

6. Further Research: The Impact of Leadership

While existing studies highlight leadership's importance, a lack of standardized methodology for a comprehensive assessment hinders evaluating its impact on individual behavior, corporate practices, and environmental indicators. Prioritizing the development of a unified approach for this assessment is crucial for future research.

Insufficient understanding of the long-term sustainability of behavioral changes resulting from leadership's influence on OCBE is evident. Focused research on long-term impact measurement is essential to better evaluate corporate strategies in sustaining behavioral changes. A shortage of studies on proactive leadership and innovative behavior is observed, emphasizing the necessity to broaden the understanding of leaders' roles in stimulating innovation, considering trust, employee involvement, and environmental commitments.

In conclusion, the importance of additional research is evident for a deeper understanding of complex relationships between transformational leadership, trust, work engagement, empowerment, and various organizational practices.

IV. Conclusions

In conclusion, this review explored diverse themes within Organizational Citizenship Behavior (OCB), with a focus on its environmental aspects. The research subjects covered critical areas, contributing distinct insights to our understanding of the interplay between organizational behavior and environmental concerns.

Despite valuable insights, noticeable gaps in the existing literature have emerged, indicating the need for further research. Future endeavors should explore the Impact of Technologies, Politics, Psychology, Motivation, Education, and Leadership, providing a roadmap to address these gaps, advance knowledge, and inform practical strategies for promoting environmental citizenship.

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