

**CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD**



**The Role of Sustainable Leadership on Employee
Green Performance: Employee Empowerment as
Mediator and Perceived Organizational Support
as Moderator for the Relationship**

by

Rameen Razzaq

A thesis submitted in partial fulfillment for the
degree of Master of Science

in the

Faculty of Management & Social Sciences

Department of Management Sciences

2024

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*Dedicated to my family who dedicated their lives to teach me how to step
forward...!*



CERTIFICATE OF APPROVAL

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Support as Moderator for the Relationship**

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Acknowledgement

“Then which of the Blessings of your Lord will you deny.”

(Surah Ar-Rehman)

First and foremost, I express my deepest gratitude to Allah, my creator, my life coach, the most gracious, the most beneficent. I owe it all to you, and I am eternally thankful for your guidance and blessings throughout my journey.

I would like to extend my heartfelt appreciation to all the individuals who has walked alongside me and provided invaluable support and guidance. I am indebted to each of you for your contributions and encouragement. To my supervisor, Dr. Shazia Faiz, I extend a special thanks for your unwavering support, stimulating suggestions, and guidance. Your expertise and dedication played a pivotal role in coordinating my thesis work and achieving the desired results. Without your continued belief in me, this accomplishment would not have been possible.

I would also like to express my deep love and gratitude to my beloved mother, Mrs. Saadia Razzaq, for her unconditional love, unwavering support, and unwavering belief in my abilities. Your encouragement and presence have been a constant source of strength throughout this journey.

Lastly, I extend my sincere thanks to the organizational management who graciously provided the data for my research. Although words cannot fully express my gratitude, my heart is overflowing with appreciation for the assistance and cooperation I received from everyone.

A handwritten signature in black ink that reads "Rameen" with a stylized initial "R" and a small star at the end.

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Abstract

This study aims to explore how sustainable leadership influences employee green performance. The leading organizations across the world have been showing great concern for green employee performance. The study specifically targeted health sector, where sustainable leadership appeared as greater contributor. The study suggested that the connection among variables I.e., sustainable leadership and employee green performance was mediated by employee empowerment. The study also looked at how sustainable leadership and employee green performance and was moderated by perceived organizational support.

Probability sampling was applied for sampling. Data was gathered online using google forms. The results from a sample of 281 doctors provided insight about the significance of sustainable leaders. Regression analysis and correlation were used to investigate the given data. With SPSS PROCESS HAYES , the data analysis was carried out. Finding revealed that sustainable leadership has a favorable influence on employee green performance and this relationship was mediated by employee empowerment and moderated by perceived organizational support. Limitations and future directions were also discussed.

Keywords: Sustainable leadership; Employee Green Performance; Perceived organizational support; Employee Empowerment.

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Abbreviations

DV	Dependant Variable
EGP	Employee Green Performance
EE	Employee Empowerment
IV	Independent Variable
POS	Perceived Organizational Support
SL	Sustainable Leadership

Chapter 1

Introduction

1.1 Background of the Study

The Sustainable Development Goals (SDGs) were unveiled by the UN in 2015 in an effort to address the growing socioeconomic and environmental issues facing the world and provide more sustainable paths for coming generations ([Sharifi et al., 2024](#)). The Sustainable Development Goals (SDGs), serve as humanity's collective compass—a universal call to action. We need sustainable leadership now more than ever in a time of extreme environmental problems, social inequality, and economic turmoil. The Sustainable Development Goals (SDGs), which were established by the United Nations in 2015, provide a comprehensive framework for addressing these global issues. Modern infrastructure, which includes housing, healthcare, good roads, education, communication, and related services, needs to be developed quickly because to the growing human population ([Mishra et al., 2024](#)). Leaders may bring about significant positive change and guarantee that companies and organizations contribute significantly to global sustainability initiatives by coordinating their organizational objectives with the Sustainable Development Goals (SDGs).

Sustainable leadership, an increasingly crucial concept in recent decades, represents an essential strategy for directing organizations and promoting positive transformation. This approach has emerged in response to growing worries about environmental damage, social inequity, and economic downturns. In the face of

complex global challenges, sustainable leadership offers a pathway to enduring success while ensuring the quality of life and welfare to human being of current and forthcoming generations. Sustainable leadership is defined as development that satisfies the demand of today's generation unless they are affecting the ability of tomorrow's people to satisfy their own needs (Waddock, 2019).

Sustainable leadership builds upon traditional leadership theories but emphasizes a broader set of values and goals, including environmental stewardship, social responsibility, and decision-making that can be useful for organization. Leadership is instrumental that can spearheading and inspired sustainable integration practices within organizations. Leaders play important and central role in fostering environment that champion's common ethics, morals values that shapes the moral conduct of personnel's and it helps making organization strong and also boost the connection's with its stakeholders (Armani et al., 2020).

Sustainable leadership that deeply ingrained throughout the entire organization, constituting a self-perpetuating system through pertinent practices. This facilitates helps in maintaining equilibrium across various dimensions throughout their entire life cycle that is in economical, social, and environmental way, thereby facilitating long-term goals to development to sustainability in an organizations (Liao, 2022). It encourages leaders to take into account the long-term roles of their own decisions on people, planet, and profit and to adopt strategies that promote sustainability across all dimensions of organizational operations. As organizations increasingly recognize the importance of sustainability in today's complex and interconnected world, sustainable leadership has become a key focus area for research, practice, and education in the fields of leadership and management.

A conscientious approach to leadership that evaluates the overall impact of an organization's actions is necessary for sustainable leadership. These leaders go beyond short-term gains and recognize their role in a larger context. Sustainable leadership involves directing and motivating individuals toward enduring success while giving precedence to environmental conservation, social accountability, and economic sustainability (Wong, 2014). When implementing sustainability it brings together the consideration to various factors in making organization decisions and strategy. Sustainable leadership balances the triple goals of economy, society, and

environment. They intend to establish long-term goals for all stakeholders that are part of organization, including internal workers, external partners, and of course the most important one that is planet (Liao, 2022). It focuses on extended period of sustainability, innovation, and role of stakeholders while tackling concerns like climate, inequality, and resource depletion (Quick et al., 2022).

Sustainable leadership entails a dedication to nurturing the enduring prosperity of an organization by taking care of the nature, being responsible and make sure money matters are balanced in both decision-making procedures and organizational operations (Yang & Lu, 2021). Various variables are studied within the realm of sustainable leadership to understand its impact and effectiveness.

Sustainable leadership encompasses an emphasis on promoting environmental sustainability and reducing ecological footprints through proactive measures (Gardner et al., 2011). Sustainable leaders prioritize social responsibility by advocating for ethical conduct, fostering diversity, and actively engaging with the community (Afsar et al., 2016).

Sustainable leaders works together with different group of like workers, customers, and nearby neighborhoods to solve environmental problems (Groves et al., 2019). Research has shown that the proficient involvement of stakeholders improves organizational resilience and credibility within the sustainability framework (Elkington & Binsardi, 2019). Sustainable leadership entails a forward-looking approach (Khan et al., 2020). Some studies highlighted that leaders who adopt a long-term perspective play a very important role in shaping organizational cultures and strategies (Schaltegger and Wagner, 2011).

Sustainable leadership goes beyond traditional profit-driven approaches. It emphasizes a broader perspective, ethical behavior, and a commitment to creating positive impacts for people, the planet, and prosperity. Sustainable leadership is a crucial aspect of organizational success, especially in today's global context where environmental and social challenges demand responsible leadership. By integrating sustainability principles, some managers can make a positive change to the organization and contribute to a better world. In the end, sustainable leadership is about leaving a legacy that helps people and the environment, not merely about wise resource management.

1.2 Gap Analysis

Amid rising environmental concerns, organizations are becoming increasingly aware of the critical role that sustainable leadership plays in driving eco-friendly practices. The environmental impact of health care organizations is substantial. Clinics, hospitals, and other healthcare institutions require resources like chemicals and water, generate trash, and consume electricity.

Researchers can find areas for improvement by looking at how healthcare procedures affect the environment. The goal of sustainable leadership is to provide excellent patient care while reducing adverse effects on the environment. Programs for sustainability in healthcare settings can result in significant financial savings. An important role is played by scientific research. It assists in defining the connections between health impacts (such as pollution and climate change) and environmental sustainability, as well as in determining the appropriate course of action and sharing best practices ([Berniak-Woźny and Rataj, 2023](#)).

The rise of sustainable leadership is situated within a larger framework encompassing changes in societal norms, increased environmental awareness, and shifts in economic models. Although the current body of literature offers a brief discussion on overall association on sustainable managers and employee green behaviour, there exists a discernible void in empirical research delving into this relationship within particular industries or organizational settings. Cultural factors must be regarded as a crucial aspect in the successful implementation of sustainable leadership. The focal point of success in advancing organizational sustainability should center on the role and development of both employees and leaders ([Purwanto and Ellitan, 2024](#)).

Despite an increasing volume of literature concerning sustainable leadership, a significant knowledge gap persists regarding the lasting sustainability outcomes associated with such leadership practices. While many studies have primarily concentrated on the immediate implications of sustainable managers on organizational performance and employee conduct. Limited research looks at how sustainable leaders affects the environment, society, and money in long –run. [Asad et al. \(2021\)](#) given a clue that relationship need to be conducted in health sector.

More investigation is necessary to explore how sustainable leadership practices foster employee empowerment and, consequently, how empowered employees impact sustainable outcomes.

Extant literature has demonstrated a link between sustainable leadership and favorable outcomes, still there is a scarcity of studies focusing explicitly on the mechanisms by which sustainable leadership influences employee empowerment and its consequent impacts on organizational sustainability (Shuya and Zainal, 2022). The underlying mechanism between empowered employee and employee green behaviour could potentially exist when specific sustainability goals or practices within the organization are concerned (Hendrawijaya, 2019).

Extant research also suggests that conducting field research solely within one city and among employees of organized industries limits the scope of the study. A more comprehensive approach would involve exploring sectors where employee empowerment holds greater significance and where employees tend to have longer tenures. This broader investigation would offer deeper factors of leadership along with organizational support that support employee empowerment (Yildirim and Naktiyok, 2017).

The explanatory mechanism needs attention, as when employees are empowered they can feel free to contribute in the organization, feel a sense of their rights in an organization and can better do their job and have control over it, leading to increased motivation and engagement. When workers feel empowered, they can make better decisions and take action, they are better positioned to innovate, solve problems, and achieve goals effectively (Nawaz et al., 2024). While sustainable leadership is theorized to positively impact employee green performance, the extent of this relationship may vary by different level of perceived organizational support. Extant research emphasized on investigating how POS moderates the connection among sustainable leaders and employee green behavior (Hameed et al., 2020). This suggests a need for further research to explore the applicability of the study's conclusions to a wider range of industries and organizational settings in Pakistan. Researchers can explore the dynamics among variables that is sustainable leadership, perceived organizational support, and employee green performance, ultimately emphasizing the development of effective leadership strategies

and sustainability initiatives in organizations.

1.3 Problem Statement

The health sector, a critical component of societal well-being, faces growing pressure to adopt sustainable practices due to environmental concerns and regulatory demands. Sustainable leadership, which integrates environmental demands with organizational management, has emerged as a crucial driver for fostering eco-friendly practices within organizations. However, the impact of sustainable leadership on employee green performance remains under explored, particularly within the health sector. While sustainable leadership is assumed to enhance employee green performance, the mechanisms through which this occurs are not well understood. Employee empowerment, the process of enabling employees to take initiative and make decisions, is suggested as a potential mediator in this relationship.

Empowered employees are more likely to engage in proactive environmental behaviors when they feel they have the authority and resources to do so. However, the effectiveness of employee empowerment in translating sustainable leadership into improved green performance may vary depending on the level of perceived organizational support (POS). Perceived organizational support refers to employees' perception of the extent to which their organization values their contributions and cares about their well-being.

High levels of POS may enhance the impact of employee empowerment by ensuring that employees feel supported in their environmental initiatives, thus reinforcing their green performance. Conversely, low levels of POS may undermine the positive effects of employee empowerment, as employees might feel isolated in their efforts to implement sustainable practices.

Therefore, the interplay between sustainable leadership, employee empowerment, and perceived organizational support warrants a detailed investigation to understand how these factors collectively influence employee green performance in the health sector. This study aims to fill this gap by examining the mediating role of employee empowerment and the moderating role of perceived organizational

support in the relationship between sustainable leadership and employee green performance in health sector organizations.

Despite the focus on sustainable leadership, the direct impact on employee green performance, as well as the mediating role of empowerment and moderating effect of perceived organizational support, remains insufficiently explored.

1.4 Research Questions

The goal of this research is to find answers to these questions. This study aims to explore the following questions:

Research Question 01:

Does sustainable leadership positively affect employee green performance?

Research Question 02:

How does Sustainable Leadership effects Employee Empowerment?

Research Question 03:

Does employee empowerment effect employee green performance?

Research Question 04:

How does employee empowerment influence the association among sustainable leadership and employee green performance?

Research Question 05:

Does perceived organizational support moderates the relationship between sustainable leadership and employee green performance?

1.5 Research Objectives

The specific objectives of this study is as follows:

- 1- To find out how sustainable leadership affects employee green performance.
- 2- To investigate how sustainable leaders empower employees.

3- To investigate how empowering employees leads to better eco-friendly performance.

4- To investigate how employee empowerment mediates the relationship between sustainable leadership and employee green performance.

5- To examine out how perceived organizational support moderates the connection between sustainable leadership and employee green performance.

1.6 Significance of the Study

Studying how sustainable leadership affects employees perform in eco-friendly ways, especially when we look at how empowering employees and support from the organization play a role, is important. It can help us understand more about sustainable leadership and how organizations can be more eco-friendly. This study adopts a comprehensive perspective to sustainability by examining the interplay between sustainable leadership, employee empowerment, perceived organizational support, and employee green performance. By investigating these complex relationships, the study contributes to a more detailed insight of how leadership practices, employee empowerment, and organizational support systems collectively influence sustainability outcomes within organizations. Sustainable leadership is increasingly acknowledge as a critical driver inside the sustainable organization. This study is crucial as it reveals how sustainable leadership, coupled with employee empowerment and perceived organizational support, can boost employee green performance and advance organizational sustainability. Examining the role of sustainability on employee green performance, this study give a knowledgeable insight on effectiveness of sustainable leadership practices in promoting environmentally responsible behavior among employees.

The findings can inform leadership development initiatives and organizational strategies aimed at fostering a culture of sustainability. This study looks at how things like empowering employees and the support from the organization affect the way sustainable leadership influences how well employees perform in eco-friendly ways. Understanding these connections can help leaders figure out how to make their organizations more sustainable. Sustainable leadership practices can play a

pivotal role in driving organizational efforts to address these difficulties by promoting environmentally responsible behavior among employees because Pakistan goes through challenges, pollution, water scarcity, deforestation, and air pollution are main challenges that country face. In Pakistan, they are committed to gain the United Nations Sustainable Development Goals (SDGs), including goals related to environmental sustainability. Studying the impact of sustainable leadership on employee green performance can contribute to progress towards these goals.

1.7 Supporting Theory

Social Exchange Theory (SET) is a theoretical framework that examines interpersonal interactions and the rewards and costs linked with these relationships. Although it's labeled as a single theory, it's more accurately conceptualized as a group of related theoretical models. In every interpretation of social exchange theory, social interactions are seen as a series of exchanges between two or more individuals. Resources are traded through reciprocity, where one party typically responds to the actions, whether positive or negative, of the other party (Cropanzano et al., 2017).

In accordance with SET, sustainable leadership practices create a reciprocal interaction between leaders and employees. Leaders who exhibit sustainable leadership behaviors, such as promoting environmental sustainability and empowering employees, establish a social exchange dynamic where employees feel valued and motivated to reciprocate by participating in green actions that benefit the organization and the environment. As stated on social exchange theory, empowered employees are more prone to reciprocate by investing effort and energy into achieving organizational goals. Mediation role of employee empowerment in relationship between sustainable leadership and employee green performance, as empowered workers are more prone to engage in environmentally responsible behaviors as a form of reciprocity for the trust, autonomy, and decision-making authority granted to them by sustainable leaders. Perceived organizational support influences the quality of exchange relationships within organizations. When employees perceived substantial levels of support from their working area, they are motivated to give

back by investing in companies goals and contributing positively to performance outcomes. In the context of leaders that apply sustainability and green performance by employee, moderation occurs through perceived organizational support between sustainable leadership and employee green performance. This theoretical framework highlights the importance of reciprocal relationships, confidence, and support in driving positive environmental outcomes within organizations, and provides a foundation for understanding the complex interplay between leadership, employee empowerment, and organizational support in promoting sustainable green behavior.

Chapter 2

Literature Review

2.1 Relationship between Sustainable Leadership and Employee Green Performance

Sustainable leadership refers to practices and strategies leaders employ that ensure long-term success and resilience for their organizations while considering their decisions' social, economic, and environmental impacts. Sustainable leaders focus on the triple bottom line: prioritizing the well-being of people, minimizing environmental impact, and ensuring financial viability. They maintain a long-term perspective, make decisions that benefit future generations, and uphold high ethical standards with a culture of transparency and accountability. The fundamental tenets of business and its goals, broad collaborative participation, and methodical thinking are all very important to learning organizations. Organizational learning is influenced by contextual elements since it is a social activity. Organizational learning and corporate success are influenced by leadership, shared vision, and systemic thinking (Iqbal et al., 2020).

By developing sustainability strategies, measuring and reporting performance, engaging and educating employees, and promoting sustainable practices, sustainable leaders embed sustainability into the organizational culture. Notable examples include Paul Polman, former CEO of Unilever, who integrated sustainability into the company's core strategy; Yvon Chouinard, founder of Patagonia, who emphasizes environmental responsibility; and Mary Barra, CEO of General Motors, who

advocates for electric vehicles and a sustainable future for the automotive industry. Sustainable leadership propels organizations toward a balanced future, ensuring economic success while positively impacting society and the environment.

Employee green performance involves the actions and behaviors of employees that advance environmental sustainability within an organization. This includes a variety of activities and initiatives designed to lower the workplace's environmental impact, encourage eco-friendly practices, and support the organization's overall sustainability objectives. Practices include Lowering energy consumption by utilizing energy-efficient appliances and equipment, as well as adopting practices like turning off lights and computers when not in use, which can significantly reduce an organization's environmental impact. Reducing waste generation through recycling and reusing materials, along with promoting digital documentation to minimize paper usage, further supports sustainability goals. Efficient use of resources such as water, paper, and office supplies, combined with the selection of eco-friendly and sustainable products, contributes to creating a more eco-friendly workplace.

Green Performance Appraisal evaluates employees based on their actions, behaviors, and accomplishments concerning environmental sustainability within a specified timeframe. This method assesses the effectiveness of employees' contributions to initiatives aimed at promoting energy conservation, reducing waste, and advocating eco-friendly practices. It measures how well employees incorporate sustainability into their daily roles and duties, intending to acknowledge and incentivizing efforts that support the organization's environmental objectives ([Ardiza et al., 2021](#)).

[Fatoki \(2021\)](#) explores that Business organizations require sustainable leaders due to the increasingly intricate global challenges, such as climate change, social disruptions, and the strain on natural and food resources, which exceed the capabilities of political institutions alone. These leaders play a crucial role in harmonizing short-term and long-term priorities and generating value for a wide range of stakeholders.

The cornerstone of 21st-century progressive organizations, sustainable leadership embodies a multifaceted strategy for leading groups and organizations toward

long-term success and moral performance. Sustainable leadership is defined as “self-aware, empathetic, and capable of building strong relationships, all of which contribute to the sustained success of an organization”. This can be achieved when companies fully embrace the opportunities that sustainability offers for corporate growth and transform their business structures accordingly (Tideman et al., 2013). In defining the concept Avery and Bergsteiner (2011) state that “Sustainable leadership necessitates adopting a forward-thinking approach when making decisions, promoting systematic innovation to enhance customer value, cultivating a proficient, devoted, and deeply engaged workforce, and delivering high-quality products, services, and solutions.”.

Sustainable leaders lead by example, demonstrating their commitment to environmental sustainability through their behaviors and decisions. When employees see their leaders actively engaging in environmentally friendly practices, including waste reduction, energy conservation, and advocacy for eco-friendly initiatives they are more likely to follow suit. Considered a valuable asset, sustainable leadership presents organizations with prospects for ongoing enhancement, avenues for innovation, and the attainment of sustainable competitive edges (Purwanto and Ellitan, 2024). Sustainable leadership is dedicated to inspiring sustainability across individual, organizational, social, and ecological dimensions, encompassing present and future generations. It offers strategic insights for decision-making in organizational sustainability, representing a novel approach to addressing sustainability hurdles. Leaders are needed entities such as governments, policymakers, and organizations can formulate strategies, enact laws, and devise plans to encourage sustainable behavior at both societal and organizational levels while also igniting the economy (Metcalf and Benn, 2013). Organizations can gain a competitive advantage through sustainable leadership. Sustainable leadership brings opportunities for innovation, continuous improvement, sustained competitive advantage, and long term success to organizations (McCann and Holt, 2010).

Sustainable leadership cultivates an environment vision by driving cultural changes and encouraging collaboration with various stakeholders to combat climate change. It is considered the pinnacle of green initiative and ecological performance at the organizational level (Al-Zawahreh et al., 2019). Sustainable Leadership enhances

organizational performance by reducing costs and boosting revenue potential. Sustainable leaders adopt a proactive approach, continuously scanning the environment to monitor external market changes (Gerard et al., 2017) and develop long-term relationships with internal and external stakeholders. The conceptualization of the 10 pillars of sustainable leadership highlights the capacity for organizations to gain competitive advantage and drive ongoing improvement characterized by an emphasis on change, systems thinking, and social and environmental responsibility consciousness, business acumen, adaptability, patience, applied critical thinking, persuasive abilities, enthusiasm, and commitment to mentoring and development (Purwanto and Ellitan, 2024).

Sustainable leaders prioritize sustainability as a core value of the organization. An organization that has core values will follow pyramids of sustainable leadership to better run the organization in a better manner. An organization might assess its current practices using the Sustainable Leadership Pyramid framework, which demonstrates a system where the components have varying levels of mutual influence. For instance, trust, a higher-level behavior, should increase when certain other activities are present and be at risk when they are absent. Methods that enhance trust include fostering friendly labor relations, promoting employee development, enabling empowered decision-making, ensuring long-term employee retention, and providing human care. Additionally, trust is strengthened by adopting a stakeholder approach, maintaining ethical standards, having a long-term perspective, committing to environmental and social responsibility, and pursuing a shared goal (Avery & Bergsteiner, 2011).

They work to embed sustainability into the organizational culture by promoting green practices, integrating sustainability into strategic goals and decision-making processes, and fostering open communication about environmental issues. This sustainability culture can motivate employees to enhance environmentally friendly behavior both in the workplace and in their personal lives. Sustainable leadership emphasizes long-term sustainability and the well-being of an organization, its employees, stakeholders, and the environment. Sustainable leadership is a leadership style that prioritizes long-term success while balancing economic, environmental, and social responsibilities. Sustainable leaders go beyond immediate interests and

short-term objectives, prioritizing future opportunities within a broader context. As a result, their leadership methods typically promote organizational sustainability, encompassing social sustainability as well (Lewandowska et al., 2023).

Organizations can effectively transition from sustainable leadership to enhancing employee green performance, creating a culture of environmental responsibility and driving positive impact both internally and externally. Employee green performance refers to the measurement and assessment of how employees within an organization engage in environmentally sustainable behaviors or practices. Employee green performance is ecofriendly or environmentally responsible performance, refers to an employee's behavior and actions within the workplace that contribute to the organization's sustainability and environmental goals. Implementing an environmental training program is crucial for fostering eco-friendly behavior in the workplace (Pham et al., 2020). This dependent variable we are taking is employee in-role performance which leads to green performance. Green engagement practices promote employee participation in corporate sustainability initiatives (Patwary et al., 2023).

It is a metric used to assess how much employees contribute to workplace environmental sustainability efforts. This involves creating an inclusive environment where employees can openly address significant environmental issues and collaboratively explore innovative solutions to tackle these challenges (Zhang et al., 2019). There is the potential for employees to show enthusiasm in formulating and implementing environmental strategies, thereby enhancing their comprehension and capabilities in dealing with environmental issues (Patwary et al., 2023).

Consider a workforce that actively engages in ecofriendly behaviors, reduces environmental impacts, and contributes to the environmental goals of an organization. It helps in cost saving, reducing the environmental effect, employee engagement and innovation, and problem-solving. The empowerment of green employees is all activities involved in the development, implementation, and continuous system maintenance aimed at making the employees of an organization go green (Amrutha and Geetha, 2024).

Employee green performance may be viewed as a set of environmental actions specified and required by the organization and outlined in the job description

(Janssen & Yperen, 2004). For example, many companies ask their employees to behave “green”, which may translate into jobs that prohibit employees from pouring toxic waste into the water systems or where employees have to manage hazardous material by organizational policies as well as government regulations (Dumont et al., 2017). So when leaders prioritize sustainability and demonstrate environmentally responsible behaviors, it sets a powerful example for employees to follow.

Employees are more likely to engage in green practices when they see their leaders actively participating in sustainability initiatives. Sustainable leaders often encourage innovation and creativity in finding new ways to reduce environmental impact. By fostering a culture of innovation, organizations can tap into the collective creativity of their employees to develop innovative solutions for sustainability challenges. Sustainable leadership creates a supportive environment where employees are inspired and empowered to engage in green practices, leading to improved environmental performance and positive outcomes for both the organization and the planet.

H1: Sustainable leadership has a positive and significant relationship with Employee green performance.

2.2 Relationship between Sustainable Leadership and Employee Empowerment

The relationship between sustainable leadership and employee empowerment is marked by a synergistic interaction. Applied in various fields, the concept of sustainability covers a wide variety of applications and is based on the principle that resources or capital should be consumed less than they are produced (Çayak, 2021).

Sustainable leadership emphasizes long-term success, stakeholder well-being, ethical practices, and the cultivation of future leaders. It focuses on guiding organizations in socially responsible, environmentally conscious, and economically sustainable ways. Leadership sustainability is an effective, long-lasting, and broadly

influential leadership model. Characteristics of sustainable leadership behaviors include reliability, equality, cultural sensitivity, performance orientation, and going above and beyond personal gain (Asif et al., 2021).

Sustainable leadership focuses on the future health of the organization and its environment, upholding ethical standards, and fostering a culture of integrity. These leaders inspire and motivate employees to come up with new ideas and implement innovative activities that promote continuous development at the organizational level. Such practices also ensure that employees have a positive attitude toward innovative initiatives (Iqbal et al., 2021). A strong shared vision, supporting the creation of ideas, sharing information, long-term relationships, and ethically and socially responsible behavior are the main characteristics of sustainable leaders. Three main processes define sustainable leadership: experiential learning, having a clear personal goal and reflecting on personal assumptions and motivations, as well as skillfully managing emotional states and prioritizing self-care (Burawat, 2019).

Sustainable Leaders address climate changes and environmental consequences so sustainable leadership plays a crucial role in alleviating the adverse effects of climate change on organizations. Primary leadership emphasizes the importance of social and environmental responsibility, which includes efforts to protect the environment by protecting it, thus honoring the heritage of the past and building for the future. In addition, it emphasizes putting people first and developing people-centered ways of working, which include valuing people and promoting employee retention (Boeske, 2023).

The relationship between sustainable leadership and employee empowerment is closely intertwined, and they often complement each other. Sustainable leadership plays an important role in empowering employees in an organization. Sustainable leaders set an example for their teams, inspiring them to embrace a common vision of sustainability. Sustainable leadership integrates sustainable development principles into leadership practices. It emphasizes responsible decision-making, ethical behavior, and environmental stewardship (Liao, 2022).

This will give courage to employees and employees will start practicing green. Employing positive behaviors, they serve as guides, aligning with the principles

of positive leadership. Additionally, they demonstrate characteristics similar to responsible leaders by considering the concerns of all stakeholders within the company and upholding strong ethical values to attain shared objectives, resembling ethical leaders. Furthermore, they exhibit thoughtfulness akin to reflexive leaders. They empower employees to actively participate in decision-making processes and contribute to the organization's sustainability goals by cultivating an environment of trust and open communication (Iqbal et al., 2020). Sustainable leaders recognize that empowering employees aligns with long-term organizational success. They view empowerment as an essential component of ethical and socially responsible leadership. Rather than focusing solely on immediate profits, sustainable leaders take into account the long-term implications of their decisions.

They recognize that organizational success is intertwined with social and environmental well-being. Analyzing how individual employees perceive their ability to perform tasks independently, with motivation, and effectiveness (Harrach et al., 2020). This empowerment can take many forms, from giving employees the freedom to make environmentally friendly choices to encouraging them to share their innovative ideas for sustainability. Remaining in a sustainable environment can be challenging. In sustainable development, balancing social, ecological, and environmental objectives often involves employees expressing varied perspectives to enhance both individual and organizational performance.

Pursuing sustainability entails taking actions with uncertain future outcomes, making risk-taking a potential catalyst for sustainable performance (Iqbal et al., 2020). Sustainable leaders articulate a compelling vision for sustainability, aligning it with the organization's mission and values. By clearly communicating the significance of employees' roles in achieving sustainability goals, leaders empower them to contribute meaningfully to the organization's purpose. Workers must feel empowered to perform the necessary green tasks (Paille et al. 2022). It aims to have a positive impact on society and the environment as well as the organization. As Mahatma Gandhi once said today, we'll look at how this principle is embodied in sustainable leadership and why it is so important in a world that is constantly changing. Sustainable Leadership encompasses behaviors and practices that generate enduring values for all stakeholders, including society, the environment, and

future generation (Avery & Bergsteiner, 2011). Every organization's progress and present state are dependent upon the qualities of its leaders.

Employee empowerment involves granting them the authority, autonomy, and responsibilities to make decisions, take actions, and contribute to their work and the organization's goal operations. Empowerment fosters creativity and innovation. Sustainable leaders encourage employees to think critically about environmental challenges and propose novel solutions.

When employees feel empowered as if it were their own business, they tend to act more responsibly and perform their duties with greater willingness. Employees are a very important asset in achieving organizational goals. These employees associate themselves with the goals of the organization and often spare extra time to work and feel proud of being part of the organization.

In today's rapidly evolving business landscape, organizations are recognizing that traditional top-down hierarchies may not always be the most effective way to operate. Employee empowerment is perceived as bolstering employees' sense of personal authority within organizations, conceptualizing empowerment as the act of endowing employees with power (Mir & Rainayee, 2015).

Employees who possess competence and self-determination showcase their values, influencing their level of commitment. Additionally, employee engagement also impacts the degree of commitment, with insufficient engagement being so crucial that new recruitment becomes inevitable (Asad et al., 2021).

Employee empowerment increases employees' satisfaction by providing information about performance, work, and goals (Idris et al., 2018). Empowered employees are more likely to engage in sustainable behaviors. When they have the authority to implement green practices, such as waste reduction, energy conservation, or ethical sourcing, the organization benefits. Research indicates a significant correlation between employee empowerment and organizational performance, which consequently influences individual employee performance.

Studies have demonstrated that employees who experience higher levels of empowerment exhibit increased motivation, job satisfaction, reduced job stress, greater involvement, and stronger organizational commitment. Empowered employees feel

backed by their organization, have access to information and resources, and are provided with opportunities to participate. Those with robust empowerment are perceived as more effective and demonstrate higher levels of innovation, creativity, and courage in embracing new initiatives (Hendrawijaya, 2019). Empowerment encourages collaboration. Sustainable leaders involve employees in sustainability initiatives, seeking their input and leveraging diverse perspectives. Empowerment serves as a key mechanism within an organization's long-term strategy to foster employee development.

It is achieved through initiatives that provide employees with a clear vision, instill a sense of ownership in their roles, and cultivate a collaborative environment built on trust to enhance team cohesion (Choi et al., 2016). Sustainable leaders emphasize the impact of employees' work on advancing sustainability goals, highlighting the meaningfulness of their contributions.

By connecting employees' daily tasks to larger sustainability objectives, leaders inspire a sense of purpose and empowerment, motivating employees to make a positive difference. When employees feel empowered, they take ownership of sustainability goals. Their collective efforts contribute to a more significant impact on environmental and social outcomes. The impact of sustainable leadership (SL) on employee empowerment (EE) is profound and multifaceted.

Sustainable leaders, by prioritizing environmental, social, and economic sustainability, create a conducive environment for empowering employees. This empowerment manifests through various channels such as increased autonomy, access to information and resources, and opportunities for participation in decision-making processes. As a result, employees feel more engaged, motivated, and committed to organizational goals.

Additionally, sustainable leadership fosters a culture of trust, collaboration, and innovation, further enhancing employee empowerment and overall organizational performance. Therefore, investing in sustainable leadership practices not only benefits the environment and society but also strengthens the empowerment of employees, leading to sustainable success in the long run.

H2: Sustainable leadership has a positive and significant relationship with Employee empowerment.

2.3 Effect of Employee Empowerment on Employee Green Performance

Employee empowerment refers to granting employees the authority, autonomy, and resources to make decisions and take ownership of their work. This refers to employees' actions and behaviors that contribute to environmental sustainability within the organization. Employee empowerment involves the delegation of authority from management to employees, granting them power and responsibilities to make decisions regarding their specific organizational roles. It is characterized as a process aimed at boosting job satisfaction and diminishing employee anxiety. Numerous organizations adopt employee empowerment as a pivotal policy to augment the competencies and engagement of their workforce, as empowered employees perceive themselves as proficient in their job roles. By leveraging their knowledge and skills, empowered employees execute tasks proficiently, thereby enhancing their capabilities ([Ahmad et al., 2017](#)).

Empowered employees are committed to organizational goals. Their commitment extends to green initiatives, as they perceive their contributions as meaningful and aligned with the organization's values ([Zaki and Norazman, 2019](#)). Empowered employees are granted the responsibility to make meaningful choices, contribute innovative ideas, and take initiative to drive organizational success, thereby enhancing their sense of self-efficacy, job satisfaction, and overall performance. Empowerment encourages employees to take ownership of their tasks. When it comes to green performance, empowered employees feel a sense of responsibility for environmental impact.

Empowered employees proactively seek ways to improve sustainability. They suggest eco-friendly practices, reduce waste, and conserve resources ([Hameed et al., 2020](#)). It involves providing employees with autonomy, and access to information, and fostering a culture of participation and ownership. When employees are empowered in this way, they are more likely to feel a sense of responsibility and commitment towards organizational goals, including those related to environmental sustainability. Employee empowerment affects employee green performance in a way that it positively influences it. Employee in-role Green Performance can

be seen as a collection of environmentally oriented actions that are defined and mandated by the organization and detailed in the job description (Janssen and Yperen, 2004). Employee performance refers to the ability of employees to fulfill their duties and meet organizational goals according to predefined standards set by the organization.

They are evaluated based on their performance against these standards. Employee performance is often assessed using a rating system in various organizations to gauge their capabilities and efficiency. It is recognized that highly skilled and trained employees significantly contribute to achieving high performance and productivity, thereby providing the organization with a competitive advantage. The success of an organization is closely tied to the creativity, loyalty, and training of its employees. Therefore, achieving better employee performance is crucial for maintaining a balanced economy as it enhances employees' living standards through increased salaries, leading to higher consumption levels.

Consequently, improved employee performance is vital for the overall well-being of society (Ahmad et al., 2017). The integration of environmental stewardship within a comprehensive human resource development framework emphasizes the empowerment of environmentally conscious employees. This empowerment encompasses all initiatives focused on nurturing, implementing, and sustainably maintaining systems to encourage organizational employees to adopt environmentally friendly practices (ADI et al., 2021).

Employee green performance is an increasingly vital and emerging research area within the field of organizational behavior (Adeel et al., 2022). Enabling employees holds significance in fostering productive employee green performance (Ahmad et al., 2017). Employee empowerment has a significant and positive impact on green performance. Employee unwavering dedication and loyalty to the company are often driven by the company's commitment to its employees and the environment, its sustainable business practices that prioritize both the environment and the workforce and its allegiance to environmentally conscious organizations (Stahl et al., 2020).

Employees with high green performance will take initiatives to help identify environmental issues in their daily work and improve the environmental impact of their

teams and organization as a whole. It has been evidenced that organizations with employees having high green performance can more easily achieve environmentally friendly and low carbon business operations and be more capable of meeting and managing the public and social responsibilities to minimize environmental impact, compared to those who have low green performance employees (Tian and Robertson, 2019).

EGP, or Employee green performance, denotes environmentally beneficial actions undertaken by employees within an organization, representing a particular manifestation of pro-environmental conduct in workplace environments (Adeel et al., 2022). The propensity of employees to participate in environmentally friendly actions might be shaped by their individual preferences and environmental convictions. The satisfaction derived from employment rises when the ethical and environmental principles of employees align with those of the organization (Adeel et al., 2022). Employees become more engaged, committed, and motivated in their roles when they are empowered, especially when it comes to sustainability and environmentally responsible practices. The concept of a green organizational culture underscores the necessity for employees at various management tiers to recognize the significance of environmental sustainability in organizational success. Consequently, organizations are urged to effectively convey their green initiatives, practices, and objectives (Ahmad et al., 2017).

They take responsibility for their work and the environmental impact it has, and they hold themselves accountable for their actions. Hence, nowadays organizations are increasingly realizing the importance of the green performance of employees in achieving and sustaining environmentally friendly and low-carbon business operations.

With the growing number of business organizations seeking solutions that deliver commercial and environmental gains at the same time, effective leadership and the need to incorporate employee green performance are considered popular and demanding issues in both the academic and practical arenas nowadays. Employee empowerment frequently nurtures a culture of creativity and innovation, motivating employees to seek out new and more efficient ways to improve green performance. Employee empowerment is a critical factor in achieving an organization's

environmental goals (Kitazawa et al., 2000). Employees must feel empowered and given opportunities to provide solutions and make decisions that benefit the environment (Zibarras et al., 2015). Employee empowerment, according to the author, the delegation of authority and responsibility from a higher to a lower level (Baird et al. 2010). Employee empowerment positively influences employee green performance. When employees feel empowered, they become active agents of sustainability, contributing to a greener and more responsible organization. Employee empowerment and green performance are closely linked. Empowered employees drive positive environmental outcomes, and sustainable organizations recognize the value of fostering empowerment.

H3: Employee empowerment has a positive and significant effect on Employee green Performance.

2.4 Mediating Role of Employee Empowerment between Sustainable Leadership and Employee Green Performance

In response to today's competitive landscape, businesses are increasingly prioritizing innovation and emphasizing improved customer orientation. A strategy often employed to enhance organizational effectiveness is the practice of empowering employees. The concept of employee empowerment can be described as the degree to which individuals within the workforce are self-motivated to make independent decisions (Haas, 2010).

In public and private sectors alike, the implementation of employee empowerment initiatives aims to enhance efficiency, service quality, and profitability, and mitigate issues such as employee turnover and absenteeism. Research indicates that empowering employees yields favorable outcomes for firm performance, effectiveness, service quality, innovation, and employee satisfaction. Assert that employee empowerment practices foster a dedication to service quality, particularly within the private sector. Empowerment entails the autonomy to make decisions within a specific operational domain without the necessity of seeking approval from others

(Andika & Darmanto, 2020). Employee empowerment is a management and leadership approach that entails providing employees with the authority, autonomy, and responsibility they require, as well as the tools and resources they require to make decisions and implement actions that affect their work and the success of the organization.

Employees acquire new knowledge and skills, offering opportunities for alternative perspectives, reflecting on what is observed, and honing these abilities. (Pratama et al., 2010). It is a fundamental concept in modern organizational management that is based on the belief that engaged, motivated, and trusted employees are more productive, creative, and dedicated to the organization's goals. Empowerment is a crucial aspect of employee engagement, as emphasized by (Pratiwi et al., 2012). Employee empowerment involves assigning additional responsibilities to employees, which, in turn, fosters a greater sense of accountability and responsibility in their positions.

This concept is closely tied to the idea of motivating and inspiring employees to take on more significant roles and challenges within the organization. In the contemporary world, organizational workspaces are characterized by greater flexibility, fostering a sense of unity and camaraderie among employees. Employee empowerment leads to a scenario where employees assume full responsibility for their actions. This compels leaders to adapt by relinquishing control, while employees are compelled to learn how to take ownership of their work and make sound decisions (Fitriah & Sudibya, 2015).

This environment encourages employees to exhibit greater attention to detail in their tasks, thereby nurturing a robust correlation between the workforce and the organization. Sustainable leaders promote open communication and encourage employee participation in decision-making processes related to environmental sustainability. Consequently, this positive dynamic influences how employees perceive the support provided by the organization. Empowerment which has the potential to change the distribution of power within an organization, is a concept with both positive and negative implications (Choi et al., 2016). Empowered employees, as a result, feel more involved in green initiatives and tend to actively engage in environmentally friendly behaviors.

Empowered employees make determined efforts to seek the necessary information about job-related tasks to improve their performance (Yang and Choi, 2009). There is a perspective that suggests that highly empowered employees tend to contribute more significantly to the organization's tasks and activities compared to their less empowered counterparts (Kirkman & Rosen, 1999). Empowered employees can help organizations move forward in this challenging world of green performance. Organizations can also improve the quality of Human resources by empowering employees in their jobs. Empowering the employees can develop and optimize their skills to ensure that their work is diverse, creative, and innovative, while also enhancing their abilities and experience. This improvement leads to enhanced employees performance, maximizing their potential (Tampi et al, 2022). The role of employee empowerment is pivotal in connecting sustainable leadership with the attainment of employee green performance. Structural empowerment positively relates to psychological empowerment. Sustainable organizations recognize its importance and create an environment that nurtures empowerment ([Marin-Garcia and Bonavia, 2021](#)).

By nurturing an environment characterized by trust, accountability, and autonomy, organizations empower their workforce to actively engage in environmentally sustainable practices. This alignment with the principles of long-term success and ethical performance promoted by sustainable leadership forms an intricate bond, leading the way toward a more environmentally conscious and sustainable future. Organizations should prioritize green HRM practices that empower employees, fostering an environment conducive to green innovation and cultivating a supportive organizational culture. Employee empowerment serves as a pivotal intermediary factor linking sustainable leadership practices to employee green performance. Organizations acknowledging this correlation can establish a more sustainable and environmentally conscious workplace ([Shahzad et al., 2023](#)).

Employee empowerment serves as a mechanism through which sustainable leadership influences employee green performance. By empowering employees to take ownership, fostering collaboration, and providing resources and support, sustainable leaders create an organizational culture that values and prioritizes environmental sustainability, ultimately leading to enhanced employee green performance.

Sustainable leadership, employee empowerment, and green performance are interconnected. Organizations that prioritize these aspects create a positive impact on both their employees and the environment. Empowerment begins with effective leadership. Leaders who actively empower their employees cultivate a positive workplace atmosphere. By demonstrating trust in their team members, delegating authority, and involving them in decision-making processes, leaders convey a sense of value and motivation among employees. Employee empowerment serves as a formidable catalyst for organizational success. When leaders prioritize empowerment, employees flourish, actively contribute to favorable results, and foster a collaborative work culture. In conclusion, the relationship between sustainable leadership and employee green performance is significantly mediated by employee empowerment. Recognizing and fostering this connection can enable organizations to cultivate a more sustainable and environmentally responsible workplace. By empowering employees and implementing sustainable leadership practices, organizations can drive positive outcomes for both their employees and the environment, ultimately contributing to long-term success and societal well-being. Employees who are empowered have the freedom to decide for themselves within the confines of their positions without constant supervision. Their sense of ownership over their duties is fostered by this autonomy, which also promotes accountability. The idea of employee empowerment places a strong emphasis on a worker's capacity to use corporate resources wisely to complete tasks.

An organization's human resources department should prioritize strategic hiring and employee empowerment to achieve customer happiness ([Arhin and Cobblah, 2024](#)). Employees should be given decision-making authority according to their qualifications, experience, and degree of responsibility. Motivate them to accept responsibility for their choices and grow from both achievements and setbacks.

To accomplish environmental goals, Employee Engagement (GEE) comprises eco-awareness, resource sharing, supervisor support, employee participation, acknowledgment, and organizational culture support. But it's directly related to staff involvement, which entails building communication channels for spreading green culture, guaranteeing employee participation, creating a learning environment for eco-awareness, and being clear about the green vision ([Amrutha and Geetha,](#)

2024). For employees to be properly empowered, organizations must offer support and direction. This includes acknowledging their efforts and accomplishments, providing clear communication, mentoring, and coaching. Workers take initiative without being asked to and contribute to the organization's goals without being overly monitored. Within the confines of the organizational structure, empowerment entails sharing knowledge, resources, incentives, and responsibilities as well as power between managers and subordinates (Sardana et al., 2024). Motivated by gratitude and confidence from their company, empowered workers show increased interest in their work. This drive keeps them committed to achieving organizational goals. Empowerment through decentralized decision-making guarantees that decisions are taken where they are most appropriate, allowing for quick reactions to opportunities and challenges alike and encouraging creativity.

H4: Employee empowerment mediates the relationship between Sustainable leadership and Employee Green Performance.

2.5 Moderating Role of Perceived Organizational Support between Sustainable Leadership and Employee Green Performance

Perceived organizational support is defined as “The belief or perception of employees that the organization values their contribution, cares about their wellbeing and is committed to success can be perceived as a manifestation of organizational support often referred to as POS”. Perceived organizational support (POS) is a critical concept in organizational psychology and management. It refers to employees' general perception of how much their organization values their contributions, cares about their well-being, and supports their overall work experience.

Organizations that place a high priority on perceived organizational support tend to attract and retain top talent in today's competitive job market, enjoy higher levels of employee engagement, and frequently achieve better performance and productivity. As per to organizational support theory, employees develop overall impressions regarding the extent to which their organization supplies sufficient

resources and values them as individuals. This encompasses the likelihood that the organization will recognize its performance and offer assistance during challenging circumstances (Cullen et al., 2014).

Imagine working for a company where you feel appreciated, valued, and encouraged in your career and personal development. This is a great example of perceived organizational support, which can have a significant impact on employee health and security as well as organizational success. POS results in behaviors outlined within employees' designated job duties and even more significantly in actions that surpass standard expectations and enhance the organization's well-being (Eisenberger et al., 2020). Employees perceive support when they are treated fairly in terms of rewards, promotions, and decision-making processes. Supportive leaders who listen, provide feedback and show empathy contribute to higher POS. Policies related to training, development, and work-life balance impact POS. Perceived Organizational Support (POS) refers to employees' beliefs or perceptions regarding the extent to which their organization values their contributions and prioritizes their well-being.

It reflects how much employees feel supported and respected by their company. Workers who perceive strong organizational support tends to exhibit increased job satisfaction, commitment, and overall sense of wellbeing. According to Eisenberger perceived organizational support (POS) refers to employees' perceptions that the organization values their contributions and cares about their well-being (Eisenberger et al., 2020).

Perceived organizational support will help motivate the employees to perform better for the organization and help them empower the employees to perform green in society. POS, or perceived organizational support, involves the act of acknowledging, incentivizing, expressing gratitude, and motivating employees who exhibit creativity (Zhou & George, 2001). It also entails the encouragement of their creative abilities to generate fresh and innovative ideas (Eisenberger et al., 2020). Employees who are provided with valuable resources, such as salary increases and opportunities for professional development, tend to enhance their perceived organizational support (POS). In line with the reciprocity norm, as proposed by Gouldner in 1960, they often feel a sense of duty to reciprocate this support by

actively contributing to help the organization achieve its goals (Gouldner, 1960). Workers are more likely to feel empowered when they perceive strong organizational support. They believe their contributions and decisions are valued, which motivates them to assume responsibility of their work and actively contribute to the organization's goals, including environmental initiatives. Employees develop overall impressions regarding the adequacy of resources provided by their organization, as well as how valued they feel as individuals.

This includes assessing the likelihood of the organization rewarding their performance and providing support during challenging circumstances. Positive outcomes for the organization and its employees will result from the employees developing a favorable perception of the support they receive from it. Employees' socio-emotional needs are satisfied and they are more likely to report positive job attitudes, including job satisfaction, when they perceive strong organizational support (Cullen et al., 2014). Employee motivation and commitment to their jobs can be boosted by high levels of POS. Workers are more likely to be driven to succeed and align their efforts with the organization's sustainability objectives when they feel supported and appreciated. Perceived organizational support creates an enabling environment that strengthens the relationship between employee empowerment and employee green performance. When workers feel valued, empowered, and supported, they are more likely to engage actively in environmentally sustainable practices, contribute to green performance objectives, and work towards achieving the organization's sustainability goals.

POS, or perceived organizational support, encompasses the generalized beliefs and employees' perceptions of the organization's recognition of their contributions and care for their well-being. Given that POS reflects generalized beliefs, a more nuanced construct is necessary to encapsulate socio-political backing for sustainability initiatives (Kharas et al., 2014). Perceived organizational support (POS) modifies the connection between environmental green practices (EGP) by influencing how employees perceive the organization's dedications to sustainability efforts. When employees perceive strong organizational support for sustainability efforts, they are more likely to interpret sustainable leadership behaviors positively and consequently engage in environmentally green practices. In contrast, if employees

perceive weak organizational support for sustainability, the impact of sustainable leadership on promoting environmentally green practices may be diminished.

Therefore, POS acts as a contextual factor that enhances or attenuates the relationship between SL and EGP based on employees' perceptions of organizational support for sustainability. Fostering a culture of trust, loyalty, and commitment among employees is one of POS's goals. Additionally, it aims to develop a positive work environment that boosts employee retention, job satisfaction, and overall organizational performance. Forming a favorable impression of the support employees receive from their organization yields positive outcomes for both parties involved (Cullen et al., 2014). Perceived organizational support (POS) serves as a crucial factor in moderating the relationship between sustainable leadership (SL) and environmental green practices (EGP) within an organization. When the worker obtained extensive support from their organization for sustainability initiatives, it enhances their trust and confidence in the leadership's commitment to environmental goals.

This positive perception of support creates a conducive environment where sustainable leadership behaviors are more likely to be recognized, respected, and emulated by employees. POS results in behaviors outlined in employees' designated job duties and even extends to activities surpassing standard expectations, thereby contributing to the organization's well-being (Eisenberger et al., 2020). Employee impressions of the organization's willingness to help when needed and how much it supports them are referred to as perceived organizational support, or POS (Utomo et al., 2023). Is a key idea in HRM and organizational behavior that deals with workers' perceptions of how much the company values their contributions and concerns about their welfare.

High POS levels are associated with a host of advantageous results for the company and its workforce. Perceived organizational support is the extent to which employees believe the company values their contributions and cares about their concerns. Employee perceptions of organizational policies, practices, and procedures about the evaluation of their welfare and contributions make up perceived organizational support (Sumardjo and Supriadi, 2023). A major factor in POS is the perception of fairness in procedures like workload distribution, promotions,

and performance reviews. When workers feel they are receiving fair treatment, they are more likely to feel supported. Workers who experience a high level of support from the company are more likely to form an emotional bond with it and be inspired to increase their efforts in support of the firm's objectives. Organizational assistance is especially crucial for employees to overcome obstacles and dangers during a crisis (Suthatorn and Charoensukmongkol, 2023).

POS gives workers a feeling of safety and community while supporting them emotionally through trying times. Employee confidence and resilience can increase when they know that their employer prioritizes their well-being, allowing them to confront dangers with more assurance. High POS is frequently associated with leadership communicating openly and honestly at times of crisis. Employees can be better equipped to respond when there is clear information regarding the nature of threats, potential effects, and the organization's mitigation methods. POS affects psychological well-being and attends to socio-emotional needs.

POS is strengthened when a company recognizes the contributions made by its employees and attends to their needs. But companies also need to invest in employee empowerment so that workers can feel more supported, grow professionally, and express their creativity. POS means recognizing, rewarding, valuing, and developing staff members who demonstrate innovation (Aldabbas et al., 2023). Workers who experience strong organizational support are more likely to go above and beyond the call of duty to support their coworkers and the organization as a whole. Encouraging environments reduce stress and prevent burnout, which improves workers' general well-being and output. This study underscores the crucial role of perceived organizational support (POS) in amplifying the connection between sustainable leadership and employee green performance. Sustainable leadership, defined by its emphasis on long-term environmental responsibility and ethical conduct, has a positive impact on employees' green performance. However, this impact is notably enhanced when employees perceive robust organizational support. The results indicate that organizations striving to improve green performance should not only implement sustainable leadership practices but also cultivate a supportive work environment. POS serves as a vital enabler, motivating employees to align their behaviors with the organization's sustainability objectives.

H5: *Perceived organizational support moderates the relationship between Sustainable leadership and employee green performance in such a way that this relationship will be stronger when perceived organizational support is high.*

2.6 Model Diagram

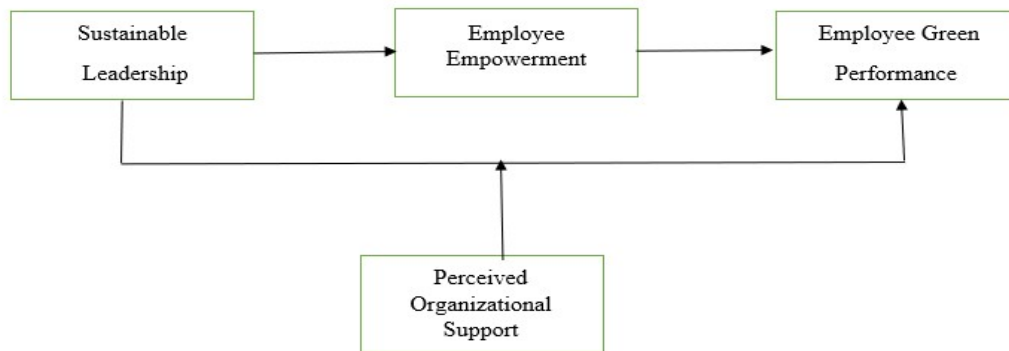


FIGURE 2.1: Research Model

TABLE 2.1: Research Hypothesis

Hypothesis	
H1	Sustainable leadership has a positive and significant relationship with employee green performance.
H2	Sustainable leadership has a positive and significant relationship with employee empowerment.
H3	Employee empowerment has a positive and significant effect on employee green performance.
H4	Employee empowerment mediates the relationship between sustainable leadership and employee green performance.
H5	Perceived organizational support moderates the relationship between sustainable leadership and employee green performance in such a way that this relationship will be stronger when perceived organizational support is high.

Chapter 3

Research Methodology

This section explores the various research methodologies utilized in the current study. The methodology employed is grounded in robust theoretical frameworks that underlie the variables being analyzed. The methodology includes the research design, population, sample, instrumentation, data analysis procedures, and statistical tools employed for analysis. The methodology for this investigation is based on the strong theoretical underpinnings of the variables being studied. This chapter also addresses important subjects including demographics, the methodical approach to gathering data, and the range of instruments employed to ensure the validity and dependability of our research.

3.1 Research Design

The research design reveals detailed information about operationalization, how population has been targeted and sample identified for the study. Additionally, which measures used, which data analysis procedures and statistical tools employed for analysis.

3.1.1 Research Philosophy

Philosophy is the concept concerned with the collection of principles that define the perspective or standpoint from which research is undertaken. In academic studies,

philosophical stances are frequently categorized as either adhering to positivism or embracing interpretivism. In this study, the positivism philosophy was followed. Positivism refers to evidence-based knowledge and rejects speculative metaphysical claims.

It aligns with empirical science and logical reasoning. Research philosophy is vital as it shapes how researchers formulate their research inquiries, structure their methodology, and comprehend their discoveries, focusing on the essence of knowledge and its acquisition and utilization. There are four types of research philosophy: positivism, interpretivism, realism, and pragmatism. The positivism approach was followed to conduct this study because positivism operates on the assumption that knowledge exists independently of the entity under investigation. Positivism, as a research philosophy, underscores the importance of empirical evidence and scientific rigor methodologies in knowledge acquisition.

It contends that only verifiable knowledge obtained through empirical evidence, including measurement, is reliable. Within positivism, researchers are confined to the tasks of gathering and interpreting data in an unbiased manner, devoid of personal biases or values impacting the investigation. This methodology hinges on measurable observations that facilitate statistical analyses and is frequently linked with a deductive research approach.

3.1.2 Research Approach

The overarching plan or methodology that directs the planning, execution, and analysis of a research study is known as a research approach. It establishes the structure and methods for gathering, analyzing, and making sense of data to address research questions or achieve research objectives. Two categories of research methodologies exist.

One is deductive and the other is the inductive approach. Deductive approach has been used to conduct research. The particular hypotheses were first formulated using the deductive approach, taking into account the researcher's observations from the literature review. After that, it makes a series of steps to test this theory and see if it holds true in different situations.

3.1.3 Research Strategy

The concept of the "research strategy" indicates that research strategies encompass a range of options, such as surveys, action research, experimental research, interviews, case study research, or a comprehensive review of the literature. The particular data required for the study and its intended objectives must be taken into consideration when choosing a strategy. The approach we employed in this study was a survey-based approach. Where a survey questionnaire was used for data collection.

3.1.4 Choices of Methods

Within the research methodology and framework, multiple methods to conduct the research. Mono-method, mixed-method, and multi-method approaches are viable options. The mono-method was opted because it comprises only one method of study and is easier to plan and carry out. A single strategy is sufficient to adequately address the research question. It enables a more concentrated inquiry.

3.1.5 Time Horizon

Time horizons indicate the duration of the research study. There are two main types of observations: cross-sectional and longitudinal, which depend on the time frame. In this research, a cross-sectional time horizon was used. This type of data collection involves gathering information at a single time point, which is typical in most survey-based studies.

3.1.6 Target Population

The "Population" in research refers to the entire group of individuals or items studied, from which conclusions, influences, and data are drawn. The primary data was collected from employees specifically doctors in hospitals situated in two cities in Pakistan (Islamabad and Rawalpindi). The necessary permissions was obtained from the HR departments of each organization. The target audience for this study

was comprised of doctors presently employed in these organizations. Given the nature of our study variables, the population is expected to be highly suitable for our research. Respondents were invited to participate in this survey voluntarily, and informed consent was obtained from each participant. The respondents were ensured secrecy and anonymity throughout the process. To provide context for the study's objectives, a cover letter outlining the research's goals was distributed to each participant.

3.2 Data Collection

The quantitative approach for data collection was employed through probability sampling methods. Data about Doctors was available. A cross-sectional study was conducted to collect data from targeted sample. To facilitate data collection, an electronic questionnaire in the form of an online Google form was created. The questionnaire link was personally distributed to respondents through different social media platforms, additionally doctors in family circle were personally requested to fill out the questionnaires.

3.2.1 Population and Sample

In 2020, there were 245,987 doctors, 27,360 dentists, and 116,659 nurses registered. These figures represent an increase from 2019, during which there were 220,829 registered doctors across private and public hospitals, 22,595 dentists, and 108,474 nurses. In Rawalpindi, There are 5000+ PMC-certified registered general physicians in Rawalpindi. Rawalpindi is one of the most famous cities in Pakistan.

In Islamabad, there are a total of 194 Doctors in Islamabad Capital Territory as of December. Source: The Pakistan Medical and Dental Council (PMDC).

3.2.2 Sample Size

For a population size ranging from 75,000 to 1,000,000, Krejcie and Morgan's (1970) method suggests a sample size of 382 to 384 respondents. This calculation

is based on a 95% confidence level and a 5% margin of error estimate. Out of 384, 281 responses were considered for final analysis.

3.3 Sampling

Our study employs a well-defined sample, drawn using the simple random sampling technique, which falls under the umbrella of probability sampling methods. Probability sampling ensures that each member of the population has a known and equal chance of being selected for inclusion in the study. This approach ensures the representativeness of the sample and enhances the generalizability of findings to the broader population. The known nature of the sample, coupled with the use of a probability sampling method, strengthens the reliability and validity of research outcomes. This methodology allows for rigorous analysis of data, drawing meaningful conclusions that can be confidently applied beyond the confines study sample.

3.4 Pilot Testing

In the context of research, a pilot study is an initial, small-scale investigation carried out before to the main project. Pilot testing is used to assess the research's viability, timeliness, cost, dangers, and unfavorable impacts in addition to honing the methodology. Conducting pilot testing proves to be a highly efficient and successful approach before embarking on a large-scale investigation.

It serves as a proactive measure, helping to mitigate potential challenges in terms of financial and time resources. In this scenario, 54 questionnaires were administered during the pilot testing phase to assess respondents' awareness of and alignment with the proposed hypotheses. The pilot testing phase yielded favorable outcomes, revealing no significant obstacles related to the variables and confirming the suitability of the scales utilized for subsequent research. Cronbach Alpha of sustainable leadership in the pilot sample was .93, for Employee Green Performance it was .87, for Employee empowerment it was .71, and for Perceived organizational it was 0.94.

3.4.1 Reliability of Scale

The table displays Cronbach's alpha values for various constructs for full set, alongside the total item count within each construct. Cronbach's alpha function as a metric for assessing internal consistency, reflecting the degree of interrelatedness among the items constituting a construct. As per Hair (2006), a Cronbach's alpha value exceeding 0.70 is deemed sufficient for ensuring the precision of the scale.

Cronbach Alpha of Sustainable leadership is 0.89, for Employee Green Performance is 0.82, for Employee empowerment is 0.87, and for perceived organization support is 0.94. These values signify strong internal consistency, implying a close overall relationship among the items within each construct. The data derived from the calculation of Cronbach's alpha is dependable and suitable for subsequent analyses, as all alpha values for the variables fall within an acceptable range.

This indicates that the constructs under examination exhibit robust internal consistency, and the items within each construct reliably measure the same underlying concept.

Variables	Cronbach Alpha
Sustainable leadership	0.89
Employee Green Performance	0.82
Employee empowerment	0.87
Perceived Organizational Support	0.94

3.5 Data Analysis Technique

The data collected underwent analysis using SPSS software. Various Statistical tests including correlation, regression, mediation, and moderation were conducted to access and understand the data. Correlation analysis was employed to investigate the connection between the independent and dependent variables. At the

same time, regression analysis was applied to explore the interdependencies among the variables.

3.5.1 Analytical Techniques and Tool Used

Statistical analysis of the data included Reliability testing, Descriptive analysis, Correlation analysis, and Regression analysis. SPSS software version 29.0 was utilized for conducting all the necessary statistical tests and calculations. Cronbach's alpha was computed to assess the internal reliability of the scales.

3.6 Instrumentation

Instrumentation in research refers to the tools and techniques used to collect data systematically and reliably. It encompasses a wide range of methods, including surveys, questionnaires, interviews, observations, and experimental procedures.

The development of instrumentation is crucial in guaranteeing the validity and the reliability of study findings. This involves defining clear objectives, constructing appropriate questions or measures, piloting the instruments to identify and address any issues, and assessing their validity and reliability.

Well-designed instrumentation not only facilitates the collection of high-quality data but also enhances the integrity and rigor of the study findings. Therefore, meticulous attention to detail and methodological rigor are essential aspects of developing instrumentation in research.

Instrumentation consists of measures of variables used and characteristics of the sample that how they are distributed.

3.6.1 Measures

All the study variables were studied using a 5-point Likert scale which starts from 1 (strongly disagree), which is a low level of variable to 5 (strongly agree) high level. Questionnaire also covers demographics variables like Gender, Age, Year of job experience, Work status, Martial status.

3.6.1.1 Sustainable leadership

Sustainable leadership was measured using mccann2010servant 15-item scale. Some sample items are “My leader acts in a sustainable socially responsible manner” and “My leader acts in a sustainable environmentally responsible manner”. Cronbach Alpha reliability of this scale was .89.

3.6.1.2 Employee Green Performance

Employee green performance was measured using (Janssen and Van Yperen, 2004). 3 Item Questionnaire. Some questions are “I complete the environmental duties specified in the job” and “I never neglect environmental aspects of the job which I am obligated to perform”. Cronbach Alpha reliability of this scale is .82.

3.6.1.3 Employee empowerment

Employee empowerment was measured using Idris, See & Coughlan, (2018) 7 scale items scale. Some sample items were “I’m sure about my competencies in work” and “While doing my job, I am allowed to perform autonomously”. Cronbach Alpha reliability of this scale is .87.

3.6.1.4 Perceived Organizational Support

Perceived organizational support was measured using eisenberger2020perceived. The scale consists of 10 items scale. Some Items were “The organization values my contribution to its well-being” and “The organization would forgive an honest mistake on my part”. Cronbach Alpha of this scale was .94.

TABLE 3.1: Scales

Variables	Source	No of items
Sustainable leadership	McCann and Holt	15
Employee Green Performance	Janssen and Yperen	3
Employee empowerment	Idris See Coughlan	7
Perceived organization support	Eisenberger, Rhoades Shanock, Wen	10

3.6.2 Sample Characteristics

The research delved into various demographic variables to better understand the sample's characteristics. These variables encompassed age, gender, marital status, work experience, and the work status held by the individuals under scrutiny. Analyzing these factors provided valuable insights into the diverse backgrounds and experiences present within the sample group.

3.6.2.1 Gender Characteristics

TABLE 3.2: Frequency by Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	184	65.5	65.5	65.5
	Female	97	34.5	34.5	100
	Total	281	100	100	

The above table shows the overview of the gender distribution within the sample of the study. Out of 281 respondents, 184 are male, making 65.5% of the sample, and 97 are female, making 34.5% of the sample.

The gender distribution within the sample of 281 respondents indicates a slight majority of male participants, comprising 65.5% of the total, while female participants constitute 34.5%. This observation highlights the importance of considering gender representation in research studies and underscores the need for further exploration of potential factors contributing to the observed distribution.

3.6.2.2 Marital Status

TABLE 3.3: Frequency by Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	197	70.1	70.1	70.1
	Married	84	29.9	29.9	100.0
	Total	281	100.0	100.0	

The above Table Shows the distribution of Marital Status. The sample consists of Single and Married data. Out of 281, we can see that 197 are single and 84 are married. Single is 70.1% of the total population and married is 29.9% of the total population.

3.6.2.3 Age Characteristics

TABLE 3.4: Frequency by Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	1	04	.4	.4
	26-30	71	25.3	25.3	25.6
	31-35	91	32.4	32.4	58.0
	36-40	82	29.2	29.2	87.2
	41-45	21	7.5	7.5	94.7
	Over 45	15	5.3	5.3	100
	Total	281	100	100	

The age distribution of the respondents can be observed in Table. Among the participants, the largest group comprised individuals aged from 31-35, with a frequency of 91 respondents, accounting for 32.4% of the sample. The second-largest group was those aged from 36-40 with 82 participants, representing 29.2% of the sample. The age group of 26-30 consisted of 71 respondents, making up 25.3% of the sample. The age group 41-45 consists of 21 respondents, making up 7.5% of the sample. The age group over 45 makes up 5.3 of the total population. The smallest group was individuals 18-25, with only 1 respondents, comprising .4% of the sample.

3.6.2.4 Work Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full Time	184	65.5	65.5	65.5
	Part-Time	97	34.5	34.5	100
	Total	281	100	100	

The above Table shows the Frequency of Work Status. Work status provides insight into the economic and social circumstances of individuals, which can influence various aspects of their lives including health, well-being, and access to resources. Out of 281, 184 respondents are doing Full-Time Jobs. They are giving full time to their work which is making 65.5% of the total sample. Out of 281, 97 respondents are doing part-time jobs. It means they are somehow contributing to their work making up 34.5% of the total population. By this, we can see how many respondents are doing full-time job and how much respondents are doing part-time job.

3.6.2.5 Years of Job Experience with Current Organization

TABLE 3.5: Frequency by Years of Job Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	100	35.6	35.6	49.8
	06-10	68	24.2	24.2	72.6
	11-15	57	20.3	20.3	86.5
	16-20	40	14.2	14.2	94.7
	Over 20	16	5.7	5.7	100
	Total	281	100	100	

The table provides insights into the distribution of years of work experience among the participants in the research. Among the participants, the largest group lies between 0-5 years of job experience with a frequency of 100 and they make making 35.6% of the sample. Then comes the Second group with 6-10 years of job experience with a frequency of 68 and they make up 24.2% of the total sample. Then comes 11-15 years of job experience with a frequency of 57 and they make making 20.3 of the total sample. Then comes 16-20 years of job experience with a frequency of 40 and they make up 14.2 of the total sample. Then comes over more than 20 of job experience with a frequency of 16 and they are making 5.7% of the total sample.

Chapter 4

Result and Analysis

The present chapter delves into a comprehensive review of the collected data through surveys from the participants. Leveraging powerful tools such as SPSS, a comprehensive investigation is conducted to explore the relationship among variables through the application of descriptive statistics, Pearson correlation analysis, moderation, and mediation techniques.

4.1 Descriptive Analysis

The table provides information on sample size, mean, standard deviation, lowest and maximum values, and so on.

TABLE 4.1: Descriptive Analysis

	N	Minimum	Maximum	Mean	Std.Deviation
SL	281	2.93	5	4.56	0.45
EGP	281	.00	5	3.98	0.91
EE	281	1.00	5	4.47	0.52
POS	281	1.00	5	4.21	0.87
Valid	281				

N=281, SL= Sustainable leadership, EGP=Employee Green Performance, EE= Employee empowerment, POS=Perceived Organizational Support.

The table provides descriptive statistics for the variables under study, including mean, standard deviation, minimum, maximum, and average values. It also includes specifics about the variables and the sample size. The minimum and maximum values are detailed in the table columns above, while standard deviation and mean values are provided for the gathered data. Descriptive statistics summarize and describe dataset features, playing a crucial role in descriptive analytics. Common descriptive statistics encompass measures of variability like range, variance, and standard deviation, as well as measures of distribution such as percentiles, quartiles, and histograms. Central tendency measures, including mean, median, and mode, are also included.

The mean value for sustainable leadership is 4.56, with a standard deviation of .45, while employee green performance shows a mean value of 3.98 and a standard deviation of .91. Employee empowerment exhibits a mean value of 4.47, with a standard deviation of .52, while perceived organizational support has a mean value of 4.21 and a standard deviation of .87.

4.2 Anova Analysis

TABLE 4.2: Anova Analysis

Employee Green Performance		
	F-Value	P-Value
Gender	.03	.84
Marital Status	.87	.35
Age	.77	.56
Work Status	.04	.83
Year of Job Experience	1.99	.09

The one-way analysis of variance was tested to assess the influence of population characteristics on the variables that is "employee green performance." The table below displays the following outcomes of the one-way ANOVA analysis for each control variable, including gender, age, marital status, experience, and year of job experience, about employee green performance. The results revealed that

demographic variables gender, Martial Status, age, Work Status and year of Job Experience are non-significant when tested with DV.

4.2.1 Correlation Analysis

TABLE 4.3: Correlation Analysis

	SL	EGP	EE	POS
SL	1			
EGP	.42**	1		
EE	.44**	.57**	1	
POS	.51**	.45**	.55**	1

$N = 281$, $SL = Sustainable leadership$, $EGP = Employee Green Performance$, $EE = Employee empowerment$, $POS = Perceived organizational support$. **Correlation is significant at the 0.01 level (2-tailed).

Examination of the correlation table shows that the correlation coefficient between sustainable leadership and employee green performance is 0.42 ** at $p < 0.01$, reveals a positive correlation. A coefficient correlation of 0.42** between sustainable leadership and employee green performance reveals a moderate favorable relationship among two variables. The correlation between employee empowerment and sustainable leadership is 0.44** at p less than 0.01, shows the high positive association among these two variables. The association among employee empowerment and employee green performance is 0.57 **. A correlation coefficient of 0.57 ** between employee empowerment and employee green performance shows a strong substantial relationship among these two variables.

4.3 Regression Analysis

It aims to model the relationship between the dependent variable and independent variable(s) and to make predictions based on that model. Present a thorough overview of the research results, incorporating significant levels of the proposed

hypotheses. Include key details such as regression coefficient values, significance levels, standard errors (S.E.), and confidence interval limits (LLCI and ULCI). The table should encompass both direct and indirect relationships, with a particular emphasis on mediation.

TABLE 4.4: Regression Analysis

Direct Effect	Beta Coefficient	P	LLCI	ULCI
Sustainable Leadership → Employee Green Performance	2.34	.00	1.14	3.54
Sustainable Leadership → Employee Empowerment	.84	.00	0.64	1.05
Employee Empowerment → Employee Green Performance	.39	.00	.27	.51
Indirect Effect	Beta Coefficient	Boot SE	Boot LLCI	Boot UPLI
Sustainable Leadership → Employee Empowerment → Employee Green Performance	.33	.00	.13	.59

Hypothesis No 01: Sustainable leadership has a significant impact on Employee Green Performance.

The regression analysis for hypothesis 1 shows that there is positive significant link exists between sustainable leadership and employee green performance. The β value or regression coefficient is 2.34. A beta value of 2.34 suggests that linear relationship exist between sustainable leadership and employee green performance. Essentially, changes in sustainable leadership predict any changes in employee green performance. Whereas the p – value is .00. In the above case, the p-value suggests that the association among sustainable leadership and employee green performance is statistically significant. Since both LLCI and ULCI include are 1.14 and 3.54, it indicates that the effect is consistently significant. Suggesting the findings indicate that sustainable leadership does have a significant effect on employee green performance. The beta coefficient of 2.34 and the p-value of 0.00 indicate that sustainable leadership predict employee green performance in this

study. Therefore, the hypothesis that sustainable leadership has a substantial effect on employee green performance is supported by the data.

Hypothesis No 02: *Sustainable leadership has a positive and significant relationship with Employee empowerment.*

The regression analysis demonstrates the link among sustainable leadership with employee empowerment. The value of coefficient $\beta = 0.84$ indicates a positive linear association among sustainable leadership and employee empowerment. The p-value assesses the statistical significance of the relationship. Since both LLCI and ULCI are positive and do not include zero, it confirms that the effect is significant. In accordance with provided data, sustainable leadership exhibits a positive and meaningful association with employee empowerment. Therefore, the hypothesis that sustainable leadership has a beneficial and significant relationship with employee empowerment is supported by the data.

Hypothesis No 03: *Employee empowerment has a positive and significant effect on Employee green Performance.*

Hypothesis 3 indicates the association among employee empowerment and employee green performance and for this relationship, the findings indicate that the importance of the regression coefficient is $\beta = .39$ which is positive with a p-value of 0.00. As both LLCI and ULCI are positive and do not include zero, it confirms that the effect is significant. Based on the provided results, employee empowerment has a beneficial and substantial positive effect on employee green performance.

Hypothesis No 4: *Employee empowerment mediates the relationship between Sustainable leadership and Employee Green Performance.*

Research related to the mediation analysis involving sustainable leadership, employee empowerment, and employee green performance. The beta coefficient β is 0.33, indicating a positive mediating effect of employee empowerment on the relationship between sustainable leadership and employee green performance.

Since the confidence interval does not include 0, this suggests that the intermediary role of employee empowerment is statistically significant. In summary, the findings indicate that employee empowerment significantly mediates the association between sustainable leadership and employee green performance, with a positive

and significant indirect effect. Sustainable leadership appears to boost employee green performance by empowering employees.

4.4 Moderation Analysis

A statistical method called moderation analysis, sometimes called interaction analysis, has been used to investigate if the amount of a third factor impacts the relationship between two variables. Stated differently, it investigates if the existence of a third variable influences or moderates the causal link between the independent variable and the dependent variable.

TABLE 4.5: Moderation Analysis

Moderation Analysis	Beta-coefficient	P	LLCL	ULCI
Sustainable Leadership				
*Perceived Organizational Support	-.49	.00	-.78	-.20
Employee Green Performance				

Hypothesis No 5: *Perceived organizational support moderates the relationship between Sustainable leadership and employee green performance in such a way that this relationship will be stronger when perceived organizational support is high.*

The above results suggest that perceived organizational support (POS) is moderating the association among variables that is sustainable leadership and employee performance. Specifically, the strength of the link between sustainable leadership and employee green performance relies on the level of perceived organizational support. In the above case, the beta coefficient for the interaction term (sustainable leadership \times perceived organizational support) is -.49. The coefficient is positive, we expect that the relationship between sustainable leadership and Employee Green Performance becomes stronger as perceived organizational support increases. The p-value is 0.00 suggests that the interaction effect statistically significant. There are negative signs between LLCL and ULCL which means they have weak relations. The findings suggest that the involvement among sustainable leadership and perceived organizational support has a non-significant moderation on employee green performance.

4.5 Summary of the Hypothesis

TABLE 4.6: Summary of the Hypothesis

Hyp.	Statement	Results
1	Sustainable leadership has a significant impact on Employee Green Performance.	Accepted
2	Sustainable leadership has a positive and significant relationship with Employee empowerment	Accepted
3	Employee empowerment has a positive and significant effect on Employee green Performance.	Accepted
4	Employee empowerment mediates the relationship between Sustainable leadership and Employee Green Performance.	Accepted
5	Perceived organizational support moderates the relationship between Sustainable leadership and employee green performance in such a way that this relationship will be stronger when perceived organizational support is high.	Rejected

Chapter 5

Discussion and Conclusion

5.1 Discussion

This chapter is organized into three primary sections: the first reviews the outcomes of the hypotheses, the second delves into their theoretical and practical significance, and the third contemplates the study's constraints and provides guidance for future research.

A total of five hypotheses were tested, with some being confirmed and others rejected. In the first section, we will explore the key insights derived from our findings, offering a comprehensive analysis of the validated hypotheses and their implications for the existing body of knowledge.

This analysis not only highlights the contributions of our study to the current scholarly discourse but also examines how these findings align with or challenge prevailing theories. By addressing these aspects, we aim to provide a clearer understanding of the study's impact and the broader context in which it operates.

5.1.1 Sustainable Leadership and Employee Green Performance

Hypothesis No 01: *Sustainable leadership has a significant impact on Employee Green Performance.* The results does not support the hypothesis that sustainable leadership significantly influence employee green performance. The rejection of

hypothesis 01 highlights that there is a need to understand complicated issues more deeply interplay between sustainable leadership and employee green performance. Sustainability necessitates leaders capable of crafting strategies, strategies, and initiatives to promote practices that involve sustainability on both social and managerial fronts while stimulating financial prosperity (Iqbal et al., 2020). After more studies, we can get to see the role of sustainable leadership on employee green performance. Sustainable leadership involves leaders who prioritize environmental sustainability and incorporate sustainable practices into their leadership behaviors and making choices for companies and engaging in making their own decisions. Leaders who shows the dedication to sustainability may influence employees' attitudes, behaviors, and perceptions toward environmental initiatives within the organization.

Employee green performance refers the level of involvement of employees in environmental initiatives sustainable behaviors, such as reducing energy consumption, recycling, using sustainable resources, and advocating for environmental initiatives within the organization. Social exchange theory suggests that relationships are built on the cost-benefit analysis and the mutual exchange of reward.

Hypothesis is rejected it may indicate that the expected reciprocal relationship, as proposed by social exchange theory, is not occurring as anticipated. This could be due to several reasons for example doctors may not perceive the sustainable actions of leadership as rewarding enough to warrant changes in their green performance.

They might be motivated by factors other than the social exchange with leadership, such as personal values or external incentives. There may be a lack of awareness or understanding among employees about the sustainable efforts of leadership and how they can contribute. The overall organizational culture might not support or prioritize green performance, regardless of leadership actions.

5.1.2 Sustainable Leadership and Employee Empowerment

Hypothesis No 02: *Sustainable leadership has a positive and significant relationship with Employee empowerment.* From the findings, it can be concluded that sustainable leadership positively influence empowering employee and also has

significant positive relationship with employee empowerment. Leaders that follow sustainability has a lot of impact on many outputs. It improves participation, empowerment, employee development, and knowledge exchange (Iqbal et al., 2020). Sustainable leadership can be seen as an investment in the social exchange with employees, leading to a mutually beneficial relationship where employee empowerment is enhanced as a result of the leaders' sustainable actions and values.

In the context of sustainable leadership, leaders who demonstrate a commitment to sustainability principles can foster a feeling of support and fairness within the organization. This, in turn, can lead doctors to feel more empowered, as they perceive their contributions to be valued and their well-being to be a priority. The mutual nature of this relationship suggests that when leaders invest in sustainable practices and employee development, doctors are likely to respond with increased engagement, innovation, and empowerment.

This relationship is supported by research that links empowering leadership styles with elevated degree of employee involvement and achievement. For example, many researchers have found that when leaders involve their workers to participate in making decisions and demonstrate a commitment to sustainability, employees are more engaged in exhibiting creative and innovative behaviors that is useful for overall companies success (Harrach et al., 2020).

According to the social exchange theory, social interactions are based primarily on a reciprocity system. Employees engage in relationships and exchanges with the hope of gaining advantages in return. At work, employees engage in social exchanges with their leaders and colleagues. When leaders exhibit sustainable behaviors (such as ethical decision-making, concern for the environment, and employee well-being), employees perceive these actions as positive exchanges. In return for sustainable leadership practices, employees reciprocate by feeling empowered, motivated, and committed to their work. Organizations enhance employee empowerment by promoting sustainable leadership practices. Leaders focus on building trust through transparent communication, ethical behavior, and genuine concern for employees and the environment.

By fostering a positive social exchange, sustainable leadership helps the success of the organization, job satisfaction and employee health. Sustainable leadership

promotes employee empowerment through social exchange theory, where employees experience reciprocal value and support from their leaders. This empowerment highlights the beneficial exchange of support and recognition within the workplace.

5.1.3 Employee Empowerment and Employee Green Performance

***Hypothesis No 03:** Employee empowerment has a positive and significant effect on Employee green Performance.*

The findings of the data analysis strongly support the hypothesis that empowering employee hold a vital role in green performance of employees. The following outcome indicates a compelling positive connection among employee empowerment and employee green performance. This implies that doctors who possess a high degree of employee empowerment tend to exhibit greater Employee Green Performance compared to those with lower levels of employee empowerment. So when employees are empowered they tend to have a greater green performance.

As employees feel empowered within the workplace, they perceive it as a substantial investment by the organization in their skills and autonomy. This perception typically instills that employee have a feeling of duty to give back to the the organization trust and investment. Consequently, employees are motivated to engage in initiatives aligned with the organization's goals, such as improving green performance ([Adeel et al., 2022](#)).

Empowered doctors may have more access to resources, information, and support, enabling them to take initiative and make decisions that contribute to environmental sustainability. In return for the empowerment they receive, they may engage in green behaviors, such as reducing waste, conserving energy, or innovating sustainable processes, as a way to reciprocate the trust and support provided by the organization.

Social exchange theory also provides insight into how empowering employees can result in improved green performance by cultivating a symbiotic relationship where both the organization and its employees are committed to attaining sustainable objectives.

5.1.4 Mediating Effect of Employee Empowerment between Sustainable Leadership and Employee Green Performance

***Hypothesis No 04:** Employee empowerment mediates the relationship between Sustainable leadership and Employee Green Performance.*

Findings of the data indicates us that employee empowerment can positively mediates the relationship among sustainable leadership and employee green performance. The concept of empowering the employees helps in mediating the relationship among sustainable leadership and employee green performance can be elaborated through social exchange theory, which is rooted in the principles of reciprocity and mutual benefit in social relationships.

Social exchange theory posits that relationships are built on a series of interactions that are contingent on the rewarding or punishing responses from others. These interactions create obligations and expectations, and the fulfillment of these expectations can lead to stronger, more committed relationships.

In the context of sustainable leadership, leaders who prioritize sustainability and demonstrate this commitment through their actions are likely to inspire similar behaviors in their employees. When leaders empower their employees by incorporating them with the ability to take decisions, providing them with resources, and supporting them with autonomy, employees feel appreciated and esteemed. This responsibility of empowerment can lead to increased motivation and participation in activities that helps in building the organization's green performance.

Empowered doctors, feeling a sense of obligation and trust towards their leaders, may reciprocate by doing their best in their jobs beyond their roles, which includes engaging in environmentally sustainable behaviors. This reciprocal relationship enhances the overall green performance of the hospitals, as doctors as staff members feel more liable to innovate, share ideas, and implement practices that support sustainability goals. Therefore, employee empowerment operates as a critical mediation in the relationship among sustainable leadership and employee green performance. The social exchange theory providing a structure to understand the underlying dynamics of this relationship. The empowered employees,

in exchange for the trust and resources provided by their leaders, contribute positively to the organizations. The practices done by sustainable leaders including promotion of workers and empowering them, and endorsing green initiatives, establish a beneficial social exchange atmosphere within the organization.

According to SET principles, individuals respond to favorable treatment or support by exhibiting positive behaviors, such as heightened commitment, engagement, and performance. Consequently, when employees recognize their leaders' authentic dedication to sustainability and feel empowered to participate in green efforts, they are inclined to reciprocate by demonstrating elevated levels of green performance.

5.1.5 Moderating Effect of Perceived Organizational Support between Sustainable Leadership and Employee Green Performance

***Hypothesis No 5:** Perceived organizational support moderates the relationship between Sustainable leadership and employee green performance in such a way that this relationship will be stronger when perceived organizational support is high.*

Hypothesis 5, which proposed that moderation variable perceived organizational support among sustainable leadership and employee green performance, suggesting that this connection would be stronger under conditions of high perceived organizational support, was not supported by the data. The significant variation among those working in the health sector resulted in the moderation strategy we proposed being rejected. The perspectives of employees on organizational support vary. Sadly, some employees have prejudices and often voice grievances about their work. They usually overemphasize little issues and view support as unnecessary showmanship, which eventually weakens interpersonal ties.

Because of the demands of patient care, long hours, and emotional strain, the health industry is inherently stressful. Stress-related restrictions may make it difficult for employees to consistently maintain high performance, even in the presence of strong perceived organizational support. The analysis revealed no notable interaction effect between sustainable leadership and perceived organizational support on employee green performance. Despite the theoretical rationale suggesting that

employees would respond favorably to supportive organizational climates by exhibiting greater green performance, our analysis revealed no significant interaction effect. This suggests that within the context of our study, the exchange dynamics predicted by social exchange theory did not manifest as anticipated.

Further exploration into the nuanced mechanisms underlying the relationship among perceived organizational support, sustainable leadership, and employee green performance is warranted to elucidate the complexities at play. In line with Social Exchange Theory, Hypothesis 5 posited that perceived organizational support would play a role of moderator, enhancing the association among sustainable leadership and doctors green behaviour. It was hypothesized when they feel that their organization supports them more they would reciprocate with increased dedication to environmentally sustainable practices at their hospital.

However, contrary to expectations, our findings did not support this hypothesis. Additional investigation into the intricate mechanisms governing the interplay among perceived organizational support, sustainable leadership, and employee green performance is necessary to illuminate the multifaceted dynamics involved.

5.2 Research Implications

5.2.1 Theoretical Implications

This comprehensive framework integrates diverse organizational behavior theories, enhancing our understanding of how different leadership styles, employee empowerment initiatives, and organizational support structures intersect to influence employees' involvement in environmentally sustainable practices. Sustainable leadership, distinguished by its dedication to environmental responsibility and ethical conduct, has become increasingly prominent within organizations striving for enduring success and societal benefit. This investigation delves into the complex interconnections among sustainable leadership, employee empowerment, and perceived organizational support, emphasizing their collective influence on employee green performance. The theoretical insights gleaned from this study offer valuable contributions to both scholarly comprehension and real-world implementation.

Sustainable leaders who enable their employees to cultivate a culture of ownership and accountability. Empowered doctors demonstrate a greater propensity to participate in Eco-conscious practices, including conserving resources, minimizing waste, and initiating innovative green projects. Through analyzing the mediating function of employee empowerment, our research expands the implementation of social exchange theory to the realm of sustainability.

As per according to social exchange theory, individuals engage in reciprocal interactions with their organizations driven by perceived advantages and responsibilities. Seeing employee empowerment as a mediator suggests that when doctors feel empowered to undertake sustainable endeavors, they reciprocate by displaying heightened levels of environmentally friendly behavior. This discovery enhances our comprehension of how organizational practices impact employee conduct within the context of social exchange dynamics.

Empowerment bolsters employees' confidence in their capacity to contribute to sustainability objectives. This increased green self-efficacy, influenced by empowerment, motivates proactive environmental engagement. Empowered individuals exhibit organizational citizenship behavior by voluntarily engaging in environmentally beneficial initiatives beyond their prescribed duties.

Sustainable leaders can utilize empowerment as a tool to stimulate organizational citizenship behavior geared toward environmental sustainability. This integrated framework advances our understanding of leadership, social exchange dynamics, organizational support mechanisms, and sustainability within the context of organizational behavior specifically in health sector.

5.2.2 Practical Implications

Understanding the practical implications of the impact of sustainable leadership on employee green performance, with the mediation of employee empowerment and the moderation of perceived organizational support, is crucial for organizational sustainability initiatives. This exploration provides actionable insights for leaders and managers aiming to foster environmentally responsible behaviors among employees.

Organizations must prioritize the cultivation of sustainable leadership skills among their leaders and management. This involves providing them with the necessary knowledge and skill, and competencies, and mindset needed to incorporate environmental stewardship and ethical deliberations into their decision-making frameworks. Implementing training programs, workshops, and mentorship opportunities tailored to sustainable leadership can foster a corporate culture that highly value sustainability endeavors and principles.

Hospitals can preserve money by using sustainable procedures. Hospitals can lower their operating costs by optimizing resource consumption, waste management, and energy utilization. Strategic planning and risk assessment are components of sustainable leadership. Hospitals are better equipped to manage crises when they take proactive measures to mitigate these risks. Regulations pertaining to the sustainability of healthcare and its influence on the environment exist in several nations. Hospitals that adhere to these guidelines are accredited and keep their good name.

Enabling doctors to engage in sustainability endeavors is crucial for effecting significant transformations within organizations. Management ought to delegate decision-making responsibilities, allocate resources, and establish avenues for employees to actively contribute to eco-friendly initiatives. Empowerment can manifest in diverse ways, such as granting autonomy, fostering innovation, and acknowledging sustainability efforts. Through empowering employees, organizations leverage their creativity, expertise, and enthusiasm for sustainability, fostering heightened involvement and dedication to environmentally conscious practices.

Perceived organizational support holds a vital effect in shaping employees' attitudes and behaviors toward sustainability. Organizations should strive to foster a supportive work environment that values and promotes sustainability initiatives. This involves fostering open communication channels, providing training and resources, and recognizing and rewarding sustainable behaviors. By demonstrating a commitment to sustainability at all levels of the organization, leaders can enhance employees' perception of organizational support, leading to greater engagement in green performance. Incorporating sustainability metrics and objectives into performance management systems is essential for evaluating employees' commitment

to environmentally friendly practices. This integration underscores the organization's dedication to sustainability as a fundamental value and underscores the significance of environmental stewardship. Top management should regularly provide feedback on doctors' sustainability endeavors, acknowledge exceptional performance, and integrate sustainability targets into performance assessments and career advancement plans.

Encouraging collaboration and knowledge exchange among employees is instrumental in enhancing the effectiveness of sustainability initiatives. By nurturing a collaborative environment that promotes active participation in sustainability projects, organizations can harness the collective expertise and creativity of their workforce to drive ongoing enhancements in environmental performance. By cultivating sustainable leadership, empowering employees, strengthening organizational support, integrating sustainability into performance management, and fostering collaboration and knowledge sharing, organizations can build a way of doing things that cares about the environment, which helps make good things happen and keeps them successful in the long run.

5.2.3 Limitation of the Study

Apart from the important findings, this study also has some limitations that should be kept in mind when looking at the results. First is that the research has a very small sample size future researchers should replicate the same study with a larger sample size to get better and more robust findings. The study's findings may lack generalization to other industries due to specific demographics within the health sector.

A cross-sectional research design offers only a snapshot of relationships at a given moment, potentially overlooking the dynamic nature of sustainable leadership, employee empowerment, and perceived organizational support over time. Self-reported data collected through surveys or interviews could introduce response bias, where participants may offer socially desirable responses or inaccurately recall their perceptions and behaviors, leading to self-report bias. Establishing causality and the direction of relationships between variables proves challenging

in observational studies, despite employing statistical techniques like mediation and moderation analyses. Changes in leadership, organizational policies, or external factors over time might influence the link between sustainable leadership, employee empowerment, perceived organizational support, and employee green performance, yet these temporal effects may not be fully captured in the study. While mediation and moderation analyses offer insights into underlying mechanisms and boundary conditions of relationships, they rely on specific statistical assumptions and might not entirely grasp the intricacies of interactions in the real world.

5.2.4 Future Direction of Research

This study used the probability sampling technique with simple random sampling technique. Future researchers can use the probability sampling technique with stratified or quota sampling for more specific results from each segment. Also, the cross-sectional research design was used to test the hypothesis, future studies can consider longitudinal research design to avoid common method bias. Present study used a single method for data collection future researches can use multiple data collection methods for better responses.

Present study was concerned with quantitative data, qualitative data can also be used in future to get rich insights into employees' perceptions, experiences, and motivations. Investigating how cultural differences influence the connection among sustainable leadership, employee empowerment, perceived organizational support, and employee green performance can be interesting idea for future researchers. Exploring additional mediating and moderating factors with same or different relationships can be fruitful.

5.2.5 Conclusion

The findings of the research emphasize that organizations should prioritize investments in sustainable leadership development, employee empowerment initiatives, and strategies to enhance perceived organizational support to maximize their impact on promoting environmental sustainability and achieving sustainable business

practices. Leaders should upgrade heating, ventilation, and air conditioning systems to more energy-efficient models. This not only reduces operational costs but also minimizes the environmental impact. Affordable and Clean Energy emphasizes the need for sustainable energy practices. SDG 12 (Responsible Consumption and Production) promotes responsible resource use and waste reduction. In the procurement of medical supplies and equipment, leaders should prioritize sustainably produced options, taking into account factors such as materials sourcing, manufacturing processes, and product life cycles. SDG 4 (Quality Education) underscores the significance of education for sustainable development. Leaders can implement educational programs and workshops within their institutions, raising awareness about health, sustainability, and their interconnectedness.

Understanding the complex interplay between sustainable leadership, employee empowerment, perceived organizational support, and employee green performance is essential for organizations seeking to promote environmental sustainability and achieve their sustainability goals.

By promoting an environment of sustainable leadership, empowerment, and assistance, organizations can motivate employees to embrace environmentally friendly behaviors and contribute to creating a more sustainable future. Management in leading hospitals prioritize initiatives aimed at helping doctors to feel empowered by giving them the tools they need, autonomy, and assistance to drive sustainability efforts across all organizational levels. By effectively leveraging these factors, hospital leaders can cultivate a sustainable work environment that fosters environmental responsibility and contributes to the overall performance of the organization and its stakeholders.

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Appendix A

CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY
ISLAMABAD

Questionnaire

Dear respondent,

I am MS scholar seeking your opinion on the topic of “Sustainable Leadership”. You are one of my potential respondent and are requested to take few minutes out of your busy schedule to fill this questionnaire. Data is being captured anonymously and will be kept confidential. If you are interested in knowing the findings of this study, then please contact undersigned.

Regards,

Rameen Razzaq

(razzaqrameen@gmail.com)

Department of Management Sciences

Demographics Questions:

Please choose the appropriate answer.

1. Gender: A. Male B. Female

2. Marital Status: A. Single B. Married

3. Age: A. 18-25 B. 26-30 C. 36-40 D. 41-45 E. Over 45

4-Work Status: A. Full Time B. Part Time

5-Years of job experience with current Organization: A. 0-5 B. 6-10 C. 11-15 D. 16-20
E. More than 20

Scale: Responses to each item are measured on a five-point scale with the anchors labeled

(1) Strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly

Agree.

Section A: SUSTAINABLE LEADERSHIP

Please keep your current organization in your mind and answer the questions given below:

My leader acts in a sustainable socially responsible manner.	1	2	3	4	5
My leader acts in a sustainable environmentally responsible manner.	1	2	3	4	5
My leader acts in a sustainable ethically responsible manner.	1	2	3	4	5
My Leader decisions are made while considering the entire organization.	1	2	3	4	5
My leader management officially recognizes when a mistake is made that affects sustainability.	1	2	3	4	5
My leader is willing to correct mistakes that affect sustainability.	1	2	3	4	5

My leader attempts to use unique innovative methods to resolve sustainability issues.	1	2	3	4	5
My leader attempts to create wealth through sustainable efforts.	1	2	3	4	5
My leader puts purpose before profit.	1	2	3	4	5
My leader balance sustainable social responsibility with profits.	1	2	3	4	5
My leader demonstrates sustainability by persevering through all types of change.	1	2	3	4	5
My leaders is concerned about how sustainability affects employees.	1	2	3	4	5
My leader communicates sustainability decisions to all involved.	1	2	3	4	5
My leader attempts to build a culture of sustainability through its communication efforts.	1	2	3	4	5
My leader has plan to demonstrate sustainability when hiring, promoting employees and replacing leaders.	1	2	3	4	5

Section B: Employee Green Performance

Please keep your current organization in your mind and answer the questions given below:

I complete the environmental duties specified in the job.	1	2	3	4	5
I fulfill all environmental responsibilities required by the job.	1	2	3	4	5
I never neglect environmental aspects of the job which I am obligated to perform.	1	2	3	4	5

Section C: Employee Empowerment

Please keep your current organization in your mind and answer the questions given below:

I'm sure about my competencies in work.	1	2	3	4	5
I have possessed the necessary expertise related to my job.	1	2	3	4	5
My supervisor suggests methods and techniques to help me for better performance.	1	2	3	4	5
I'm free to employ any methods and procedures to improve my performance.	1	2	3	4	5
I feel a sort of independence over employing a variety of ways to improve my job	1	2	3	4	5
I can address my job-related problems without the permission of my managers.	1	2	3	4	5
While doing my job, I am allowed to perform autonomously.	1	2	3	4	5

Section D: Perceived organization support

Please keep your current organization in your mind and answer the questions given below:

The organization values my contribution to its well-being.	1	2	3	4	5
The organization strongly considers my goals and values.	1	2	3	4	5
Help is available from the organization when I have a problem	1	2	3	4	5

The organization really cares about my well being.	1	2	3	4	5
The organization wishes to give me the best possible job for which I am qualified.	1	2	3	4	5
The organization cares about my general satisfaction at work.	1	2	3	4	5
The organization takes pride in my accomplishments at work.	1	2	3	4	5
The organization would forgive an honest mistake on my part.	1	2	3	4	5
The organization is willing to extend itself to help me perform my job to the best of my ability.	1	2	3	4	5
The organization cares about my opinions.	1	2	3	4	5