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Assessing the Knowledge on Sustainability and Barriers to Daily Sustainable Practices Among Faculty and Students in Higher Education: the Case of Eastern Illinois University

Abstract

The concept of sustainable development gained prominence with the publication of the Brundtland Report, which emphasized economic progress without jeopardizing future generations' well-being. Following that, the Education for Sustainability (EfS) program was created by the United Nations to raise sustainability awareness. However, the transition to sustainable living is fraught with difficulties, including a lack of knowledge, financial constraints, infrastructure gaps, and political ideologies. This study focuses on sustainable practices among Eastern Illinois University (EIU) students and faculty, as well as the barriers to daily sustainable behaviors. As independent variables influencing sustainable practices, the study evaluates sustainability knowledge/awareness, personal financial situation, university infrastructure, and political orientation. Data were collected using surveys, which were then analyzed using regression analyses. The findings revealed that familiarity with the concepts of sustainability and global warming, as well as financial security, correlated with more sustainable behaviors. However, because the mean scores were not statistically significant, the observed relationships could be due to chance. It was discovered that infrastructure convenience has a significant relationship with sustainable practices. Political affiliation had no discernible relationship with long-term behavior. The small sample size from a single university and subjective interpretations of sustainability-related questions were among the study's limitations. To improve future research, a larger and more diverse sample from multiple universities, using mixed methods and stratified sampling, should be considered. The findings add to the literature on higher education sustainability and offer recommendations for overcoming identified barriers. Understanding faculty and student knowledge and attitudes is critical for creating a sustainable future, as higher education institutions play an important role in shaping future leaders.

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Assessing the knowledge on sustainability and barriers to daily sustainable practices among
faculty and students in Higher Education. The case of Eastern Illinois University

By Joel Edem Holison

A Thesis Presented for the Master of Science Degree in Sustainability

Eastern Illinois University

2023

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Chapter 1

Introduction

The idea of sustainable development gained prominence after the release of the Brundtland Report where sustainable development was explained as a process by which a nation advances economically without compromising the chance for future generations to grow (Brundtland, 1987). Later, the 1997 “Thessaloniki Declaration” introduced the Education for Sustainability (EfS) program as a shared sustainability message (Knapp, 2000). The United Nations’ 2030 agenda for sustainable development with seventeen goals and 169 targets also set a road map for countries worldwide to follow and address issues related to sustainability (Colglazier, 2015). This agenda emphasizes the importance of sustainability in economic, social, and environmental aspects.

According to the United Nations Framework Convention on Climate Change (UNFCCC, 2015), it is important to increase public understanding, education, and awareness of climate change while striving for sustainable development. The goal of this education advocacy is that people would practice sustainable lifestyles if they become more aware of its importance. Unfortunately, while many individuals recognize the urgency of sustainable lifestyle practices, the transition to sustainable living has been impeded by a variety of factors including the lack of knowledge or the abundance of it, personal financial constraints, infrastructure deficits, and individual political ideologies (Scott, 2009; Bolsen & Druckman, 2015; Carter, 2018; Adams, Klinsky, & Chhetri, 2019; Goswami & Schoeneberger, 2019; Longo, Shankar, & Nuttall, 2019).

To illustrate the point, consider the following scenarios. Jenny, who is enrolled in a public university in the United States, commutes daily to her university in a single-occupancy car, which contributes to air pollution and traffic congestion. Despite her knowledge of the negative impact

of single-occupancy cars on the environment, she continues to use her car because of convenience and habits. Meanwhile, Ryan, who is studying economics and has learned about sustainability in his classes, walks around campus or his residential hall and sees the lights on in empty living spaces and classrooms and students wasting resources. Ryan feels frustrated and powerless to make a change. He wonders why his peers and even the institution do not seem to care about the environment and sustainability.

Sustainable lifestyles, which incorporate a special “behavioral wedge” to reduce individual carbon footprint have the potential to contribute to a low-carbon future (Axon A., 2016a). Despite this, shifting to environmentally responsible behavior is highly challenging due to the psychological, sociological, economic, sociopolitical, infrastructural, and institutional barriers (Hedlund-de Witt, 2012; Mont, Brezet, & van der Heijden, 2014; Verplanken & Roy, 2016; Whitmarsh, 2009a). Thus, educational programs must develop, transforming the way sustainability is taught, learned, and understood (Filho, Viedma, Vaz, Rocha, & Adomou, 2018a; Filho, et al., 2019). As higher learning institutions for imparting knowledge, universities have an increasingly important role to play in achieving the set global sustainable goals. It is also essential to understand the motivations and constraints of sustainable growth from stakeholders including professors, students, as well as administrative and support personnel (Connolly & Prothero, 2008; Newholm, 2005; Prothero, Connolly, & Orr, 2011). Incorporating sustainability issues into education is essential as the actions and inactions of future generations, including students, will have significant impacts on the environment (Lozano, 2006; Waas, Rees, Robinson, & Paul, 2010; Zilahy & Huisingh, 2009). Higher education institutions have been actively implementing initiatives to promote sustainable lifestyles in the form of green practices such as energy conservation, waste reduction, and the promotion of green transportation (Kammer & Owen, 2015; Müller & Hockerts,

2019). To evaluate the effectiveness of these initiatives, it is important to understand the sustainable lifestyle practices of both students and faculty in higher education institutions.

As centers of learning, research, and innovation, higher education institutions have a significant role to play in promoting sustainable practices among students and faculty members. However, as mentioned, there are several barriers to implementing sustainable practices in daily life. Dimitrova et al. (2021) reported that while people understood the value of sustainability and the need for sustainable behaviors, they lack specific knowledge about how to put these behaviors into practice in their daily lives. Given their lack of knowledge, it may be challenging for them to adopt sustainable practices because they may not be aware of the best course of action or how to make it work in their particular situation. Too much knowledge according to Longo et al. (2019) can also be a barrier to individual sustainable lifestyle practices. According to the authors, as people learn more about sustainable living practices, they might encounter conflicts, tensions, or even decision making paralysis. This is due, in part, to the fact that sustainable living strategies frequently involve difficult trade-offs and conflicting priorities. For instance, people may need to strike a balance between the need to maintain a certain standard of living or fulfill other obligations and the desire to reduce their carbon footprint.

Regarding financial constraints, Adams et al. (2019) found that people in underprivileged and marginalized communities in the United States could find it more difficult to adopt sustainable lifestyle practices due to personal financial constraints. For instance, many low-income households are unable to purchase energy-efficient appliances, where such appliances can result in higher electric bill costs and more carbon dioxide emissions. Similarly, it may be difficult for people to make sustainable decisions if they lack access to public transportation or healthy food options (Adams, Klinsky, & Chhetri, 2019). Horhota et al. (2014) also highlighted a number of ways that

inadequate infrastructure may prevent campus commuters from living sustainably. The authors discovered that it can be more challenging for people to engage in sustainable behaviors when there is a lack of infrastructure such as recycling bins or bike racks. Additionally, even when the infrastructure for sustainable practices is present, the design of the infrastructure can be a barrier. For example, the authors note that poorly placed recycle bins or inaccessible bike racks can make it difficult for individuals to engage in sustainable behaviors (Horhota, et al., 2014). Bolsen and Drackman (2015) discussed how political ideology can influence people's perceptions of scientific issues and can cause science to become politicized (Bolsen & Druckman, 2015).

Universities have the potential to play a significant role in promoting sustainable practices and creating a sustainable future. Despite the increasing attention paid to sustainability in higher education, the knowledge and attitude of faculty and students towards sustainability remain unclear. Many studies conducted in universities regarding barriers to sustainable practices often concentrate on the approach of the decision-makers of the university on sustainability (Finlay & Massey, 2012; Ávila, et al., 2017). This study aims to assess the sustainability awareness of students and faculty and further explore the barriers to daily sustainable practices among the respondents, using Eastern Illinois University (EIU) as a case study. This research will consider knowledge/awareness, personal financial situation, university infrastructure, and individual political orientation of EIU students and faculty as independent variables. The study will then analyze the impact of these variables on the ability of students and faculty to practice sustainable lifestyles. Questions the study seeks to explore are: What is the level of knowledge of sustainability among faculty and students at EIU? What are the barriers to daily sustainable practices among faculty and students at EIU? And what interventions are used to promote sustainable practices among faculty and students at EIU? Data were collected from the target respondents through

surveys and analyzed to assess the knowledge and barriers identified through regression analyses. The findings of this study will contribute to the literature on sustainability in higher education and be used to recommend solutions to the identified barriers. The significance of this study stems from the fact that higher education institutions have a momentous role in shaping the minds of future leaders of society. Faculty and students can promote sustainable practices through their research, teaching, and daily activities. Thus, it is essential to assess their knowledge and attitudes toward sustainability and identify the barriers to daily sustainable practices to create a sustainable future.

In summary, this chapter provided a background to the significance of education to sustainable development, examples of barriers to sustainable lifestyle practices, and the focus of having such studies on university campuses. The chapter also discussed the rationale of the study, the questions the study seeks to explore, as well as an overview of the methodology employed. The remainder of this paper will be organized as follows: Chapter Two will provide a review of the relevant literature on the barriers to daily sustainable practices and the theory underpinning this study; Chapter Three will discuss the methodology used in the study; Chapter Four will present the results of the study; and Chapter Five will provide a discussion of the results and conclusions.

Chapter 2

Literature Review

Prior research have focused on understanding factors that can influence an individual's ability to adopt sustainable lifestyle practices (Barr & Gilg, 2006; Barr, Shaw, & Coles, Sustainable lifestyles: Sites, practices, and policy, 2011; Gifford & Nilsson, 2014; Carter, 2018; Rosenbaum, 2016). Knowledge and attitude towards sustainability, financial situation, infrastructure inconvenience, and personal political orientation have all been identified as key factors in determining an individual's sustainable lifestyle practices (Hobson, 2001; Agyeman, 2005; Fudge et al., 2013; Carter, 2018). Previous studies have suggested that knowledge and attitude can play a key role in determining an individual's sustainable lifestyle practices (Tanner & Wölfing Kast, 2003; Salonen & Åhlberg, 2013; Axon, 2017). Individuals, who have a good understanding of the impact of their actions on the environment and a positive attitude toward sustainability, are more likely to make sustainable choices and support policies and initiatives aimed at promoting sustainability (Longo, Shankar, & Nuttall, 2019). To effectively promote sustainable lifestyles, it is important to ensure that individuals are well informed about the environmental impacts of their actions and have a positive attitude towards sustainability (Hobson K. , 2003). Additionally, it is important to ensure that individuals are aware of the potential benefits of adopting sustainable practices and are motivated to make a difference (Agyeman, 2005).

The financial situation of an individual is another significant factor that can have an effect on the adoption of sustainable lifestyle practices by that individual. It may be challenging for people with lesser incomes to embrace sustainable lifestyles (Antwi-Agyei, Dougill, & Stringer, 2015). For instance, such people may not have the financial means to purchase home appliances that are more energy-efficient or solar panels for their homes (Scott, 2009). The problem may be

made worse by the fact that sustainably responsible ways of living may not be easily accessible or affordable in some places (Nahal & Mitra, 2018). It is important to mention that some sustainable practices, when seen over time, prove to be more economical. For example, walking or biking rather than driving can save money on gas and car maintenance, while promoting healthy living. In the same vein, decreasing food waste can save money on grocery bills.

Because infrastructure can make it either simple or challenging for a person to pursue a sustainable lifestyle, it is another factor that influences sustainable living. Individuals with access to public transportation, recycling and composting facilities, and green spaces, have the opportunity to adopt behaviors that are more environmentally responsible. Individuals may find it challenging, to pursue sustainable behavior if these forms of infrastructure mentioned above are not easily accessible (Horhota et al., 2014). Residents in areas that do not have bike lanes or sidewalks may feel unsafe walking or biking, while people who live in communities with good public transportation may be more likely to opt for low-carbon modes of commuting. People who do not have access to public transit infrastructure may have next to no choice but to depend on personal vehicles as their main means of transport. It is important to have appropriate infrastructure if sustainable living can be achieved.

Personal political orientation is another factor that can affect one's propensity to pursue a sustainable lifestyle (Dryzek, Norgaard, & Schlosberg, 2013). Generally, individuals who identify as liberals or as left-leaning – that is, individuals who tend to be more supportive of policies and government interventions that promote social welfare, equality, civil liberties, and redistribution of resources (McClosky & Zaller, 1984; Jost, Federico, & Napier, 2009) – are more likely to prioritize environmental issues and to show more support for policies that seek to address climate change and promote sustainability. A politically progressive person may consider sustainability to

be a priority, making it more likely for such a person to adopt a sustainable lifestyle (Jarrett Jr., 2015). Because of the perceived cost of investing in sustainable lifestyle practices, conservative leaning individuals may be less likely to make such investments. However, it is necessary to note that sustainability is not just a political issue, and that people of all political views have the potential to make personal decisions that would lessen their negative environmental impacts.

What follows is an examination the existing research on knowledge/attitudes, financial situation, infrastructural inconvenience, and personal political orientation serving as barriers to sustainable lifestyle practices as well as a discussion the theories guiding the study.

Knowledge/attitude as a barrier

One commonly cited barrier to practicing sustainable lifestyles is the lack of knowledge or awareness about sustainable lifestyle practices. Luederitz et al. (2017) found that education and awareness-raising initiatives were effective in promoting sustainable lifestyle practices. The authors suggested that educational programs that provide specific and actionable information about sustainable lifestyle practices could be effective in overcoming this barrier (Luederitz, et al., 2017). Both a lack of knowledge and an excess of knowledge can serve as barriers to achieving a sustainable lifestyle. One of the key challenges associated with a lack of knowledge is that individuals may not fully understand the impact of their actions on the environment. For example, people may not be aware of the harmful effects of single-use plastics, or they may not understand the importance of reducing their carbon footprint. As a result, they may continue to engage in unsustainable practices, despite their good intentions to live sustainably.

This lack of knowledge can be particularly challenging when it comes to complex issues, such as climate change. In an article by Hobson (2001) on sustainable lifestyles, the lack of

knowledge was seen as a barrier to individuals engaging in sustainable lifestyle practices (Hobson K., 2001). The study also found that despite the fact that some individuals were aware of the environmental consequences of their actions there was still a lack of understanding about how their actions could lead to a more sustainable lifestyle (Hobson K. , 2001). The author concluded among other things that knowledge is an important factor in sustainable lifestyle practices and that more education and awareness on the benefits and details of specific example practices is needed (Hobson K., 2001). This could include information about the environmental impact of certain actions and how these could be reduced.

In the United Kingdom, a study by Padel and Foster (2005) looked to identify knowledge and attitudes toward environmental issues. The study found that while participants had a general understanding of environmental issues, they lacked specific knowledge about sustainable lifestyle practices. Participants reported that they did not know how to make changes in their daily lives that would contribute to environmental sustainability. In the United States, a study by Kollmuss and Agyemang (2002) sought to identify attitudes toward environmental issues and their engagement in sustainable activities. The study found that participants who reported a lack of knowledge about sustainable practices were less likely to engage in those activities. In Canada, a study by Hargreaves et al (2013) found that university students lacked knowledge about sustainability issues and were not confident in their ability to make a meaningful impact on the environment. Also in Canada, an article by Wals and Jickling (2002) found that a lack of knowledge about sustainability issues can result in feelings of helplessness and apathy. Participants in the study reported feeling overwhelmed by the complexity of sustainability issues and unsure of how to make a meaningful impact. The authors suggested that providing clear and accessible information about sustainability issues can help to overcome this barrier. Similarly,

a study by Thøgersen (2005) in Denmark found that lack of knowledge was a significant barrier to engagement in sustainable lifestyles. The study surveyed participants to identify attitudes toward environmental issues and their engagement in sustainable activities. Respondents who reported a lack of knowledge about sustainable lifestyle practices were less likely to engage in those activities.

Lubowiecki-Vikuk et al. (2021) discovered that people may not only lack the knowledge or information to live sustainable lifestyles but also the skills and resources essential to implement them. This lack of awareness could be attributed to limited access to information, restricted exposure to sustainable practices, or just a lack of appreciation of the nuances of sustainable living. All of these variables could be at play. The study concluded that in order to reduce the knowledge gap and increase individual sustainable practices, it is vital to provide educational resources that are tailored to the individual's needs and pursuits (Lubowiecki-Vikuk, et al., 2021). The research also suggested that governments, businesses, and other organizations should work collaboratively on the development of a comprehensive strategy for promoting sustainable practices. This strategy would involve both providing general education and specific resources to assist individuals in adjusting to lifestyles that are more sustainable (Lubowiecki-Vikuk, et al., 2021). According to the findings of another study conducted at a university in Qatar (Al-Nuaimi & Al-Ghamdi, 2022), the lack of knowledge and awareness among students was identified as a significant barrier to students engaging in sustainable practices. The authors concluded that educational institutions should place a priority on equipping students with the necessary knowledge and resources to support sustainable living practices (Al-Nuaimi & Al-Ghamdi, 2022). The study went on to suggest that institutions initiate support networks and make sustainability-related resources available to bridge the existing knowledge gap (Al-Nuaimi & Al-Ghamdi, 2022).

Having excess amount of knowledge can also serve as a barrier to leading a sustainable lifestyle. When individuals become inundated with information, they may feel paralyzed and uncertain of how to take action. Longo, Shankar, and Nuttall (2019) investigated the relationship between knowledge and sustainable lifestyle choices. They researchers observed that while knowledge about sustainable behaviors and their impact is key, it can also lead to quandaries, pressures, and even paralysis in decision-making when it comes to making sustainable lifestyle adoptions (Longo, Shankar, & Nuttall, 2019). Individuals overly exposed to information may also become skeptical about the possibility of change, believing that their individual actions will not cause a difference in the face of the greater problem and systematic issues that exist regarding sustainability. This can lead to a sense of hopelessness and a lack of motivation to take action (Longo, Shankar, & Nuttall, 2019). For example, some sources may suggest a plant-based diet as a very good sustainable choice while others may advocate for locally sourced products instead. These mixed messages can leave individuals feeling unsure of how to make the best choice for the environment.

To overcome these barriers, the provision of accessible and easy-to-understand information about sustainability, as well as actionable steps individuals can take to lessen their negative environmental impact, is essential. It is also important to accentuate that individual actions do make a difference and that small changes can add up to generate a significant positive impact. By addressing both the lack of knowledge of individuals on the subject of sustainability as well as the excess of information surrounding the same subject, individuals can be empowered to make informed choices and contribute to a more sustainable future.

Financial situation as a barrier

Financial constraints can also serve as a significant barrier to the adoption of sustainable practices (Kollmuss & Agyeman, 2002; White, Habib, & Hardisty, 2019; Baur, et al., 2022). The first significant challenge is the cost of sustainable products and services. The market for environmentally friendly products is still developing, with the majority of sustainable products and services often being more expensive than their non-sustainable substitutes. Low-income earning households would find the cost of energy-efficient home appliances, organic food, and electric vehicles as expensive. These households may be dissuaded from adopting more sustainable practices because of financial barriers. The initial cost of sustainable options can be prohibitive for many individuals (Baur, et al., 2022). Choosing to invest in solar panels, rainwater-harvesting systems, or a green roof, for example, can be expensive (Kollmuss & Agyeman, 2002). This may lead to individuals being unable to take on such projects and eventually settling for less sustainable options that are inexpensive. Additionally, Individuals going through financial hardship may prioritize immediate necessities like food, shelter, and medical care over long-term constraints such as the cost of sustainable living (Carter, 2018).

In their book, “Environmental Justice and Environmentalism: The Social Justice Challenge to the Environmental Movement,” Sandler and Pezzullo explored the connection between environmentalism and social justice, including the part that income inequality plays in determining outcomes of environmental issues. The authors contend that low-income earning individuals and communities are often confronted with significant economic barriers that prevent them from adopting pro-environmental behaviors (Sandler & Pezzullo, 2007). The book emphasizes that policies aimed to support environmental justice, such as pollution taxes or green jobs programs, can assist in overcoming these barriers and produce more justifiable outcomes (Sandler &

Pezzullo, 2007). Cairns et al. (2004) conducted a study in the UK to identify the elements that influence sustainable transportation behavior. In particular, the authors examined the use of “soft measures” such as travel plans and public transport promotion in reducing car use. The study surveyed individuals in three different cities and found that income was a major predictor of car use. The researchers observed that individuals with lower incomes were less inclined to opt for sustainable transportation such as purchasing more fuel-efficient or electronic vehicles due to the perceived high cost associated with these options (Cairns et al., 2004).

The role of public policy in enabling pro-environmental behaviors at the household level, including the economic barriers faced by low-income households, was investigated in a report that was published by the Organization for Economic Co-operation and Development (OECD). The report noted that households with lower incomes may have to overcome a number of economic barriers in adopting sustainable behaviors. These obstacles include the upfront costs of energy-efficient appliances or home improvements, as well as the higher cost of some sustainable products such as organic food. The report recommended that interventions such as subsidies, tax incentives, or public education campaigns may be effective in encouraging pro-environmental behaviors among low-income households. Koger (2011) explored the psychological elements that influence environmentally conscious behaviors, including the role of economic considerations such as affordability. According to the finding of the study, the cost of sustainable products and services can be a substantial obstacle to adopting sustainable practices, especially for low-income households. The author also proposed that public measures such as subsidies or tax incentives could assist in making sustainable products more reasonably priced and accessible for low-income-earning individuals and communities (Koger, 2011).

In summary, studies suggest that personal financial income and economic constraints can act as significant barriers to sustainable or pro-environmental lifestyle practices, particularly for low-income households and marginalized communities. While policies such as subsidies, taxes, and/or public education campaigns may help to mitigate these barriers, there is a need for more research on how to achieve environmental sustainability.

Infrastructure as a barrier

Infrastructure inconvenience has been recognized as another barrier to personal sustainable lifestyle practices affecting transportation, recycling, and energy use. Transportation is one of the most critical aspects of personal sustainable lifestyle practices, and infrastructural inconvenience can significantly hinder individuals from adopting sustainable transportation practices. The lack of public transportation options, bike lanes, and pedestrian-friendly streets can discourage individuals from walking or cycling to their destinations, leading to increased reliance on personal vehicles. The availability and accessibility of charging stations for electric vehicles have been found to be critical factors in individuals' decisions to adopt this sustainable transportation option. Therefore, governments and private entities should invest in the development of sustainable transportation infrastructure to encourage individuals to adopt sustainable transportation practices.

Recycling is another critical aspect of sustainable lifestyle practices that can be affected by infrastructure inconvenience. Poorly located recycling bins, a lack of standardized recycling practices, and limited access to recycling facilities can discourage individuals from recycling. Convenient access to recycling bins significantly increases recycling behavior. Therefore, investing in the development of convenient recycling infrastructure and standardizing recycling practices can encourage individuals to adopt recycling as a sustainable practice.

Energy use is another area where infrastructure and convenience can hinder the adoption of sustainable practices. The lack of access to renewable energy sources, including solar and wind power, can discourage individuals from adopting these sustainable energy options. Additionally, energy-efficient infrastructure, including buildings, lighting, and appliances can make it easier for individuals to adopt energy-saving practices. Governments and private entities should invest in the development of renewable energy and energy-efficient infrastructure to encourage individuals to adopt sustainable energy practices.

Abbott (2013) discussed the implementation of green infrastructure in African urban communities, which includes spaces such as parks, gardens, green roofs, and green walls, and how they help promote sustainable urban development. The author asserts that one of the key impediments to sustainable lifestyles for urban inhabitants, especially those living in low-income neighborhoods, is the inability to access green infrastructure. Residents may be less likely to engage in activities beneficial to their physical and mental well-being if they do not have access to green spaces. These activities may include outdoor exercising or gardening. Abbott (2013) suggests that an investment in green infrastructure can help enable sustainable growth by improving the quality of health for urban populations, promoting biodiversity, and reducing the impact of climate change. Regarding rural or remote locations, Tovey (2016) also discusses the lack of access to infrastructure, such as public transportation, waste management facilities, and renewable energy sources being a barrier to sustainable living. Because of their distance from urban centers and lower population, rural areas typically have less developed infrastructure. Tovey (2016) puts forward that sustainable development in rural regions must have tailored strategies that take into account the unique challenges of rurality. Such strategies could include investment

in renewable energy, the development of sustainable agriculture practices, and the support of small-scale entrepreneurship (Tovey, 2016).

Kawachi and Berkman (2003) also explored the association between neighborhood infrastructure and health outcomes, positing that the lack of access to necessary infrastructure, such as green spaces, healthy food options, and safe places to exercise, can play an important role in poor health outcomes. The researchers observed that residents of low-income neighborhoods and communities with high numbers of racial and ethnic minorities are often disproportionately affected by those infrastructure gaps (Kawachi & Berkman, 2003). The study suggested that the growing of community gardens or the creation of safe walking and cycling paths could improve both health and sustainable practices. Urban sprawl, characterized by low-density development and the lack of access to public transportation and other infrastructure, can have negative implications on both public health and sustainable living practices according to Frumkin et al. (2004). The authors proposed that policy interventions, such as “encouraging” public transportation and mixed-use development, can help decrease the adverse effect of urban sprawl and support a more sustainable and healthier urban environment (Frumkin, et al., 2004).

Adhya et al (2017) also noticed that many urban residents are forced to rely on personal vehicles due to inadequate public transportation, which contributes to air pollution and carbon emissions. The authors suggested that investment in public transportation and affordable housing can encourage sustainable urban development. This can be achieved by improving access to essential infrastructure and reducing reliance on personal vehicles. Agyeman (2005) investigated the connection between sustainable communities and environmental justice. The study argued that access to essential infrastructure such as greenspaces, affordable housing, and public transportation is essential for promoting both sustainable living and social equity. Agyeman

(2005) noted that low-income individuals and communities of color are usually disproportionately affected by poor infrastructure, which can add to environmental degradation or poor health problems. Agyeman (2005) advocates that sustainable communities must be designed with a focus on social equity through the provision of essential infrastructure such as energy-efficient offices and apartments, adequate bike and pedestrian lanes, recycling points, and green parks for all residents (Agyeman, 2005).

These findings provide additional evidence of the relevance of access to essential infrastructure such as green spaces, public transportation, and renewable energy sources, and in promoting pro-environmental lifestyle practices. These barriers may be particularly experienced to a greater degree for low-income individuals and residents of rural or urban areas with derisory infrastructure. Policy interventions and investments in infrastructure are advocated to be critical for addressing the barriers to sustainability encountered by low-income individuals and communities of color, as well as for promoting health and well-being more generally. It is important for governments and commercial organizations to collaborate on developing sustainable infrastructure and standardizing sustainable practices to make sustainable lifestyle practices more easy and convenient for individuals. Additionally, educating individuals on the benefits of sustainable lives and practices and how to adopt them can help individuals overcome the barriers posed by infrastructure inconvenience.

Political Orientation as a barrier

The left and right-wing political followers have different understandings of individual sustainable lifestyle practices. According to Jost et al., (2009), Liberals or Left-wingers are described as individuals who tend to support government initiatives and policies that advance

social welfare, equality, civil freedoms, and resource redistribution. On the other hand, right-wingers or conservatives are thought to be people who place an emphasis on traditional values and embrace individual liberty, free markets, and a conservative attitude to social development (Jost et al., 2003). Mayer and Frantz (2004) found that political ideology was a strong predictor of connectedness to nature. The authors found that liberals reported higher degrees of connectedness to nature than conservatives did. Beliefs regarding how people should interact with the natural environment served as a moderating factor in this relationship (Mayer & Frantz, 2004). In general, adherents of left-wing political ideologies believe that individual sustainable lifestyles are crucial for the environment (Coffey & Joseph, 2013). Left-wings are more likely to be of the view that it is the responsibility of each person to reduce their consumption and make sure they are not using more resources than they require (Feinberg & Willer, 2013). They also tend to hold the belief that individuals should be held accountable for their actions and that the government should have the ability to intervene and ensure that individuals act in ways that are environmentally sustainable. Right-wing political adherents, generally lean towards supporting the idea that there should be less government intervention and regulation in individual sustainable lifestyle practices (Jost et al., 2003). Right-wings advocate that individuals should be free to decide for themselves how they live their lives, and that the government should not be able to dictate what those decisions are. It is interesting to note that right-wings still support individual sustainable lifestyle practices and all should be free to make their own decisions about how to live their lives without restrictions (Feinberg & Willer, 2013). Hodson and Earl (2010) found that political conservatism was related to less adherence to environmentally conscious diets. This was the case even after controlling for demographic factors and other ideological variables (Hodson & Earle, 2010). Kahan et al (2012) also found that political worldviews influenced how the interpretation of scientific evidence related

to climate change, such that conservatives were less likely to perceive climate change risks as being significant. This effect was more pronounced among individuals who had higher levels of scientific literacy and numerical competence (Kahan, et al., 2012).

The likelihood that followers of left or right political ideology are more likely to engage in personal sustainable practices is not easy to answer. However, there are significant differences between each group's underlying beliefs and intentions regarding the adoption of sustainable lifestyle practices. Followers of left-leaning political ideas are often motivated to act by the ideal of preserving the natural world and protecting the interest of future generations. Zaval et al (2015) found that liberals are more inclined than conservatives to support environmental policies framed as supporting societal interests such as preserving or restoring nature for the benefit of future generations rather than individual values (Zaval, Markowitz, & Weber, 2015). People who lean left may be more likely to adopt sustainable practices such as reducing electricity and water usage, moving to renewable energy sources, and limiting their usage of single-use plastic. These individuals may also be likely to elect representatives who are inclined to support pro-environmental initiatives. Right-wing political followers have the propensity to place a larger importance on economic growth and personal liberty than on environmentally friendly behaviors and policies. This is because right-wings believe in individual autonomy and that the economic landscape should be left to the discretion of the free market. Having said that, despite their devotion to personal autonomy, some conservatives may still adopt sustainable practices due to their personal beliefs. Results from a study conducted by Feinberg and Willer (2013) revealed that a person's political ideology was associated with an array of moral values that influenced perspectives on the environment. Specifically, people who identify as conservatives were more likely to place importance on moral principles connected to individualism and self-interest,

whereas liberals were more likely to prioritize values associated with care and fairness (Feinberg & Willer, *The moral roots of environmental attitudes.*, 2013).

Dryzek, Norgaard, and Schlosberg (2013) explain that conservative political orientation is often linked to a lack of belief in the relevance of environmental issues, a preference for free market solutions to government interventions, and a lack of trust in environmental science and research. The authors mention that addressing challenges pertaining to the environment requires the participation of people across political perspectives. Dunlap, McCright, and Yarosh (2016) investigated the political split on the topic of climate change and found that political orientation was a significant predictor of views and attitudes regarding climate change. The authors found a correlation between conservative political views and lower support for environmental policies and practices as well as higher degrees of skepticism regarding climate change. Jarrett Jr. (2015) also observed the connection between political ideology and conservation behavior among rural Americans. He averred that conservative political orientations are linked to lower degrees of involvement in pro-environmental behaviors, such as recycling and water conservation (Jarrett Jr., 2015). The study reasons that working to promote sustainability and conservation in rural communities should take into account the influence that political ideology might have on people's behavior.

In summary, the evidence suggests that a person's political orientation can be a significant indication of their environmental behavior as political orientations influence an individual's values, beliefs, and attitudes. Conservatives or right-wing political orientations are often associated with opposition to pro-environmental policies and practices due to a lack of belief in the importance of environmental issues, a preference for individualistic values over collective action, and skepticism towards environmental science. Left- and right-wing political followers have

distinct differences in their conceptions of individual sustainable lifestyle practices. Left-wing political supporters typically believe that individuals should be held accountable for their activities and that the government should step in to ensure that individuals are making sustainable lifestyle choices. Addressing this political divide requires developing solutions to engage individuals across the political spectrum and reframing environmental issues in a manner that can be understood by the divergent view point on the subject.

From the above literature review, this study seeks to test the following hypotheses;

- *H1: Knowledge/awareness: Poor knowledge or awareness of sustainability among EIU faculty and students will be negatively related to sustainable lifestyle practices.*
- *H2: Financial Capacity: A poor financial capacity of EIU faculty and students will have a negative impact on their ability to practice sustainable lifestyles.*
- *H3: Campus Infrastructural Facilities: Poor campus sustainable infrastructure of EIU will have a negative impact on the ability of faculty and students to practice sustainable lifestyles.*
- *H4: Political Orientation: A conservative political orientation of EIU faculty and students will be negatively related to sustainable lifestyles.*

Theory of the Study

There have been several theories used to study the barriers to daily sustainable practices, including those related to knowledge, personal financial situations, infrastructure, and individual political ideology/orientation. A few include;

- The Theory of Planned Behavior: This theory was first proposed by Icek Ajzen in 1985. The theory suggests that attitudes, subjective norms, and perceived behavioral control all influence an individual's intention to engage in a particular behavior. If someone lacks knowledge about sustainable practices or believes that their financial situation or the infrastructure around them makes it difficult to engage in sustainable behaviors, they may be less likely to intend to engage in those behaviors (Ajzen, 1985).
- Social Cognitive Theory: This theory has been used to study knowledge, personal financial situation, and infrastructure as barriers to daily sustainable practices. This theory proposed by Bandura and Walters (1977) suggests that individuals' knowledge, beliefs, and attitudes about sustainability are influenced by their environment which can be shaped by financial resources and infrastructure (Bandura & Walters, 1977).
- Cultural Theory: Propounded by Geertz (1973), this theory has been used to study individual political ideology and orientation as barriers to daily sustainable practices. Geertz suggests that individuals' political ideologies influence their attitudes and behavior regarding sustainability and can be used to explain differences in sustainability practices (Geertz, 1973).

This study used the Theory of Planned Behavior (TPB). According to TPB, attitudes are a person's positive or negative evaluation of a particular behavior or action. Subjective norm refers to the perceived social pressure to perform or not perform a particular behavior action. Perceived behavioral control also refers to the degree to which the person believes that they have the ability to perform a behavior or action. In the context of sustainability, TPB suggests that an individual's attitude and intentions toward sustainability are influenced by their beliefs and expectations which can be shaped by various factors such as knowledge, financial resources, and political ideology

(Ajzen, 1985). If an individual believes that sustainability is important and has a positive attitude towards sustainable practices, they are more likely to engage in sustainable behavior. Similarly, if an individual perceives that their social group or community values sustainability and expects them to engage in that social behavior, they are more likely to do so. Furthermore, TPB suggests that perceived behavioral control plays a critical role in determining behavior (Ajzen, 1985). If an individual believes that they have the ability to engage in sustainable behavior, they are more likely to do so. However, if they perceive that barriers such as lack of knowledge or individual resources prevent them from engaging in sustainable behavior, they may be less likely to do so (Ajzen, 1985).

TPB was used by Bamberg et al. (2007) to examine the variables that affect the adoption of sustainable lifestyles, such as recycling, energy conservation, and alternative transportation. They discovered that behaviors associated with a sustainable lifestyle were significantly predicted by attitudes, subjective norms, and perceived behavioral control (Bamberg et al., 2007). TPB was also used by Miller et al. (2015) to investigate the elements that affect travelers' intentions to practice sustainable tourism behavior, such as conserving water, supporting neighborhood businesses, and minimizing waste. The research discovered that perceptions of behavioral control, subjective norms, and attitudes were all significant predictors of sustainable tourism behavior (Miller, Merrilees, & Coghlan, 2015). Lastly, Ahmed et al. (2021) found the same predictors of consumers' intentions to purchase environmentally friendly products when they employed TPB. These studies demonstrate the use of TPB as a viable framework to understand and predict sustainable lifestyle choices. These studies can help guide interventions and policies that support sustainable living by identifying the attitudes, subjective norms, and perceived behavioral control that affects sustainable behavior.

Chapter 3

Methodology

The study was conducted in the 2022-2023 academic year and sought to assess sustainability awareness of EIU students and faculty and further explore the barriers to daily sustainable practices among the respondents. Survey questions were developed and sent to over 8,600 students and 514 faculty through EIU's official email distribution system. A follow-up email was sent in the space after a week the first email. In addition, private reminders were sent to students and faculty that the researcher knew personally. The survey gathered 233 students and 70 faculty respondents. A regression analysis was performed on the data collected to find out any causative relationship between the variables.

Research Objectives

This project had knowledge, personal financial situation, infrastructure, and individual political ideologies as the independent variables. These factors were studied to illustrate how they affect individual sustainable life practices of sampled students and faculty of EIU. These variables are known determinable metrics in this area of research (Kollmuss & Agyeman, 2002; Jarrett Jr, 2015; Axon A., 2016a). Using regression analysis, the objectives were to test the following hypotheses and further provide insights into the challenges of promoting sustainable lifestyles and the need for systemic change.

- *H1: Knowledge/awareness: Poor knowledge or awareness of sustainability among EIU faculty and students will be negatively related to sustainable lifestyle practices.*
- *H2: Financial Capacity: A poor financial capacity of EIU faculty and students will have a negative impact on their ability to practice sustainable lifestyles.*

- **H3:** *Campus Infrastructural Facilities: Poor campus sustainable infrastructure of EIU will have a negative impact on the ability of faculty and students to practice sustainable lifestyles.*
- **H4:** *Political Orientation: A conservative political orientation of EIU faculty and students will be negatively related to sustainable lifestyles.*

A study by Axon (2017) to investigate the enablers of and barriers to sustainable lifestyles used regression analysis to explore the relationship between sustainable lifestyle behaviors and several factors including attitudes, perceived behavioral control, social norms, and personal values. Axon (2017) examined the role of demographic variables, such as age, gender, and income in predicting sustainable lifestyle behaviors. Several barriers to sustainable lifestyles were identified to be; Lack of time and convenience: Participants reported that busy schedules and the convenience of unsustainable options often prevented them from engaging in sustainable lifestyle behaviors. Cost and affordability: Participants identified the high cost of sustainable products as a significant barrier to adopting sustainable backstop practices. Lack of knowledge and information: Many participants reported feeling uncertain about the most effective way to live sustainably and express their desire for more information and guidance. Social norms and pressure: Participants reported feeling social pressure to conform to unsustainable norms and behaviors, which made it difficult to maintain sustainable lifestyles. Lack of access to sustainable option color participants reported that pending the availability of sustainable products and services was limited in their area, which made it difficult to adopt sustainable lifestyle practices (Axon S. , 2017).

Chapter 4

Findings

First, to help in the analyses of the data collected, the 12 questions regarding the behavior or lifestyle practices were each ascribed a 4-point measure which meant that the mean score of the sustainable behavioral activities metric was distributed between 0 – 48 points. In other words, this creates a 48-point index for measuring the extent of sustainable lifestyles of the respondents.

- Switch off lights every time I leave a room or when not needed
- Only use the washing machine when I have at least a full load of clothes
- Close the sink tap when brushing my teeth
- Limit time in the shower to 7 minutes or less
- Often use a reusable water bottle, coffee cup, etc.
- Drink tap water instead of bottled
- Read documents on-screen rather than printing them out
- Print documents double-sided instead of one-sided
- Use public transportation rather than drive own car
- Walk or ride a bicycle rather than drive a car for short distances
- Share a ride with a friend if convenient than drive your own car (Carpooling)
- Take part in a recycling program

From Figure 1 which is a graphical representation of the distribution of the sustainable activity index, we see that the average score of the responses is 30.7 out of 48. This shows that generally, students and professors are likely to have a positive inclination towards practicing sustainable lifestyles.

Distribution of Sustainable Activites Index

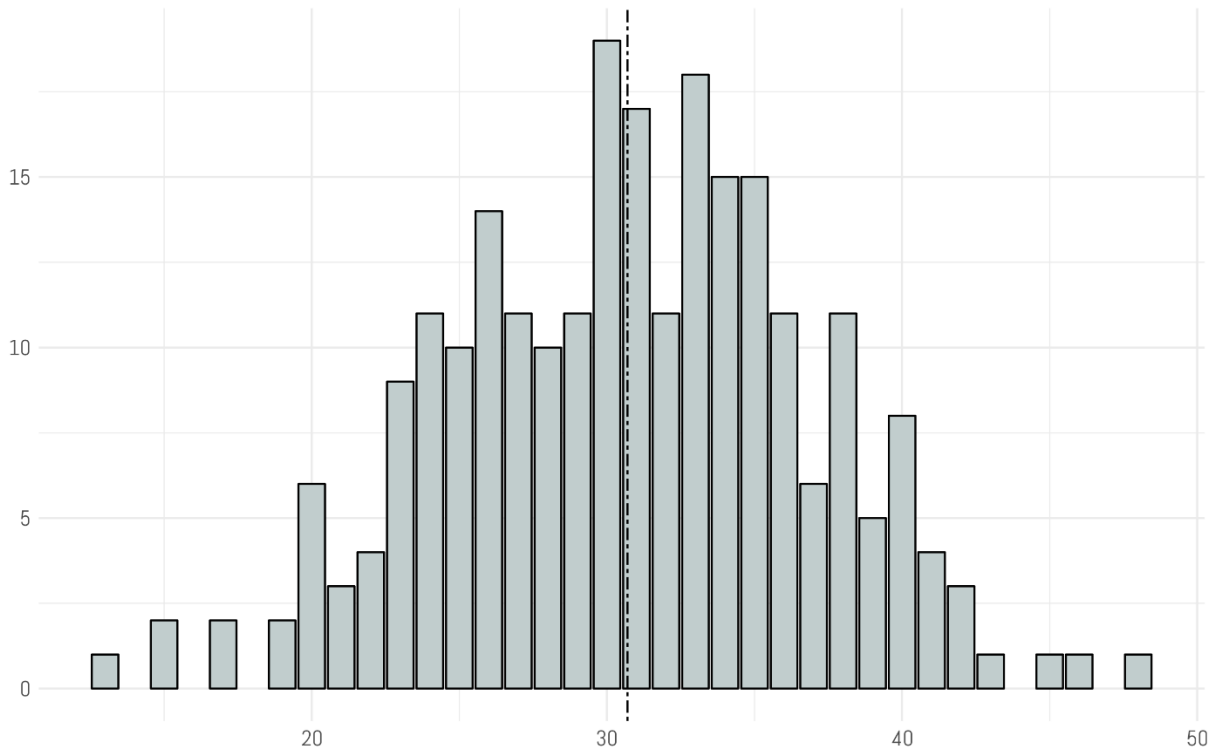


Figure 1: Distribution of Sustainable Activities Index

In the diagrams presented in this chapter to represent the analysis of the relationship between the variables (sustainable lifestyle practices (dependent variable); knowledge of sustainability, Financial Capacity, Infrastructural Convenience, as well as Political orientations (independent variables), the horizontal bars represent a confidence level of 84% and the dots are the point estimates or mean scores. When it comes to analyzing sustainable activities based on knowledge of the topic of sustainability, we see from the mean scores in Figure 2 that respondents who indicated more familiarity with the concept of global warming and sustainability were more likely to practice sustainable lifestyles. However, because the bars in Figure 2 are overlapping for both knowledge concepts (global warming and sustainability), it shows that the differences in mean scores are not statistically significant, hence the observed relationship between the variables under investigation is possibly due to chance rather than a valid difference or relationship that

would remain true across several samples or trials, hence, further research with larger sample size is needed to draw meaningful conclusions. The need for more respondents is evidenced in the wide bars for some of the response categories which represent a low number of responses in said category.

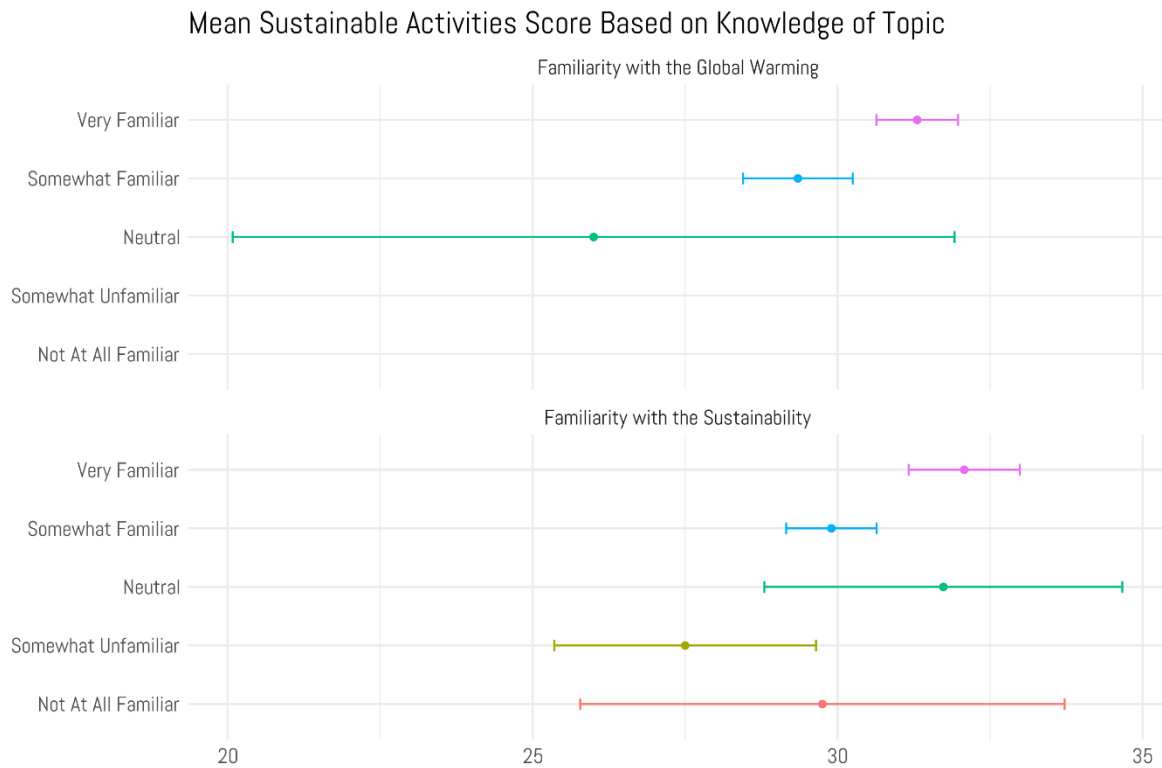


Figure 2 Sustainable Activities Score Based on Knowledge

A similar analysis of Figure 2 can be made for Figure 3 which shows the analyses of sustainable activities based on the financial situation of respondents. Again we observe largely that the more financially comfortable a respondent is, the higher their mean score on the sustainable activities index, which shows that they are likely to engage in sustainable lifestyles. But again, because the bars are wide and overlapping, the finding is not necessarily statistically significant and the finding cannot be generalized.

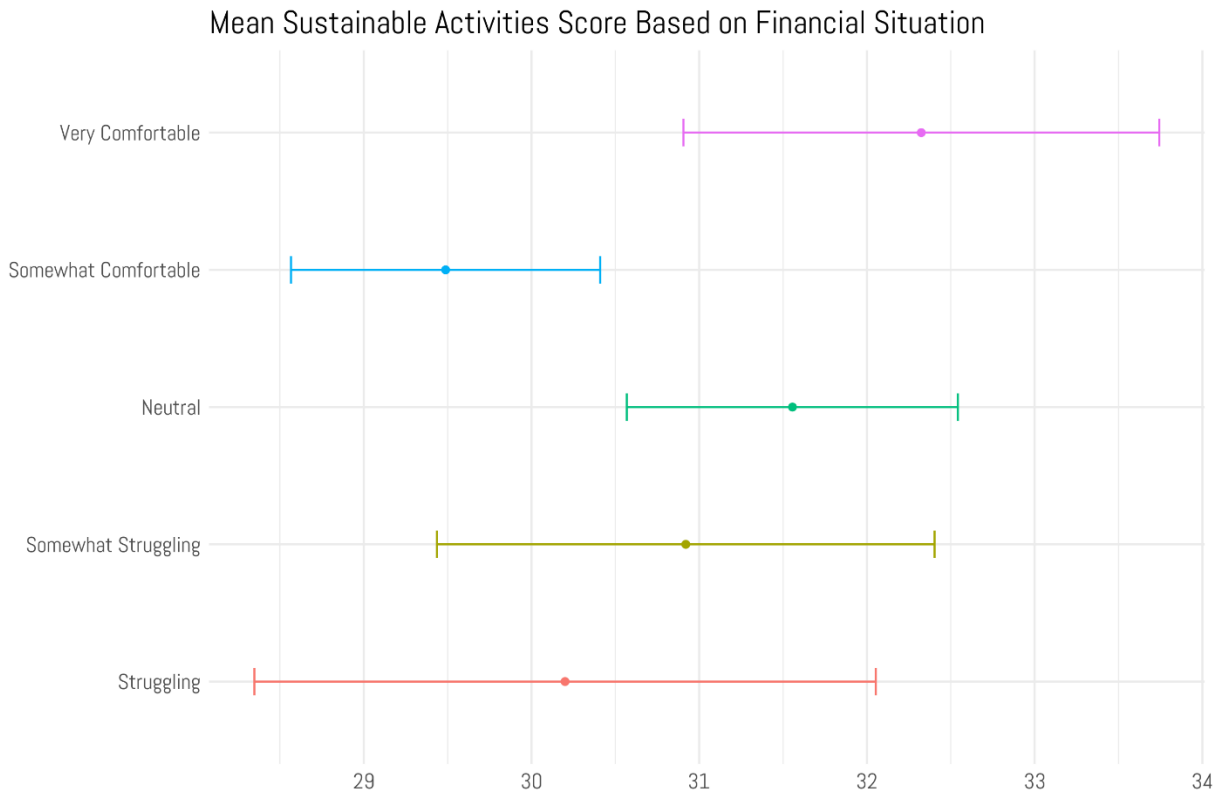


Figure 3 Sustainable Activity Score Based on Financial Situation

In Figure 4, the narrative is slightly different. We see that for the analyses of sustainable activities based on infrastructural convenience, respondents we very likely engage in sustainable lifestyle practices and there is a statistically significant relationship between the variables, albeit not much significance. This finding is observed in the positive response bars not overlapping with the negative response bars, however, with not a wide gap between the ends of the bars.

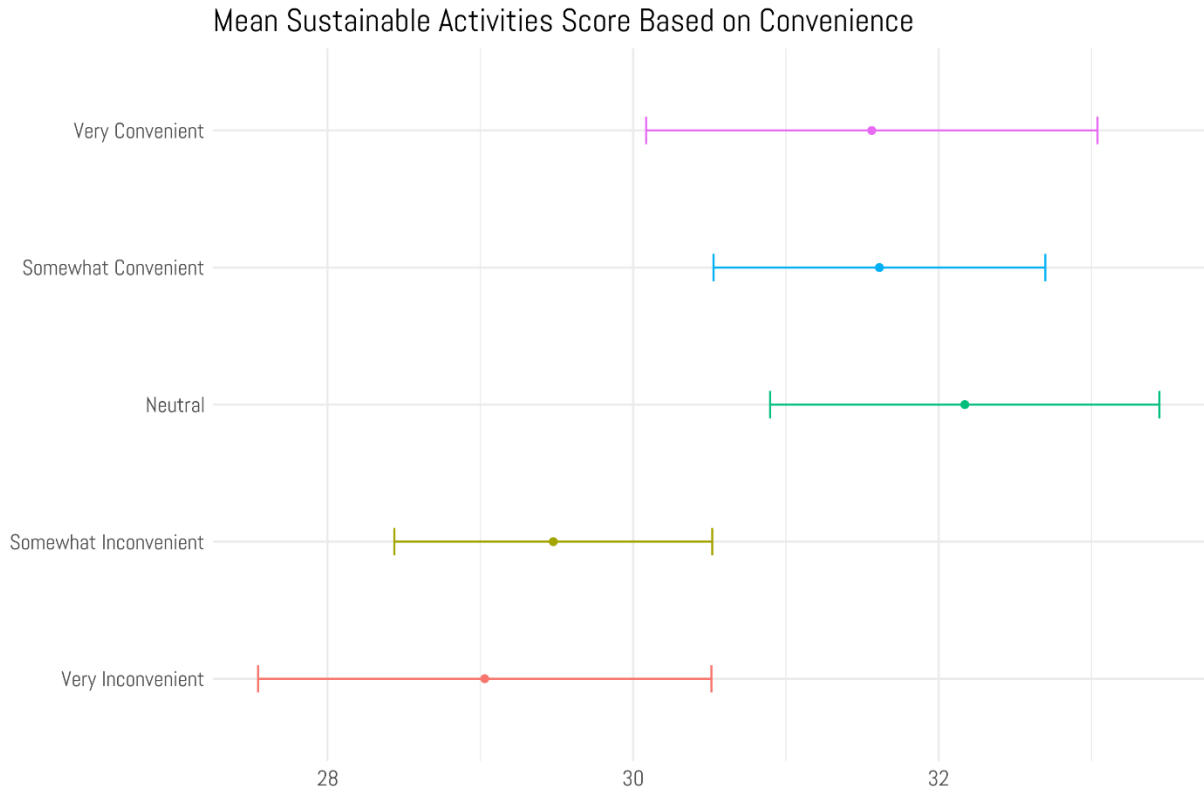


Figure 4 Sustainable Activity Score based on Infrastructural Convenience

Regarding the analyses of sustainable activities based on the political ideologies of respondents in Figure 5, strong Democrats had the highest mean score when it comes to the likelihood to practice sustainable lifestyles. This was followed by strong Republicans. However, like the analysis concerning knowledge of sustainability and the financial situation of respondents, the bars in the analysis are overlapping and wide, representing no statistical significance of the finding and a small sample size that cannot allow us to generalize the conclusions. It was interesting to note though, that respondents who identified as leaning Republicans and Independents were more likely to practice sustainable lifestyles than to leaning Democrats as the latter had lower mean scores from the analysis.

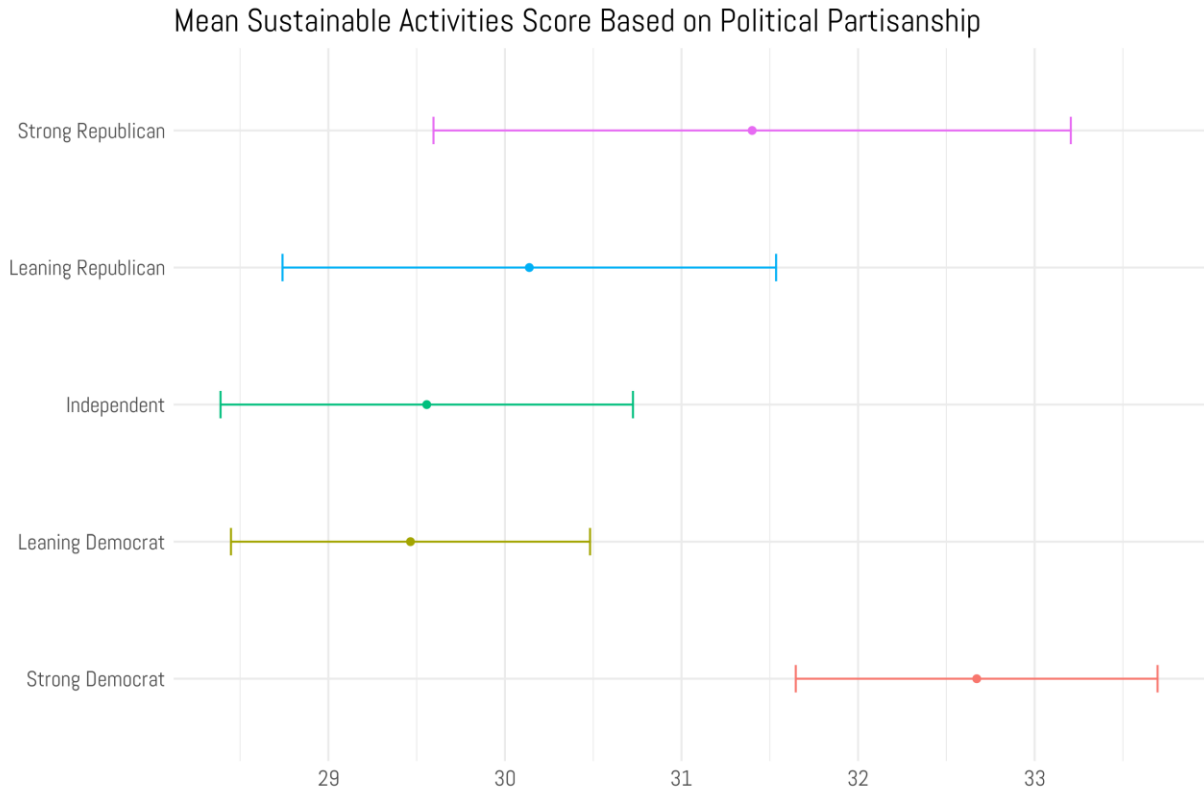


Figure 5 Sustainability Activity Score Based on Political Orientation

Figure 6, shows the results of the regression analysis to ascertain the causal relationship between changes in the independent variables and the resulting changes in the dependent variable (sustainable lifestyle practices). From the diagram, we see the bars of the predicting factors all overlapping with the 0 coefficient estimate. This means that none of the factors could predict whether or not respondents would engage in sustainable practices. This is a result of a small respondent size of 233 students and faculty.

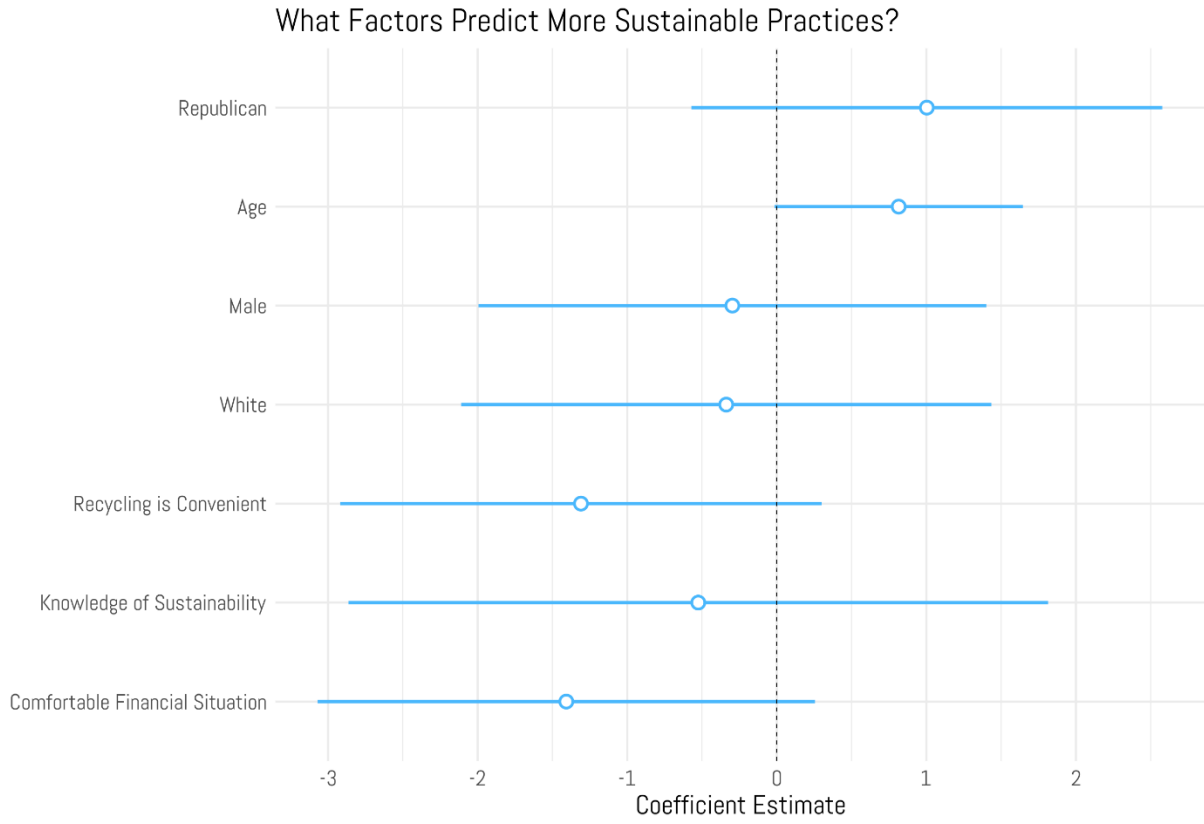


Figure 6 Regression Analysis Based on Independent Variables

Chapter 5

Discussions and Conclusion

Since this study was carried out right after the effects of the COVID-19 pandemic had died down significantly, it seems only right to consider and discuss how the pandemic may have played a role in this study. The pandemic had a considerable impact on the operations of universities, just as it did on other operations in one way or the other. In-person classes had to be replaced with remote or online learning at the majority of universities because they were required to comply with public health guidelines and ensure the well-being of students, faculty, and staff (Hodges et al., 2020). This sudden shift posed challenges in terms of adapting teaching methods, maintaining student engagement, and maintaining technological infrastructure. Educational institutions had to make investments in digital tools and platforms, train their faculty in online pedagogy, and provide students with support for distance learning (Crawford & Cifuentes-Faura, 2022).

Some universities temporarily closed their campuses or restricted access to their facilities and resources (Pokhrel & Chhetri, 2021). In addition, on-campus events, conferences, and extracurricular activities were affected, which led to their cancellation or the creation of virtual alternatives (Pokhrel & Chhetri, 2021). Universities faced difficult financial challenges (Friedman et al., 2020). Drops in enrollment affected housing fees and dining plans. This strain was compounded by decreased funding from the state, decreased support from philanthropic organizations, and other sources of funding, and additional expenditures for health and safety measures (Pokhrel & Chhetri, 2021). The sudden shifts in educational experiences, increased social isolation, financial struggles, and anxiety about the future all had an adverse effect on student's physical and mental health (Son et al., 2020).

When these effects are taken into consideration, the COVID-19 pandemic had the potential to influence people's perspectives on the environment and sustainability. The pandemic brought to light the intricate connections between human health and the surrounding environment (Mishra, Mishra, & Arora, 2021). The connection between diseases that can be passed from animals to humans, and human activities, such as deforestation or the wildlife trade, has brought attention to the significance of sustainable practices for the prevention of future pandemics (Holmes, 2022). This heightened awareness of the importance of environmental protection can result in a greater emphasis being placed on environmentally responsible behaviors and an appreciation for the value of preserving the environment for future generations (Mishra, Mishra, & Arora, 2021). The pandemic also caused disruptions in global supply chains, which resulted in changes in the behavior of consumers and the patterns of their consumption (Rutitis, et al., 2022). In some industries, the implementation of lockdown procedures and travel restrictions resulted in lower levels of carbon emissions and consumption of resources (O'Garra & Fouquet, 2022). This experience may prompt individuals to reflect on the impact of their consumption habits and consider more sustainable alternatives, such as decreasing the amount of air travel they do, sourcing their goods and services locally, or making more conscious purchasing decisions (Abu-Rayash & Dincer, 2020).

In addition, during the pandemic, there was widespread adoption of remote work and flexible work arrangements, both of which challenged the conventional ideas of work-life balance and commuting (Fabiani et al., 2021). A significant number of people were able to cut back on their commutes, which resulted in a reduction in carbon emissions (Crowley et al., 2020). As a result of this shift, there is now a push to make more sustainable work lifestyle choices in the future (Fabiani et al., 2021). The pandemic brought to light how critical it is to maintain resiliency and

focus on the long term. This helps to cultivate a greater appreciation for environmentally responsible practices as a means of developing resilience to future crises, such as climate change. Policy and investment priorities have seen a greater shift toward sustainability, with a focus on sustainable infrastructure, clean energy, and resilient systems that can contribute to the formation of a more sustainable and resilient future (Ikram et al., 2020). Although the pandemic may have the potential to change people's attitudes and behaviors regarding sustainability, it is important to note that the impact on people's perspectives related to sustainability may vary among individuals and across regions.

The purpose of this study was to assess the sustainability awareness of EIU students and faculty and further explore the barriers to daily sustainable practices among the respondents. From the mean scores recorded, respondents who indicated that they were familiar with their ideas of sustainability and global warming were more likely to live sustainable lifestyles, which is in line with findings from earlier studies (Jiang & Harada, 2019; Kollmuss & Agyeman, 2002). These results imply that promoting sustainable lifestyle habits may be accomplished by raising awareness of sustainability and global warming. In addition, the study revealed a positive relationship between financial security and sustainable lifestyle choices which is also consistent with the results of earlier research (Hocking & Kroksmark, 2013; Seegebarth, Peyer, Balderjahn, & Wiedmann, 2016; De Villiers & Roux, 2019). The observed relationships between the independent variables – knowledge of sustainability and financial situation – and the dependent variable – sustainable lifestyle practices –, however, may simply be a result of chance rather than a valid difference or relationship that would remain true across several samples or trials. This is resulting from the mean scores of the independent variables not being statistically significant. Therefore, further research

that would involve over 3000 respondents (students and faculty) from other universities as well would be needed to draw more significant and generic conclusions.

Findings from this study also show that there was a statistically significant relationship between infrastructural convenience and sustainable lifestyle practices among the respondents. The outcome corresponds with earlier studies (Evans & Abrahamse, 2009; Luchs, et al., 2010; Mont, et al., 2014). Regarding political affiliations, it was discovered that strong Democrats and strong Republicans both had the highest mean score for likely adopting sustainable lifestyles. Again, the observed relationship between political affiliation and sustainable practices, however, may yet be the result of chance as the mean scores for political affiliation were also not successfully significant. When a regression analysis was run, none of the independent variables (Knowledge of sustainability, financial situation, infrastructural inconvenience, and political orientation) were seen to be predictors of the independent variable (sustainable lifestyle practices).

Limitations

Researching sustainable lifestyle practices on a university campus in the United States using students and faculty will come with some limitations. For this study, the following were some of the limitations. Because the respondents came from only EIU, the results were not representative of the student and faculty population in the United States higher education sector at large. It is also probable that various universities have differing cultures, settings, environmental awareness, and eco-friendly policies which can affect the findings' ability to be generalized.

With the assistance of the school's Information Technology Support (ITS) department, the questionnaire for the survey was sent out via email to every member of the faculty and student body. Individuals who participate in the research voluntarily may already have a higher level of

interest in or engagement with sustainable lifestyle practices. This presents a potential limitation that can lead to an overestimation of the prevalence and effectiveness of these practices on campus. The respondents' subjective interpretations of sustainability-related questions could also compromise the accuracy and reliability of data.

Further, the political leanings of faculty and students in the United States can vary considerably from institution to institution and are subject to the influence of a number of different factors. The political ideologies of faculty members working in higher educational institutions tend to be more on the liberal or leftist side (Langbert et al., 2016). This pattern of behavior has been noticed in a wide range of academic fields, including the social sciences, the humanities, and the liberal arts (Langbert et al., 2016). Nevertheless, there is also a notable presence of conservative or right-leaning faculty members, particularly in fields such as economics and business, as well as in some STEM (science, technology, engineering, and mathematics) disciplines (Langbert, 2018). When it comes to students, political orientation may differ as well depending on the type of school they attend, where they live geographically, and what they major in (Stolzenberg, et al., 2019). There are some colleges and universities that have a reputation for attracting students that lean more liberally or conservatively, but this can also vary depending on the department or program. In addition, the political atmosphere and the social problems that are prevalent at the time can affect the political beliefs and activism of students (Stolzenberg, et al., 2019). Regardless of any overarching tendencies, it is essential to acknowledge the myriad of political viewpoints held not only by faculty but also by students (Abrams & Amna, 2020). Universities strive to cultivate environments that encourage open dialogue and the exchange of diverse ideas, and that not all members of a group will hold the same political beliefs.

The relatively small number of participants in this study also presents a number of limitations and challenges. The study's ability to draw conclusions that are applicable beyond the specific sample is hindered as a result of the limited size of the sample (Faber & Fonseca, 2014). Due to the low number of participants in the study, there was also a risk of sampling error as well as in the identification of actual effects or relationships between variables (Faber & Fonseca, 2014). The study also exhibited a lack of diversity and heterogeneity in its findings. Estimates generally tend to be more reliable and the impact of random variation is reduced when larger samples are used (Andrade, 2020). When interpreting the results of this study to confirm the relationships that were observed between the variables, it is crucial to keep in mind that the study had a relatively small sample size, and the mean scores for the independent variables were statistically insignificant. Both factors should be taken into consideration. Also, no grant was submitted for funds to help in incentivizing the target population so that the study would have many respondents.

Ways to expand the study

To address the limitations of this study and improve upon it in future research it is essential to increase the sample size of respondents, if possible, to over 3,000 and include multiple universities. The results may be more applicable to the population as a whole if the sample size is increased. Collecting information over an extended period can also be looked into. To help achieve this, it is strongly recommended that grant applications should be submitted.

Future research may also make use of a mixed methods approach, which combines quantitative and qualitative research techniques to provide a more in-depth understanding of sustainable lifestyle choices. Interviews and focus groups can provide insights and information

about the context that quantitative data alone may not be able to capture. Using techniques such as random or stratified sampling can also help reduce the effects of bias and make samples more representative of the population. In addition, working together with a variety of stakeholders, such as offices dedicated to sustainability, student organizations, and professors coming from a variety of fields, could broaden the perspectives and expertise needed for the study.

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Appendix A

Questionnaire

Hi,

You are invited to take part in a research study to assess the knowledge on sustainability and barrier barriers to daily sustainable practices among faculty and students at Eastern Illinois University. This study is being conducted by Joel Holison, a second-year graduate student at EIU under the supervision of Dr. Nichole Hugo, Graduate Coordinator for the Sustainability program.

You have been asked to voluntarily participate in this study because you are a faculty member or a student currently enrolled and on campus at Eastern Illinois University. If you agree and volunteer to participate, we will ask for 10 to 15 minutes of your time to complete a self-administered questionnaire of no more than 25 questions. This study's findings will help identify the barriers to daily sustainable behaviors among key stakeholders (faculty and students) on the Eastern Illinois University campus. Furthermore, the findings can be generalized to understand what stops individuals of society from practicing sustainability in their daily lives who have similar demographics. The study would then proceed to provide solutions to the identified barriers. I'm reaching out to you as a member of the campus community to learn about your perspectives. Your honest responses will help us gain a deeper grasp of the subject.

There is no significant foreseeable risk or triggering situation associated with this study. However, in such instances, you can discontinue and withdraw from the study at any time without any repercussions. One other discomfort may be the time it takes to answer the questions openly and honestly. There will be no information collected in this questionnaire that can be identified with you and your responses. Your email address will not be recorded or included with your responses and therefore your information will remain anonymous and confidential, even to the researcher.

This questionnaire is being distributed electronically to offer the most flexibility for you to respond openly and honestly, and in the most comfortable setting for you. Once you complete this questionnaire, your participation is concluded; there will be no follow-up questionnaires or other

data collection activities. Please understand that no compensation or academic credit is being offered for your participation.

Thank you for considering this invitation. If you have any questions or concerns about this study, please feel free to contact Dr. Nichole Hugo at the telephone number or e-mail address listed below.

- *Dr. Nichole Hugo, Ph.D., Associate Professor
Hospitality & Tourism Department and Graduate Coordinator for the Sustainability master's degree program, Eastern Illinois University
Telephone: 217-581-8595; Email address: nhugo@eiu.edu*

The electronic questionnaire can be accessed by clicking on this link:

XX

By clicking the link to this survey, you consent to voluntarily participate in this study.

If you have any questions or concerns about the treatment of human participants in this study, you may call or write:

*Institutional Review Board
Eastern Illinois University
600 Lincoln Ave.
Charleston, IL 61920
Telephone: (217) 581-8576
E-mail: eiuirb@eiu.edu*

This study has been approved by the Eastern Illinois University Institutional Review Board (IRB
xx-xxx)

(This will only take between 10-15 mins and can easily be done on your phone)

1. I am a
 - a. Faculty Member
 - b. Student

2. Current year at college (if student) :
 - a. Fresh year
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate Student

3. Age bracket :
 - a. 18 – 25
 - b. 26 – 35
 - c. 36 – 45
 - d. 46 – 55
 - e. 56 – 65
 - f. 66 – 75
 - g. Above 75

4. Where do you currently live?
 - a. On-campus
 - b. Off-campus

5. Gender
 - a. (enter which you identify best with)

6. What racial or ethnic group best describes you?
 - a. White

- b. Black
- c. Hispanic
- d. Asian
- e. Native American
- f. Mixed
- g. Middle Eastern
- h. Other

7. The United Nations has adopted the definition of sustainability from the Brundtland Report in 1987 as “ ... *development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*”

How familiar are you with the term sustainability?

- a. Very familiar
 - b. Somewhat familiar
 - c. Neutral
 - d. Somewhat unfamiliar
 - e. Not at all familiar
8. The The Earth Observatory unit of the National Aeronautics and Space Administration (NASA), defines Global warming as “... *the unusually rapid increase in Earth’s average surface temperature over the past century primarily due to the greenhouse gases released by people burning fossil fuels.*”

How familiar are you with the term global warming?

- a. Very familiar
- b. Somewhat familiar
- c. Neutral
- d. Somewhat unfamiliar
- e. Not at all familiar

9. How would you describe your interest in sustainability?
- Very enthusiastic
 - Somewhat enthusiastic
 - Neutral
 - Somewhat against
 - Very against
10. How concerned are you about global warming?
- Very concerned
 - Somewhat concerned
 - Neutral
 - Somewhat unconcerned
 - Very unconcerned
11. How much do you think global warming will harm you personally?
- A great deal
 - Somewhat affected
 - Not sure
 - Somewhat not affected
 - Not at all affected
12. How much do you think global warming will harm future generations?
- A great deal
 - Somewhat affected
 - Not sure
 - Somewhat not affected
 - Not at all affected
13. I like to help make a difference on environmental issues like minimizing waste, water usage, resource consumption, and energy use.
- Always

- b. Often
- c. Sometimes
- d. Rarely
- e. Never

14. I like sharing information on sustainability issues by recommending supportive activities that promote the environment, human health, and wellness.

- a. Always
- b. Often
- c. Sometimes
- d. Rarely
- e. Never

15. How would you describe your financial situation (or those who financially support you e.g. parent, guardian, etc.)

- a. Very comfortable
- b. Somewhat comfortable
- c. Neutral
- d. Somewhat struggling
- e. Struggling

16. How convenient is it for you to practice sustainable waste management (e.g., easily accessible recycle points)?

- a. Very convenient
- b. Somewhat convenient
- c. Neutral
- d. Somewhat inconvenient
- e. Very inconvenient

How do you feel about the following policies

17. A policy that would allow more drilling of crude oil and support the manufacturing industry, provide well-paying jobs, and boost the economy, but potentially release more harmful gases that cause global warming.

- a. Agree
- b. Somewhat agree
- c. Neutral
- d. Somewhat disagree
- e. Disagree

18. A policy that would encourage electric vehicles that have zero carbon emissions but potentially lead to the loss of jobs and companies in the crude oil and natural gas industry.

- a. Agree
- b. Somewhat agree
- c. Neutral
- d. Somewhat disagree
- e. Disagree

19. At home or in school, how would you rate your sustainable behavior? (1 = Never, 3 = Sometimes, 5 = Always).

Switch off lights every time I leave a room or when not needed	1	2	3	4	5
Only use the washing machine when I have at least a full load of clothes	1	2	3	4	5
Close the sink tap when brushing my teeth	1	2	3	4	5
Limit time in the shower to 7 minutes or less	1	2	3	4	5
Often use a reusable water bottle, coffee cup, etc.	1	2	3	4	5
Drink tap water instead of bottled	1	2	3	4	5
Read documents on-screen rather than printing them out	1	2	3	4	5
Print documents double-sided instead of one-sided	1	2	3	4	5
Use public transportation rather than drive own car	1	2	3	4	5

Walk or ride a bicycle rather than drive a car for short distances	1	2	3	4	5
Share a ride with a friend if convenient than drive your own car (Carpooling)	1	2	3	4	5
Take part in a recycling program	1	2	3	4	5

20. How would you describe your overall attitude towards sustainability?

- a. Very Positive
- b. Somewhat Positive
- c. Neutral
- d. Somewhat Negative
- e. Very Negative

21. How important do you think sustainability is to your overall well-being (i.e environment/health, Social, Economic)?

- a. Very Important
- b. Somewhat Important
- c. Neutral
- d. Not very Important
- e. Not at all Important

22. How strongly do you feel about your commitment towards sustainability?

- a. Very strongly
- b. Somewhat strongly
- c. Neutral
- d. Somewhat Weakly
- e. Very Weakly

23. Rate the following on a scale of 1 to 5 (1 = Not at all, 3 = Somewhat, 5 = very).

Does your knowledge on sustainability influence your daily sustainable practices?	1	2	3	4	5
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Does your perception on sustainability influence your daily sustainable practices?	1	2	3	4	5
Does your financial situation influence your daily sustainable practices?	1	2	3	4	5
Does inconvenience (e.g. lack of opportunities to recycle) influence daily your sustainable practices?	1	2	3	4	5
Does your policy orientation influence your daily sustainable practices?	1	2	3	4	5

24. On a scale of 1 –10, rate how much you practice sustainability in your everyday activities (1 = Not at all – 10= very much).

25. How would you describe your political party affiliation?

- a. Strong Republican
- b. Leaning Republican
- c. Moderate
- d. Leaning Democrat
- e. Strong Democrat
- f. Other: _____

**Your inputs are very important and we appreciate your time and thoughts.
Thank You!**

Appendix B

IRB Form

Form A

For IRB use only
IRB File No.: _____
Date received: _____

Eastern Illinois University
 Institutional Review Board

NEW APPLICATION FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS

Federal regulations and Eastern Illinois University’s IRB policy require that all research involving humans as subjects be reviewed and approved by the University’s Institutional Review Board (IRB) prior to the commencement of the data collection. Approval of this project by the IRB only signifies that the procedures adequately protect the rights and welfare of the subjects.

Title of Project:	Assessing the knowledge on sustainability and barriers to daily sustainable practices among faculty and students in Higher Education. The case of Eastern Illinois University
Principal Investigator*:	Joel Edem Holison
*Note: Students engaging in research are required to have a faculty sponsor or executive, administrative, or professional (EAP) staff sponsor. List sponsor below.	
Status:	Graduate Student
Mailing address:	11 Bloomfield University Court, Eastern Illinois University, 61920, Charleston, IL,
Phone:	2172180559
Email:	jeholison@eiu.edu
Department or Unit:	School of Technology
Has PI completed CITI training?	Yes, CITI Training Completed
Prior to IRB approval, all PI’s, Co-PI’s, and sponsors must complete the CITI Program training	
Co-Investigator:	Nicole Hugo
Status:	Faculty Sponsor
Mailing address:	600 Lincoln Ave., Lumpkin 3108, Charleston, IL 61920
Phone:	2175818595
Email:	nhugo@eiu.edu
Department or Unit:	Hospitality and Tourism Management

Has Co-PI completed CITI training?	Yes, CITI Training Completed
---	------------------------------

*List additional co-investigators, including above information, on a separate sheet.

Level of Review Sought: Exempt (submit Form B) Expedited (submit form C) Full Committee

Is this research being conducted to meet requirements of a course or to complete an academic degree?

Yes (do NOT submit your dissertation or thesis proposal) No

Estimated Project Start Date: 10/3/2022
12/16/2022

Estimated Project Completion Date:

Extramural Funding:

Principal Investigator of Contract or Grant:	Click or tap here to enter text.
Funding Source:	Click or tap here to enter text.
Contract or Grant Title:	Click or tap here to enter text.
Contract or Grant Number:	Click or tap here to enter text.

Indicate the categories of subjects and controls to be included in the study: Check ALL that apply:

- | | |
|--|---|
| <input type="checkbox"/> Abortuses/Fetuses | <input checked="" type="checkbox"/> Normal Volunteers |
| <input type="checkbox"/> Decisionally Impaired | <input type="checkbox"/> Patients |
| <input type="checkbox"/> Decisionally Impaired (Institutionalized) | <input type="checkbox"/> Pregnant Persons |
| <input type="checkbox"/> Minors (17 yrs or less) | <input type="checkbox"/> Prisoners |
| Give age range: Age Range | <input checked="" type="checkbox"/> Students |

Approximate number of human subjects: 250 - 300

Indicate which of the categories listed below accurately describes this protocol:

- Not greater than minimal risk
- Greater than minimal risk, but presenting the prospect of direct benefit to individual subjects
- Greater than minimal risk, no prospect of direct benefit to individual subjects, but likely to yield generalizable knowledge about the subject's disorder or condition
- Research not otherwise approvable, but presents an opportunity to understand, prevent, or alleviate a serious problem affecting the health and welfare of subjects

Does this research involve any of the following? (Check all that may apply)

- Past, present, or future physical health of the participants
- Mental health (as defined in DSM-V TR)
- Provision of health care to the participants
- Past, present, or future payments for the provision of health care to the participants

If any of the above categories are checked, please refer to Appendix 4, HIPAA Information, in the EIU Policy and Procedures for the Review of Research Involving Human Subjects

Will a public use data file be created? Yes No

Complete all items in the following Research Description section.

Investigator Assurance

I certify that the information provided for this project is correct and that no other procedures will be used in this protocol. I agree to conduct this research as described in the attached supporting documents. I will request approval from the IRB for changes to the study's protocol and/or consent forms and will not implement the changes until I receive IRB approval for these changes. I will comply with the IRB policy for the conduct of ethical research. I will promptly report significant or adverse effects to the IRB in writing within 5 days of occurrence. I will be responsible for ensuring that the work of others involved with this project complies with this

protocol. I will complete, on request by the IRB, the Continuation Request or Completion of Research Activities Forms.

Principal Investigator's Signature _____ Date _____

Faculty or EAP Staff Sponsor Assurance (required when a student is the PI)

This is to certify that I have reviewed this research protocol and that I attest to the scientific merit of this study and the competency of the investigator(s) to conduct the project. I assure that the investigator(s) is knowledgeable about the regulations and policies governing research with human subjects. I agree to meet with the investigator on a regular basis to monitor study progress and compliance with IRB policy for the conduct of ethical research.

Faculty or EAP Staff Sponsor's Signature _____ Date _____

RESEARCH DESCRIPTION

Provide responses to each of the following items. All items require a response unless otherwise indicated.

<p><u>PROJECT DESCRIPTION:</u></p> <p>1. Provide a brief description in layperson's terms of the proposed research. Include the purpose and research questions/hypotheses.</p>
<p>This study seeks to assess the knowledge on sustainability and further investigate the barriers to daily sustainable practices among faculty and students at Eastern Illinois University. The study would go on to propose ways of dealing with the barriers identified.</p> <p>Research Questions</p> <ul style="list-style-type: none">• How knowledgeable are EIU students and faculty on the subject of sustainability and global warming?• Do EIU students and faculty sustainability knowledge levels impact their implementation of sustainable practices in their daily life?

- Is a lack of sustainability awareness a barrier to daily sustainable behaviors among EIU students and faculty?
- Is poor perception of sustainability a barrier to daily sustainable behaviors among EIU students and faculty?
- Are financial situations a barrier to daily sustainable behaviors among EIU students and faculty?
- Is inconvenience a barrier to daily sustainable behaviors among EIU students and faculty?

DISSEMINATION:

2. Describe how the results of the research will be disseminated. Dissemination includes, but is not limited to: honor's, master's or doctoral theses; presentation at a scientific/professional meeting or conference; submission to or publication in a scientific/professional journal (paper or electronic); and internet postings.

- Master thesis
- Publication in a journal
- Presentation at a scientific conference

METHODOLOGY:

3. **PARTICIPANTS:** Describe the characteristics (e.g., age, gender, ethnicity, health status) of the subject population whom you are targeting and the approximate number of participants. Provide exclusion and inclusion criteria. Will there be any special populations (see 45 CFR 46, subparts B, C, and D), such as children, mentally incapacitated individuals, prisoners, or others whose ability to give voluntary informed consent may be in question included? If yes, explain the rationale for their inclusion.

The faculty and students on the campus of Eastern Illinois University, excluding any individuals 17 or younger

4. **RECRUITMENT:** Describe how you will identify and recruit prospective subjects.

Attach a draft or final copy of any planned advertisements, flyers, letters, and emails to potential subjects.

Faculty and students would be notified through email to complete an online survey. Students and faculty would also be sampled with appropriate consent and permission.

Email Example

Hi there,

You are invited to take part in a research study to assess the knowledge on sustainability and barrier barriers to daily sustainable practices among faculty and students at Eastern Illinois University. This study is being conducted by Joel Holison, a second-year graduate student at EIU under the supervision of Dr. Nichole Hugo, Graduate Coordinator for the Sustainability program.

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*Hospitality & Tourism Department and Graduate Coordinator for the Sustainability master's degree program, Eastern Illinois University
Telephone: 217-581-8595; Email address: nhugo@eiu.edu*

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Institutional Review Board

Eastern Illinois University

600 Lincoln Ave.

Charleston, IL 61920

Telephone: (217) 581-8576

E-mail: eiuirb@eiu.edu

This study has been approved by the Eastern Illinois University Institutional Review Board (IRB xx-xxx)

.

5. LOCATION OF STUDY: Identify specific sites or agencies to be used. For research conducted online (e.g. surveys, interviews), indicate the platform to be utilized, the agency(s) where participants will be recruited from (if applicable), and the physical location of the participant and investigator, when possible.

For research conducted at a facility other than one owned and operated by Eastern Illinois University, additional information is required (see 5a and 5b).

This study will be conducted on the campus of EIU.

5a. If study **will not** be receiving federal funds:

<p>If the research project will not receive federal funds, a letter from the appropriate administrator of each facility should be submitted on the facility's letterhead stationary and should contain the following: agreement for the study to be conducted; identification of someone at the site who will provide information about appropriateness for its population; assurance of adequate capabilities to perform the research as approved by the IRB; and if applicable, assurance that facility personnel involved in data collection have appropriate expertise and will follow IRB approved procedures. <i>For exempt research, a letter from the administrator is only needed when children are directly involved.</i> If the approval letters are not available at the time of IRB review, IRB approval will be contingent upon receipt of the letters.</p>
<p>N/A</p>
<p>5b. If study will receive federal funds:</p> <p>If the research project receives federal funds from an agency such as the National Institutes of Health (NIH), each study site must have a Federal Wide Assurance (FWA) with the Office for Human Research Protections (OHRP). FWAs are a requirement of OHRP or NIH and not EIU's IRB or EIU's Office of Research and Sponsored Programs. EIU has negotiated a FWA. Contact ORSP for the information to enter on the funding agency's application form regarding FWA documentation. If the study is a collaborative project and another organization in addition to EIU is engaged in human subjects research (as defined by DHHS), then the PI must obtain information on the other organization's FWA and provide it in this section of the EIU application. A search for another organization's FWA may be found at OHRP's web site, http://ohrp.cit.nih.gov/search/asearch.asp#ASUR.</p>
<p>N/A</p>
<p>6. INSTRUMENTS, RESEARCH MATERIALS, RECORDS, & PROCEDURES:</p> <p>Attach a copy of all questionnaires, tests, surveys, or other materials to be administered to the subjects, if applicable.</p>
<p>a. Describe the study design and research procedures that will be followed. Identify all procedures that will be carried out with each group of subjects.</p>
<p>Faculty and students will be emailed the questionnaire to complete and the results will be analyzed in a way that will keep the respondents anonymous.</p>
<p>b. Describe the setting and mode of administration (e.g., group, telephone, individual)</p>
<p>The collection would be distributed online through Qualtrix.</p>

c. Describe the duration of administration, intervals of administration (if multiple administrations), and overall length of participation.
Filling out the questionnaire should take about 10-15 minutes.
d. Identify the sources of research material (e.g., specimens, records, data) to be obtained from subjects. Indicate whether the material or data will be obtained specifically for research purposes or whether use will be made of existing specimens, records, or data.
Demographics and personal views would be taken from respondents and would be used only for research purposes.
e. If applicable, differentiate between procedures that involve standard or routine procedures for care or treatment from those which will be performed specifically for the conduct of this research project.
N/A
7. DATA COLLECTION, STORAGE, AND CONFIDENTIALITY:
a. Describe how data will be collected and recorded.
<ul style="list-style-type: none"> The data obtained will be digital and securely saved on the researcher's personal hard drive.
b. State whether data will be recorded with or without names or identifiers. If subjects are identifiable by name or other means, explain special steps that will be taken to ensure confidentiality.
<ul style="list-style-type: none"> Participants will be identified by their campus status (faculty or student), age group, gender, and school year (if student). Individual information, such as name and campus id numbers, that directly link forms to respondents will not be collected.
c. Describe how data will be stored during the study and how it will be secured. Delineate who will have access to the data or to subject identifiers.
<ul style="list-style-type: none"> The data obtained will be digital and securely saved on the researcher's personal hard drive.
d. Describe what will happen with data from subjects who formally withdraw from the study.
<ul style="list-style-type: none"> The data of respondents who withdraw from the study will be permanently deleted.

<p>e. Describe how data will be stored when the research has been completed. [Note: Records (e.g., signed informed consent forms, data) relating to the research project must be retained for at least three years after completion of the research. See 45 CFR 46.115(b)]</p>
<ul style="list-style-type: none"> • The data obtained will be digital and securely saved on the researcher's personal hard drive.
<p>f. Recordings (when applicable): If all or some of the subject(s) of the proposed research will be audio or videotaped, justify why the use of audio or videotaping is necessary to the study. Who will have access to the tapes and for what purposes? Where will the tapes be stored and what security measures will be taken to prevent unauthorized persons from accessing the tapes? What are your plans for the ultimate use and disposal of the tapes?</p>
<p>N/A</p>
<p>8. INFORMED CONSENT: Describe the informed consent procedures to be followed, including circumstances under which consent will be sought and obtained, who will seek it, and the method for documenting consent. Include applicable informed consent forms for review purposes.</p> <p>If the informed consent process is to be waived, or if written consent or a signed informed consent is not to be obtained, specifically point this out and complete and submit Form I, Request for Waivers of Informed Consent [see 45 CFR 46.116(e)(f) and 45 CFR 46.117(c)].</p> <p>Special Considerations:</p> <p>Minors: If the study involves minor participants (17 years of age or under), describe the process for obtaining parent permission, and include the parent informed consent form. Also describe the child assent process (written assent may not be required in every case).</p> <p>On-line Research: If the research is to be conducted completely on-line (such as surveys or questionnaires administered via the internet or email), it may be possible to waive the written documentation of informed consent. Complete Form I, Section B, to request a waiver.</p>
<p>Documented Consent:</p> <ul style="list-style-type: none"> • Prior to filling out the questionnaire, the respondent will have to indicate their consent before continuing with the questionnaire.
<p><u>RISKS/BENEFITS:</u></p> <p>9. RISKS: Describe the short-term and long-term potential risks (physical, psychological, social, legal, or other) to subjects and assess their likelihood and seriousness. Where</p>

appropriate, describe alternative treatments or procedures that might be advantageous to the subjects.
<ul style="list-style-type: none"> • There is no significant foreseeable risk associated with this study. However, it is included in the consent form that participants can stop and withdraw anytime from the study without any repercussions.
10. SAFETY PRECAUTIONS: Describe the procedures for protecting against or minimizing any potential risks, including risks to confidentiality. Where appropriate, discuss provisions for ensuring necessary medical or professional intervention in the event of adverse effects to the subject(s) and attach a referral list. Also, where appropriate, describe the provisions for monitoring the data collected to ensure the safety of subjects.
<ul style="list-style-type: none"> • Contact information for the researcher and IRB will be provided on the form in case there are any negative effects and a respondent is seeking any additional resources.
11. BENEFITS: Describe the potential direct benefits subjects may receive as a result of participating in this research (this does not include incentives for participation). Describe the potential benefits to society that may be expected from this research.
<ul style="list-style-type: none"> • The findings of this study will aid in identifying the barriers to daily sustainable practices among key stakeholders (faculty and students) on the Eastern Illinois University campus. • The findings can also be generalized to understand what prevents members of society with similar demographics from practicing sustainability in their daily lives. • The study would recommend solutions to the identified barriers.
12. BENEFITS VS. RISKS: Discuss why the risks to subjects are reasonable in relation to the anticipated benefits to subjects and in relation to the importance of the knowledge that may reasonably be expected to result.
<ul style="list-style-type: none"> • The research does not address any private information that might put the subject at any risk. • The benefit of the study is that it will help in addressing the barriers to people improving their practice of sustainability in their daily lives.
13. INCENTIVES AND RESEARCH RELATED COSTS: Describe the incentives, if any, being offered to subjects for their participation in the research study. If monetary compensation is offered, indicate how much subjects will be paid and describe terms of payment. Describe what will be done if subjects withdraw before completion of the research (e.g., will monetary payments be prorated or payment in full?). If applicable, describe any costs which will be accrued by the subjects as a consequence of participating in the research.

- This study will not include any incentives. Every participant will be a volunteer.

QUALIFICATIONS OF INVESTIGATORS:

14. Briefly describe the qualifications of the investigators(s) conducting this research project.

- A graduate student undertaking his second quantitative research study in his curriculum.
- The faculty advisor has a Ph.D. and has been working with graduate students on their research projects for 8 years.

IMPLICIT BIAS AND DIVERSITY, EQUITY, AND INCLUSION (DEI):

15. Regardless of the study's focus, describe what processes are in place to ensure that all aspects of the study are inclusive in nature and do not potentially harm members of a marginalized community (such as women, non-binary persons, people of color, people of varying ages and abilities, etc.). For example, use of gender inclusive language in survey recruitment and questions; providing an accommodation for participants with differing abilities, etc.

- Respondents would fill out an open-ended gender field to indicate whichever gender they identify with. This increases inclusivity.

OTHER (Provide information regarding the following if applicable):

16. DATA SAFETY AND MONITORING FOR NIH SPONSORED RESEARCH: The National Institutes of Health policy requires that grantees have in place procedures for data safety monitoring of clinical trials. The IRB is required to review and approve the data safety monitoring plans. For NIH funded clinical trials, include a description of the Data Safety Monitoring Plan.

N/A

17. Describe any requirements imposed by funding agencies that are not already covered in this application.

N/A