The Effect of Pro-Sustainable Perception on Sustainable Lifestyle: Evidence from Sustainability Training Initiatives of the Egyptian Ministry of Planning

Dr. Mayar Farrag Singab Elsayed
Associate Professor at Egyptian Chinese University
mfarrag@ecu.edu.eg

Dr. Manal Elsayed Abdelhamid Shabat
Assistant Professor at Egyptian Chinese University
manalelsayed@feps.edu.eg

Abstract

Purpose-This study explores how Pro-sustainable Perception influence individuals' sustainable lifestyle through the mediation of sustainable intention. The study investigates what drives people to show a willingness to transform their lifestyle into a sustainable one. To accomplish this goal, this research explained how perceived consumer effectiveness (PCE), perceived behaviour control (PBC) sustainable concern (SC) and sustainable knowledge are considered as the driving force for pros stainable perception. the sample chosen were those exposed to multiple sustainable programs provided by the ministry of planning. examples of which were "be an ambassador", the road to COP 27 simulations, and others.

Design/Methodology- this study tested the variables relationship with the data collected by a online questionnaire distributed to a sample that consists of 192 from those who were exposed to the sustainability training programs and initiatives.

Findings– The results revealed that the most influencing variables determining the pro-sustainable perception where the perceived consumer effectiveness, and the sustainable knowledge they had direct significance to the sustainable lifestyle. The perceived consumer control, the perceived consumer effectiveness and sustainable expertise had a significant relation with sustainable

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lifestyle behaviour mediated by the sustainable intention, while sustainable concern had no significance.

Originality/value – investigating pro-environmental behaviour from the public perspective is relevant for both public policy and marketing in general. From a public policy perspective, citizens – as members of society – are important stakeholders in the environmental sustainability movement. So, the research provides a new concept for sustainability which is Pro- sustainable Perception from a multidisciplinary point of view. On the other hand, the study is focusing on sustainability as a part of the SDGs and its plan for 2030. Therefore, they are launching several initiatives from many governmental entities like the one of "be an ambassador" of the ministry of planning and economic development.

Key words– Sustainable intention, Environmental concern, Pro-sustainable knowledge, sustainable lifestyle, sustainability initiatives, SDGs.

Paper type- Research Paper.

الملخص:

الغرض– تستكشف هذه الدراسة كيف يؤثر الإدراك المؤيد للاستدامة على نمط حياة مستدام للأفراد من خلال وجود النية المستدامة، كما تبحث الدراسة فيما يدفع الناس لإظهار الرغبة في تحويل نمط حياتهم إلى نمط حياة مستدام. لتحقيق هذا الهدف ، أوضح هذا البحث كيف تعتبر فعالية المستهلك المدركة (PCE) ، والتحكم في السلوك المدر (PBC) ، والاهتمام المستدام (SC) والمعرفة المستدامة القوة الدافعة لإيجابيات الإدراك المستدام . كانت العينة المختارة هي أولئك الذين تعرضوا لبرامج تدريبية متعددة عن التنمية المستدامة والمقدمة من وزارة التخطيط والتنمية الاقتصادية المصرية. ومن الأمثلة على ذلك "كن سفيرا"، والطريق إلى محاكاة27 COP، وكن سفيرا ...غيرها.

التصميم/ المنهجية– اختبرت هذه الدراسة علاقة المتغيرات بالبيانات التي تم جمعها بواسطة استبيان عبر الإنترنت تم توزيعه على عينة مكونة من ١٩٢ من أولئك الذين تعرضوا لبرامج ومبادرات التدريب على الاستدامة .

النتائج – كشفت النتائج أن المتغيرات الأكثر تأثيرا التي تحدد التصور المؤيد للاستدامة حيث كان لفعالية إدراك المواطن أو المستهلك والمعرفة المستدامة أهمية مباشرة لنمط الحياة المستدام. فالتحكم المدرك لدى المستهلك وفعالية المستهلك المدركة، والخبرة المستدامة لها علاقة هامة بسلوك نمط الحياة المستدام مع توافر النية تجاه السلوك المستدام أو الرغبة في ممارسته ، في حين أن الاهتمام المستدام ليس له أهمية.

الأصالة/ الإسهام العلمي– التحقيق في السلوك المؤيد للبيئة من منظور عام له صلة بكل من السياسة العامة والتسويق بشكل عام، من منظور السياسة العامة ، يعد المواطنون – كأعضاء في المجتمع – من أصحاب المصلحة المهمين في حركة الاستدامة البيئية. لذلك ، يقدم البحث مفهوما جديدا للاستدامة وهو الإدراك المؤيد للاستدامة من وجهة نظر متعددة التخصصات. من ناحية أخرى ، تركز الدراسة على الاستدامة كجزء من أهداف التنمية المستدامة وخطتها لعام ٢٠٣٠. لذلك ، فإنهم يطلقون العديد من المبادرات من العديد من الجهات الحكومية مثل مبادرة "كن سفيرا" لوزارة التخطيط والتنمية الاقتصادية.

الكلمات المفتاحية: البنية المستدامة، الاهتمام البيئي، المعرفة المؤيدة للاستدامة، نمط الحياة المستدام، مبادرات الاستدامة، أهداف التنمية المستدامة.

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INTRODUCTION

As the world population continues to increase, sustainability is becoming critical. In the domain of natural assets management and protection, the challenge is to direct human behavior and to achieve the goals of green growth for societies as there is a growing belief that human conduct strongly affects the environment. Hence, it is significant to define the tools that guide human attitudes to face these challenges. Providing information on why individuals initiate pro-environmental behavior (PEB) becomes critical for decision makers and researchers to determine the solutions to sustainability challenges which requires the transformation of individuals attitudes. (Islam,M. Managi, S., et al.2019,126). In 2015, the United Nations released the 2030 Agenda for Sustainable Development which included 17 sustainable development goals (SDGs). These goals address the challenges of the century and invite all countries to put these goals into action to ensure sustainable life for all people across the world. To accomplish these goals, it requires joint cooperation from governments, non-governmental organizations, academic institutions, civil society, and individuals at all levels as well. (Hübscher, C. et al. 2021,77). Recently, different terms of sustainability such as environmental awareness, climate change, sustainable behaviour are used aggressively due to the growing concern of environmental issues related to human behaviours. This increasing interest leads people to change their behavior to be more sustainable lifestyle behaviors. Hence, pro-environmental behaviour becomes one of the most dominating topics to be investigated (Yusliza, M., et al., 2022:2). Pro-environmental behaviours are those behaviours that are environmentally friendly which is why it is sometimes called as environment friendly behaviour, ecological behaviour, environmentally related behaviour, environmentally significant behaviour, responsible environmental behaviour according. Pro-

environmental behaviour was described as those behaviours that could result to reduction of the negative effect of people on our physical environment. It could also be described as every voluntary action taken by individuals in protecting our natural and physical environment. Pro-environmental behaviours are not only practiced at workplace (public pro-environmental behaviour) but it could as well be practiced at home (private pro-environmental behaviour). (Sule, O. Eniola, et al. 2022,112). Pro-environmental behaviour is an effort by individual aimed at reducing the negative effect because of destruction of natural phenomenon by simply preserving, protecting, and improving the environment. gave a broad definition of PEB as any behaviour that convert available energy and or materials or energy offered by the environment as well as altering the dynamics and or structure of atmosphere or environments. (Sule, O. Eniola, et al. 2022,115). Pro-environment behaviours such as using products with recyclable packs instead of those associated with single-use plastics contribute to a safe and clean society. Similarly, the consumption of products and services that are environment-friendly benefits the sustaining essential services that are a part of enhancing the revenue of businesses that contribute to community design projects. The import of the above examples is that people would endorse PEB because of its protective influence on the environment. (Opuni, F. et al. 2022:3).If individuals' intention become ecologically friendly, they would engage in pro-sustainable knowledge that will contribute to environmentally sustainable lifestyle behavior by increasing the sustainable intention (Yusliza, M., et al., 2022:2).
Sustainable lifestyles are important for social and ecological transformation towards sustainability. It refers to the possibility of flourishing human and other life on the planet forever. However, major changes are needed to achieve this goal (Böhme, J. et al., 2022,2063). This responsible behaviour is expected to be engaged by highly educated individuals with deep environmental knowledge. Pro-environmental behaviour is influenced by distinctive factors, including environmental commitment. green lifestyle or pro-environmental lifestyle, self-efficacy, environmental awareness, and goal-framing differences (Yusliza, M., et al., 2022:2). Sustainable Environmental knowledge includes the general knowledge of facts,

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interactions, and concepts that concerns people's knowledge about how the products are made, their environmental impact, and the needed responsibility for long-term development, comprehensive awareness, friendly attitudes, and the intention to be greeny. There is a strong link between environmental awareness and sustainable behavior. If people are offered knowledge on the effects and causes on the sustainability, their level of awareness will rise, and they will likely choose sustainable lifestyle. (M.A.S. Khan, J. Du, H.A. Malik et al. 2022:2). However, recent studies proved that environmental consciousness turns into real changes in people behaviors. For this reason, it is important to promote pro-environmental behaviors for people through studying the influence of the pro-sustainable knowledge they have from different provided initiatives on their intentions to change their behaviors into sustainable lifestyle ones. (De Canio,F. 2021:1313) . Pro-environmental behaviours (PEBs) are a multi-dimensional phenomenon with multiple mental, social, and affective processes. Some studies explore the reasons behind the gap between individuals' environmental perceptions like (values, beliefs, concerns, attitudes) and their actual behaviors, and found that PEB was initially depended on the impacts of the behaviours that contribute to sustainable use of natural resources, but lately started to focus on the environmental consciousness which affected the people sustainable actions and practices (Nascimento,J. et al.2022:2). PEB, by this meaning is a conscious action people take to minimise the negative impact of their activities on the environment. (Opuni, F. et al. 2022:1). Egypt launched its Sustainable Development Agenda "Egypt Vision 2030" in 2016. the Ministry of Planning and Economic Development released different initiatives that aim to disseminate the culture of comprehensive and sustainable development through organizing a series of training courses and programs for various groups of the Egyptian society in partnership with the National Institute for Governance and Sustainable Development (NIGSD). It also provides Egyptian youth with the needed skills to apply the basics of integrated and comprehensive development of sustainability on the ground. (https://sdgs.un.org/partnerships). Hence, this topic has its specific implications for policymakers responsible for environmental sustainability initiatives, policies, and business managers responsible for pro-environmental and environmentally

sustainable strategies and those who are within the field of public policy and marketing.

RESEARCH PROBLEM

To promote pro-environmental behaviour, training centres are expected to play a significant role, since individual behavioural change can be easily adopted by young generations. In this ccontext education, environmental knowledge should be provided by organizations which are interested in having pro-environmental shifts due to their sustainability goals. To realize the sustainability goals, it is a need to promote people's personal behaviours from a young age by exposing them to environmental issues in training centres initiatives to determine whether the ecological behaviours were prompted by the pro-sustainable perception provided by these initiatives or not. Thus, the focus of this study is the personal Sustainable Lifestyle) as a result of pro-sustainable perception provided by these organizations. In this regard, The Egyptian planning and Economic Development ministry in cooperation with the National Institute for Governance and Sustainable Development (NIGSD) and other stakeholders have launched some initiatives that aim to build national abilities in the field of sustainable development through a series of training courses such as; Be an ambassador, Hayat Karima, and Road to COP 27. Its main goal is to ensure that the sustainability culture will disseminate knowledge about sustainable development provided by several governmental initiatives. Hence, the main research problem is how to ensure that the pro-sustainability perception acquired by the targeted groups will be translated into actual practice. As to ensure that this culture is systematically practiced in society, this requires firstly to measure their sustainable intention and sustainable lifestyles after delivering such sustainability training programs. So, it is expected that Factors like perceived behaviour effectiveness, perceived behaviour control, sustainable concern, sustainable knowledge could be measured to determine the

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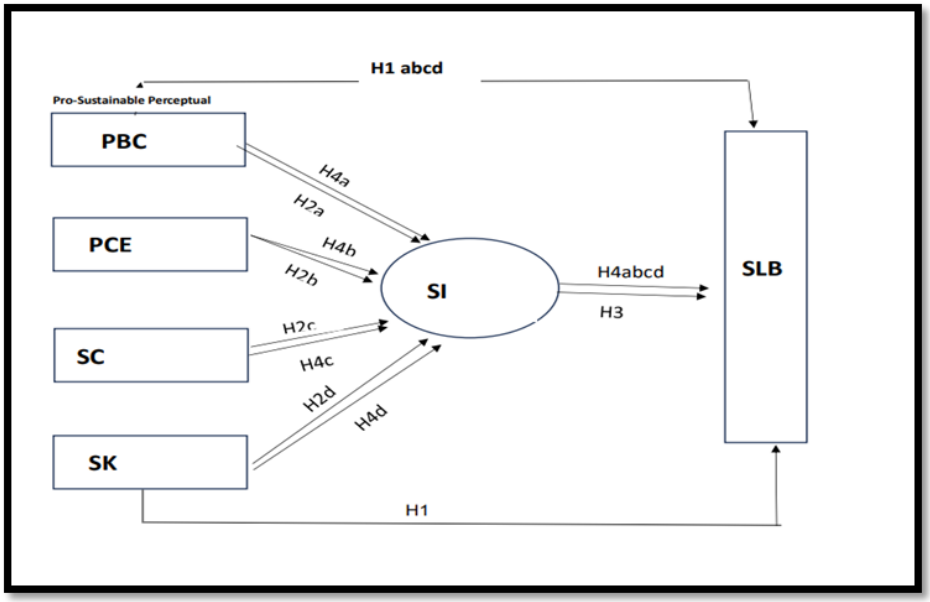
effect of pro-sustainable perception on sustainable lifestyle by the mediator effect of sustainable intention as showed in figure (1).

RESEARCH OBJECTIVES

The aim of this research is to create a pro environmental ecosystem that is important for sustainable growth and development needed to embrace sustainable behaviours of Egyptian citizen. This could be done by disseminating knowledge about sustainable development provided by several governmental initiatives. To achieve this main aim there are some objectives which are: Establish the relationship between providing a pro- sustainable perception and enhancing the intention to sustainable lifestyle behaviour; Understand to what extent sustainable governmental initiatives affected those who were provided sustainable knowledge through sustainability training programs; Examine the linkages between Pro-sustainable behaviour and Perceived behaviour control, sustainable knowledge, sustainable concern & Perceived consumer effectiveness.

Figure (1)



Conceptual Framework: Prepared by the authors

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT.

PRO- SUSTAINABLE PERCEPTION

Sustainability perception can be understood as humans' awareness of the environment. item response theory (IRT) assessed the sustainability perception. Sustainability is seen as an iterative process that includes multiple perspectives. Assessment of environmental awareness levels is becoming increasingly important because it allows knowing how a particular population perceives issues related to the environment and sustainability. However, measuring the perception of sustainability is not an easy task. sustainability consists of defining actions and activities that address the needs of present human beings without compromising the capabilities of future generations. It depends on the capability of human civilizations to be submitted to ecological system and make good use of nature. The developed measurement scale for sustainability perception can be employed by those responsible for local environmental governance in the development of initiatives and projects aimed at sustainable awareness and knowledge, with the goal of identifying alternatives to increase the perception levels of population. It can be used to promote awareness campaigns and environmental education to maintain the perception level of a certain population (Vincenzi, S. L.,2018:1370). Perception and sufficient abilities can activate people’s coping behaviour; thus, scarcity of natural resources represents a stressful situation to individuals. scarcity might be a stressor that can cause an increase in pro sustainable perception and accordingly an increase in Pro- Environmental Behaviour. however, perception of sustainability and resources scarcity lead to willingness and intention to adopt pro-environmental behaviour especially for people with a future orientation (Berthold, A. et al.2022:1-2). customers are aiming to implement the lifestyle shopping trend and be environmentally sustainable. The lifestyle defined earlier is an accumulation of patterns of behaviour, resource use, and consumption, as well as a choice about the best way to live (Vuong, Q.H.,2022:1). Other studies showed that the process of behaviour change toward sustainability does not correspond to a linear model in which ecological knowledge would lead to awareness, then directly to action as there are many

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internal and external factors associated with such as sustainable perception and intention of people to act eco-friendly (Mouchrek, M. et al. 2023:1). there are multiple factors influencing consumers' perception of sustainable products. Despite this, most studies focus on the effect of single factors and variables. According to the theory of reasoned action (TRA), individual behaviour is mainly determined by two factors, namely, the individual's attitude and social norms. Attitude represents the individual's propensity to engage in a certain behaviour, generated by a set of beliefs, insights, and knowledge. Social norms represent the influence of society through experts' opinions and norms and socially encouraged or discouraged behaviours (Camilleri, M. et al. 2023:2). Accordingly, the following hypotheses are proposed::

H1: pro-sustainable perception positively affects sustainable lifestyle.

H2: pro-sustainable perception positively affects sustainable intension.

H4. Sustainable intention positively mediates the relationship between pro-sustainable perception and sustainable lifestyle.

SUSTAINABLE INTENTION

Sustainability orientation dimensions, which include the commitment to ecological sustainability, affect sustainable intention. Environmental sustainability commitment influences intention, attitude, and behaviour. Sustainability intentions mediate the correlation between sustainability perception and sustainable behaviour. Sustainability behaviour (Sustainable lifestyle) and sustainability intention are very important for creating entrepreneurial society (Bapoo, M. A., et al. 2022). Sustainable development depends not only on governments and corporations engaging in but also most importantly, individuals engaging in behaviour that promotes and protects the long-term interests of environment and the society as developing responsible behaviour of individuals towards the environment is very important (Bai, G. et al.2020:3525). Sustainability includes three fundamental pillars: economic, social, and environmental (ecological). Sustainability is the key factor of success for many societies. These dimensions of sustainability must be included in the organization's strategy and people daily activities

and practices as well (Nour et al., 2020). Sustainable development, as a concept, ensures the necessity of balancing the intentions and actual behaviours to be sustainable as sustainable lifestyle influences sustainable intention of people (consumers). (Al-Haddad, S. et al. 2023:1). Starting from the mid-1990s, the distinction between the environmental and social dimensions of sustainability was made, inspiring a more consumer-oriented and more focusing on sustainable lifestyles. It was the rise of environmental psychology, addressing the effects of human activities in both social and environmental perspectives. The definition of sustainable lifestyle focuses on the decreases of negative impacts to the environment, such as reducing the use of natural resources across the lifecycle of products or services. (Nascimento, J. et al. 2021:3). The Norm activation theory is considered as one of the theories commonly used to study pro-environmental behaviour which consists of three elements for stimulating behaviour which are consequence awareness, individual norms, and ascribed responsibility. Adverse consequence awareness refers to the ability to know the potential negative impacts of those actions that are not pro-environmentally. Ascribed responsibility refers to that kind of obligation to those consequences are negative. personal norm is considered the main pillar of the norm activation theory because it is the major determinant of behaviour an individual commit to a definite behaviour. In addition, this theory explains how norm shapes values, attitudes, and beliefs affecting environmentally ethical behaviours through the development of knowledge and skills that enhanced participation in social and ecological issues. (Sule, O. Eniola, et al. 2022,114). Normative activation theory introduces a scientific theoretical explanation to the relationship between perceived environmental responsibility and individuals' pro-environmental behaviours. As individuals are likely to practice environmental activities when they feel responsible for those consequences harmful environmental consequences after recognizing these consequences. Hence, individuals who perceive environmental responsibility are more likely to involved in environmental actions, such as avoiding the use of disposable products (Wang, J.et al.2021:361). In cognitive psychology, intention is defined as the state of cognition that immediately prior to carrying out behaviour. it is

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also determined as the central variable in the TPB model (Vu, D. Manh, et al.2021:5). the researchers propose the following hypotheses:

H3: sustainable intention positively affects sustainable lifestyle.

PERCEIVED BEHAVIOUR CONTROL

The Theory of Planned Behaviour (TPB) by Ajzen (1985) aimed to predict pro-environment behaviours (PEB). TPB extended to include perceived behavioural control as a determining factor to explain the behaviour of individuals by including socio-demographics introduced new arguments for debate. This factor expresses the difficulty experienced by individuals in performing a certain behaviour (Camilleri, M. et al. 2023:2). A behaviour is performed after the individual has evaluated it as good, noticed that people or society call for this behaviour, and confirmed the person can perform the behaviour successfully. One of the main features of the theory is what is called behavioural control, which is measured by perceived self-efficacy and the ability to perform a task. Intentions to perform a behaviour are likely to result in the actual behaviour if people have self-efficacy or believe that they can enact the behaviour. An evaluation of a behaviour (referred to as attitude) strongly correlates with behavioural intention, which in turn correlates with the actual behaviour. (Opuni, F. et al. 2022:3). By this meaning, the theory of planned behaviour (TPB) explains how the intention to perform a certain behaviour influences actual behaviour and by the way accounts for various factors that influence the intentions formation. An intention refers to an individual's incentive to engage in certain behaviour and is influenced by the attitude towards the behaviour, perceived behavioural control (PBC), and the subjective norm. by this meaning, PBC affects the individual behavioural intention. PBC refers to whether the person will find it easy or difficult to perform the behaviour. If a person's behaviour is to be changed, behavioural intentions must also be changed. the TPB aims to explain that a person's intentions to behave in a certain way ultimately led to a certain behaviour. The intentions to behave are determined by a person's attitude, normative beliefs, and perceived behavioural control. Normative beliefs refer to the perception of social pressures to perform or not to perform a certain behaviour. Such pressures usually stem from people, organizations and similar entities that

surround the person (Shanmugavel, N., et al. 2023:2). The TPB is identified as a social cognitive model which explores how rational decisions are related to a consideration about benefits of the expected behaviours prior to actual behaviour which attempts to explore the cognitive determinants of behaviours, TPB has been widely applied to predict a variety of economic and special behaviours. A behavioural intention is posited to capture a person' decision to carry out in a particular way and represent his or her motivation to involve in the behaviour in question. In the TPB model, people take their behavioural intention inspired by three motivational antecedents, including attitudes toward the behaviour, subjective norms, and perceived behavioural control. (Vu, D. Manh, et al.2021:5).The TPB argued that behavioural attitude, subjective norms, and perceived behavioural control collectively determine an individual's behavioural intention, which in turn strongly predicts their actual behaviour. In addition, there is a positive correlation between behavioural attitude, subjective norms, perceived behavioural control, and behavioural intention. However, there is also a positive influence of behavioural attitude, subjective norms, and perceived behavioural control on the formation of behavioural intentions (Liao, C. et al. 2023:3).

Building on previous discussion, the researchers propose that:

H1a: perceived behaviour control positively affects sustainable lifestyle.

H2a: perceived behaviour control positively affects sustainable intention.

H4b: Sustainable intention positively mediates the relationship between perceived behaviour control and sustainable lifestyle.

PERCEIVED BEHAVIOUR EFFECTIVENESS

A main determinant of environmental behaviour is to what extend people perceive their contributions to be effective. the sense of connectedness to others is an important driver of the perceived effectiveness of one's actions. The more individuals feel connected to others, the more they believe that their actions have a substantial impact on the collective good. As a result, those who feel more connected are more likely to engage in environmental behaviour.

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Thus, understanding the determinants of the belief that one's contributions have an impact is essential for the promotion of environmental behaviour. A crucial factor in people's decision to act in a sustainable manner is the extent to which they believe that their actions make a difference. Therefore, understanding the determinants of that one's actions have an impact is essential for the promotion of environmental and sustainable behaviour (Cojuharenco, I. et al.2016:75). PCE can directly or indirectly shape individuals' perceptions and actions as it has a positive effect on individuals' intention. When individuals believe that their consumption choices can make a positive impact on the environment, they actively participate in such behaviours. thus, individuals with high PCE tend to be more confident in their ability to solve environmental problems. In addition, consumers with higher PCE are generally more environmentally conscious and ethically concerned. there is a positive relationship between PCE and individual attitudes toward engaging in environmentally friendly behaviour. This indicates that individuals who possess a higher level of PCE tend to exhibit more favourable attitudes toward adopting and supporting sustainable practices (Liao, C. et al. 2023:3). By this meaning, perceived consumer effectiveness (PCE) defined as a consumer's estimate of his or her ability to contribute to specific sustainable development-related outcomes through specific behaviours. PCE as a subjective estimate of a person's ability to make a difference rather than a measure of that person's objective effectiveness. An individual's actual ability to help achieve an outcome can be affected by various factors such as his own behavioural skills and knowledge related to the outcome domain and the consumer's confidence in being able to make a difference. (Hanss, D. et al. 2019, 3). The PCE positively correlated with sustainable behaviours. It is also a key determinant of socially responsible consumption and an important predictor of pro-environmental behaviour. (Kovacs, I. Keresztes, 2022: 4). Consumers' perceptions and behavioural intentions on sustainability issues are linked to perceived consumer effectiveness (PCE). PCE differs from perceived behavioural control according to TPB as PCE focuses on the role of the cognitive system's impact on an individual's emotions, involving their prediction of their ability to achieve a specific goal, and can help the individual construct a

positive self-perception system. Thus, PCE is prior to the behaviour intention and represents an individual's subjective judgment of their abilities. Thus, consumers' behavioural intentions will be stronger if they believe that their actions will benefit society more. PCE represents a domain-specific assessment of individual's capability to improve the environment. The higher level of PCE, the more positive the individual's behaviour and the increased and longer-lasting effort (Liao, C. et al. 2023:3). Hence, the following hypothesis can be developed:

H1b: perceived consumer effectiveness positively affects sustainable lifestyle.

H2b: perceived consumer effectiveness positively affects sustainable intention.

H4a: Sustainable intention positively mediates the relationship between perceived behaviour effectiveness and sustainable lifestyle.

SUSTAINABLE KNOWLEDGE

Several studies have adopted the TPB for green products and added other constructs, such as environmental concern, environmental knowledge, collectivism, long-term orientation, man nature orientation. Some have also adopted the TPB for specific green products, such as energy-efficient household appliances, skincare products and sustainable apparel. To the best of our knowledge, the effects of price sensitivity, availability and scepticism are being studied in relation to sustainable consumption intention and behaviour for the first time and since equal constructs can originate different effects on different kinds of green products, conclusions extracted provide new findings for academia. The effects of environmental apparel knowledge, awareness, perceived value and product attributes and variety were adapted for the sustainable consumption context. (Brandão, A. et al.2021:743).The drivers of pro-environmental behaviour are categorised into two main categories: cognitive and affective factors. Cognitive factors refer to an individual's attitudes, beliefs, and values that they get from environmental knowledge, environmental awareness, and environmental concern all these are vital cognitive factors that explain individuals' eco-friendly and

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responsible behaviour and decision. Affective factors on the other hand are the feelings individuals experience. Affective factors refer to feelings as a sense of acceptance by society (social value) and an emotional sense of doing good (emotional value). (Foroughi, B., et al. 2022:2). People often behave in an unsustainable manner due to the "attitudes-behaviour" gap or the "intentions-behaviour" gap due to the inconsistencies between attitudes and behaviour, which called the "green gap", are explained by multiple factors, such as poor perceptions and the absence of strong moral norms which hinder ethical consumption decisions. (Liu, H. et al. 2022:2). Sustainable knowledge is an influential factor that affect an individual's behavioural intention towards sustainable behaviours. Early studies have explained that environmental knowledge enhances the people understanding of the product and its significance to the environment. The relationship between sustainability knowledge and environmental behaviour is very important. Environmental knowledge's relationship with decision attributes identifies the different facets using knowledge. People with good environmental knowledge exhibit stronger intentions and behaviour to pursue sustainable environmental practices. (Shanmugavel, N., et al. 2023:2). Some studies showed that Environmental knowledge is an essential factor that increase an individual's behavioural intention towards sustainable products as environmental knowledge enhances the consumers' understanding of the product and its significance to the environment and is also an essential factor that significantly affects consumers' ecological behaviour. Environmental knowledge's relationship with decision attributes determines the different facets using knowledge. People with good environmental knowledge show stronger intentions and behaviour to pursue sustainable environmental practices. (Shanmugavel, N., et al. 2023:3). Earlier studies found that young individuals are more sensitive and responsive than older generations to accept new and innovative environmental ideas and that supporters of environmental protection tend to be younger in age There is also evidence that young consumers are interested in more sustainable behaviour as well. Overall, the general belief is that younger people are likely to be more sensitive to environmental issues. Moreover, when analysing consumer's consciousness related to the natural environment by age, it was found that children have usually more

environmental knowledge and higher levels of involvement with environmental protection compared to their parents. (Adnan, A.et al. 2017: 350). Attitudes and behaviours are gotten from education and life experience. pro-environmental behaviour could be seen as that pro-social behaviour of people within a particular community, group/team and/or organisation. They went further to stress it that pro-social behaviour ought to have impact that is enduring on the employees' well-being. private pro-environmental behaviour – purchasing, using and disposing personal products; and public pro-environmental behaviour– policies on pro-environmental, sharing of knowledge on environmental issues and encouragement of people to be involved in pro-environmental activities. It must be noted that when discussing either private or public pro-environmental behaviour, any of those mentioned examples can be the focus. (Sule, O. Eniola, et al. 2022,115). The expression of one's accountability towards a sustainable environment can be attributed to environmental responsibility. Protecting the environment could be seen by shouldering responsibility. As it is the responsibility, even corporations of all sizes strive to embrace environmental responsibility as a competitive advantage. the significance of environmental responsibility in purchase intention. (Shanmugavel, N., et al. 2023:3).

Thus our hypothesis will be as follows:

H1d: sustainable knowledge positively affects sustainable lifestyle.
H2d: sustainable knowledge positively affects sustainable intention.
H4d: Sustainable intention positively mediates the relationship between sustainable knowledge and sustainable lifestyle.

SUSTAINABLE CONCERN

Sustainable concern is defined as "'Individuals' commitment towards the environment to overcome the bad effects concerning natural resources". Similarly, the people increased environmental concern influences adoption intention. Hence, sustainable concern describes the consideration and awareness of environmental issues. Individuals can change their behaviour to be more environmentally friendly by becoming concerned about the environment. environmental concern

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can indirectly influence the behavioural intentions of people concerned with environmentally friendly products.in this regards environmental concern affects human behaviour. So, people with deeper environmental concern shows high intentions and behaviour towards sustainable environmental practices. (Foroughi, B., et al. 2022:3). The pressure of globalization has raised social concerns related to the sustainability, companies tended to use sustainability as a strategy to address their legal and social obligations. Over the past few years, a high concern has emerged about the physical sustainability issues and problems, such as environmental issues which has raised concerns regarding the planet and its ability to sustain humanity in the future (Papadopoulou, M., et al. 2021:351). Hence, Sustainable development has received more attention among academics, policymakers, and businesses. It comes from an increased awareness of the interrelationship between the increased environmental concerns about the quality of life for today and future generations. (Garren, S.J. et al. 2018:4) Pro Sustainable Perception (PSP) about sustainability issues, refers to the information individuals have on the state of the environment, climate change, environmental views, and the ecological effects of consumption and production, decent life. Recent research findings show that in countries with a higher national income have a higher environmental knowledge. Knowledge has been listed as one of the factors influencing risk perception. Thus, if people do not have sufficient knowledge of environmental issues, they cannot judge environmental risks. Therefore, there is a variation in perception levels between different countries. On the individual level, sustainable perception is dependent on cognitive factors of risk perception and the level of individuals' knowledge of sustainability issues. Moreover, sustainable concern depends on knowledge of the occurrence of environmental problems. Detailed information about sustainability issues can lead to higher levels of sustainable concern. (Saari, U. et al. 2021:3). Based on the above theoretical arguments, the researchers propose the following hypotheses:

H1c: sustainable concern positively affects sustainable lifestyle.

H2c: sustainable concern positively affects sustainable intention.

H4c: Sustainable intention positively Sustainable intention mediates the relationship between sustainable concern and sustainable lifestyle.

Methodology

Research instrument

In this study, 192 people were surveyed as part of a quantitative methodology. The primary instrument the researchers used to gather the information required to assess the relationships in the research model shown in Fig. 1 was a questionnaire. A five-point Likert scale (1 Strongly Disagree to 5 Strongly Agree) was used to evaluate the replies. Scales for assessing variables are taken from literature and modified for Arabic-speaking people. Pro-sustainable perspective is derived from (Kautish & Sharma, 2019) (Tölkes & Butzmann, 2018) and includes Perceived behavior control, Perceived knowledge, Perceived concern, and Perceived consumer effectiveness. Sustainable intention is developed from (Kautish & Sharma, 2019); and has only one dimension: conduct intention. Finally, behaviors towards a sustainable way of life were taken from (Paswan et al., 2017).

Analysis

This study analysed survey data using the partial least squares-based structural equation modeling approach PLS 3.3 to address the problems with normalcy. The measuring strategy underwent extensive testing to validate its dependability and validity. The discriminant and convergent validity of the model variables is ensured by a variety of metrics. Cross loadings, AVE, and the Fornell Larcker criterion were used to assess discriminant validity. To evaluate the collinearity of formative indicators, the variance inflation factor (VIF) was also used.

Sampling Technique

The sample was taken from a set of research sample frames. We based our population on Egyptian ministry of planning's sustainability program participants. The sampling frame was created using two criteria. No matter their governorate, gender, or level of education, all

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sample students have attended several sustainability training programs, workshops, and events. These were the following: Be the ambassador , the Sustainable Development and Governance Awareness Seminar , Egypt Vision 2030, the Governance Ambassadors Initiative, the Climate Ambassadors Initiative, the Together for a Digital Future Program, which includes a section dedicated to sustainable development and some of its goals.

Second, it depended on whether they agreed to take part in the study. The researchers included a question to the beginning of the questionnaire to determine whether the candidates had completed any of the initiatives of the training programs on sustainability run by the ministry of planning in Egypt. This allowed us to end up with a pool of candidates that accurately represented our sample. In conclusion, although nonprobability judgmental sampling approaches were employed to choose sample units, they were justified and based on logical standards to ensure minimal bias in selection and maximum involvement from the chosen initiative.

Results

Sample profile

In total,192 survey responses were used in the analysis collected from the learners to test the pre-determined hypothesis. Results show that 94.79% of the participants attended an initiative or project related to sustainable development, while only 5.21% of the participants didn't complete the initiative or project related to sustainable development, so we can say that most of the participants attended an initiative or project associated with sustainable development. Next, according to the descriptive analysis for demographic variables, the results illustrate that most of the sample is female with (65.38%) while males accounts for only (34.62%). As for the age, the results show that the age of the majority is ranging between (18- 25) years old with (56.04%) followed by the age range between (26-33) years old (28.02%), and finally the age range between (34- 41) years old (20.33%). In addition, the analysis showed that the income of the majority is less than 11,000 per month (84.62%), followed by those whose income is ranging between (11,000-25,000) per month with (12.09%). Moreover, concerning the education level, the majority are graduates (56.04%) followed by those who are undergraduates

(37.39%). Finally, regarding the marital status, the majority are single (79.12%) followed by those who are married (18.68%).

The measurement models.

The measurement model has strong internal reliability and validity, as shown in Table 1. All of the cronbach alpha values are 0.7, per (Hair et al.'s ,2019) recommendation. Additionally, every composite reliability (CR) score exceeds 0.8, the threshold suggested by (Henseler et al ,2016). The rho_A1 of each latent variable is the same. Each of the AVE values in Table 1 is higher than 0.5. The square root of the AVE values is compared to the latent variable correlations in the Fornell-Larchker discriminant validity criterion. Table 1 shows that, in accordance with the Fornell-Larchker criterion, the square roots of the AVE for each construct (which indicates convergent validity) are greater than their greatest correlation value with any other construct. Additionally, Table 1 displays no cross loadings and loadings that are approximately 0.7. The VIF shows that all measures fall below the suggested cut-off point of five [27]. Table 2's diagonal figures meet the Fornell-Larchker discriminant validity requirement since they are larger than their maximum correlation value with any other notion. The model's convergent and discriminant validity are confirmed by the absence of cross loadings and well-loaded dimensions on their constructs, with 0.7 being the lowest loading.

Table 1: Variables loadings, VIF, Latent variable's reliability and validity

	Sustainable Intension	Perceived Consumer Effectiveness	Perceived behavior control	Sustainable Concern	Sustainable Knowledge	Sustainable Lifestyle Behavior	VIF
PCE1		**0.766**					**1.589**
PCE2		**0.745**					**1.583**
PCE3		**0.761**					**1.473**
PCE4		**0.751**					**1.311**
PBC1			**0.738**				**1.538**
PBC2			**0.711**				**1.548**
PBC3			**0.581**				**1.2**
PBC4			**0.601**				**1.275**

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PBC5			**0.549**				**1.227**
SC1				**0.79**			**2.015**
SC2				**0.564**			**1.124**
SC3				**0.83**			**2.291**
SC4				**0.726**			**1.485**
SC5				**0.671**			**1.291**
SI1	**0.781**						**1.79**
SI2	**0.67**						**1.545**
SI3	**0.752**						**1.852**
SI4	**0.771**						**1.917**
SI5	**0.873**						**2.624**
SI6	**0.678**						**1.455**
SK1					**0.67**		**1.592**
SK2					**0.589**		**1.4**
SK3					**0.368**		**1.135**
SK4					**0.685**		**1.533**
SK5					**0.623**		**1.316**
SK6					**0.725**		**1.787**
SK7					**0.636**		**1.544**
SLB1						**0.668**	**1.596**
SLB10						**0.715**	**2.477**
SLB2						**0.606**	**2.461**
SLB3						**0.683**	**2.038**
SLB4						**0.685**	**1.581**
SLB5						**0.538**	**1.438**
SLB6						**0.738**	**2.088**
SLB7						**0.633**	**2.297**
SLB8						**0.565**	**1.325**
SLB9						**0.704**	**2.414**
AVE>0.5	**0.573**	**0.571**	**0.41**	**0.521**	**0.389**	**0.431**	
CR>0.8	**0.889**	**0.842**	**0.774**	**0.843**	**0.812**	**0.882**	
Cronbach alpha > 0.7	**0.849**	**0.752**	**0.639**	**0.762**	**0.728**	**0.853**	
Rho <1	**0.859**	**0.757**	**0.654**	**0.761**	**0.746**	**0.861**	
All loadings are above 0.5							

Structural model

5000 subsamples were used to assess the significance and direction of the proposed correlations using the bootstrap method. For model fit, PLS-SEM indices included d_G=0.648, NFI=0.534, and SRMR=0.097≤0.12, as advised [38, 48]. With β=0.126 and β=0.272, respectively, Figure 2 and Table 3 demonstrate how the perceived behavior control strongly influences both sustainable lifestyle behavior and sustainable intention. Furthermore, Table 3 demonstrates that 50.7% of the sustainable lifestyle behavior is significantly attributable to perceived behavior control (β = 0.126) and sustainable knowledge (β = 0.223). The data also demonstrate that the perception of consumer efficacy (0.412), perceived behavior control (0.272), and sustainable knowledge (0.257) all significantly influence the adjusted R square for sustainable intention, which is 57.6%. Lastly, with β=0.369 t=3.419, p≤0.001, Table 3 and Fig. 2 demonstrate that sustainable intention has a positive significant impact on the Sustainable Lifestyle Behavior. The outcomes of testing direct hypotheses are shown in Table 3, accompanied by P values denoting significant levels.

Table 2: Diagonal Figures Satisfying Fornell-Larchker Criterion

	Sustainable Intension	Perceived Consumer Effectiveness	Pro Sustainability Perception	Sustainable Concern	Sustainable Knowledge	Sustainable Lifestyle Behavior
Sustainable Intension	**0.757**					
Perceived Consumer Effectiveness	**0.677**	**0.756**				
Perceived Behavior Control	**0.593**	**0.504**	**0.64**			
Sustainable Concern	**0.507**	**0.653**	**0.523**	**0.722**		
Sustainable Knowledge	**0.605**	**0.543**	**0.489**	**0.451**	**0.623**	
Sustainable Lifestyle Behavior	**0.652**	**0.532**	**0.53**	**0.496**	**0.573**	**0.656**

Direct relations

Table 3 demonstrates that whereas PCE and SC did not directly influence sustainable lifestyle behavior, PBC and SK did have a modest impact. H1 is therefore only partly accepted. Furthermore,

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Table 3 shows that PBC, PCE, and SK have a strong direct impact on sustainable intention. However, there was no discernible negative direct influence of sustainable worries on sustainable intention. H2 is therefore only partially accepted. Furthermore, Table 3 provides evidence to partially support H3, confirming that sustainable intention increases Sustainable Lifestyle Behavior.

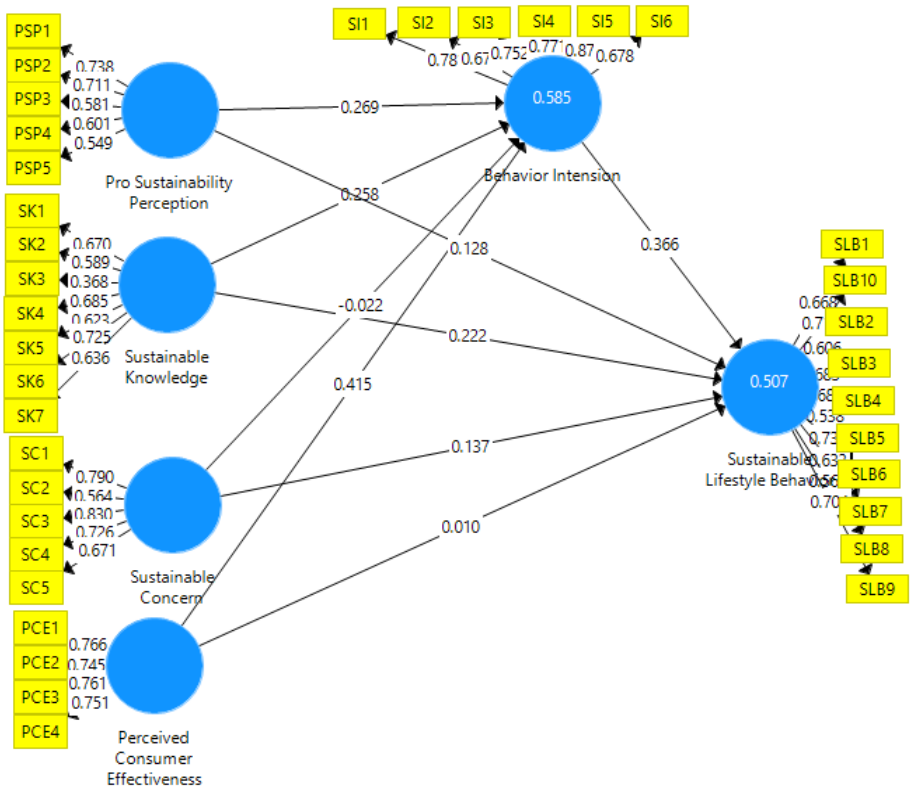

Figure (2) Model tested. Source: Smart PLS 3.3 output

Table 3 Direct relationships (All hypotheses except H9, H8)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Accept/ Reject
H1 H1a: Perceived Behavior Control -> Sustainable Lifestyle Behavior	0.126	0.132	0.063	1.998	0.046	Accept
H1b:Perceived Consumer Effectiveness -> Sustainable Lifestyle Behavior	0.007	0.029	0.104	0.071	0.943	Reject
H1c: Sustainable Concern -> Sustainable Lifestyle Behavior	0.139	0.133	0.105	1.333	0.183	Reject
H1d:Sustainable Knowledge -> Sustainable Lifestyle Behavior	0.223	0.233	0.097	2.303	0.022	Accept
H2 H2a:Perceived Consumer Effectiveness -> Sustainable Intension	0.412	0.391	0.105	3.91	0.000	Accept
H2b: Perceived Behavior Control -> Sustainable Intension	0.272	0.278	0.062	4.368	0.000	Accept
H2c:Sustainable Concern -> Sustainable Intension	-0.023	0.009	0.092	0.248	0.804	Reject
H2d:Sustainable Knowledge -> Sustainable Intension	0.257	0.252	0.068	3.791	0.000	Accept
H3: Sustainable Intension -> Sustainable Lifestyle Behavior	0.369	0.36	0.108	3.419	0.001	Accept

Table 4 Indirect relationships

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Accept/ Reject
Perceived Consumer Effectiveness -> Sustainable Lifestyle Behavior	0.152	0.138	0.052	2.91	0.004	Accept
Perceived Behavior Control -> Sustainable Lifestyle Behavior	0.1	0.1	0.037	2.714	0.007	Accept
Sustainable Concern -> Sustainable Lifestyle Behavior	-0.008	0.006	0.035	0.24	0.81	Reject
Sustainable Knowledge -> Sustainable Lifestyle Behavior	0.095	0.09	0.037	2.6	0.01	Reject

Testing mediation relationships

As advised by (Hair ,2019), bootstrapping with 5000 was carried out to test the mediation analysis. Tables 4 and 5 are included in the analysis of mediation. Table 4 demonstrates a strong inverse association (β=0.152, t=2.91) between sustainable living behavior and perceived customer effectiveness. Furthermore, with β=0.1 and

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t=2.71, the results indicate a substantial indirect association between perceived behavior control and sustainable lifestyle behavior. Furthermore, the findings show that sustainable concern, sustainable knowledge, and sustainable lifestyle behavior have negligible indirect correlations. Table 4 shows P values that indicate significant levels. Table 5 elucidates the mediator's contribution to the indirect effect, while Table 4 displays the noteworthy indirect effect. As a result, either the mediation theories are accepted or not.

Table 4 shows a significant indirect relationship perceived consumer effectiveness and sustainable lifestyle behavior. Additionally, table 5 shows that there is a full mediation—that is, that sustainable intention mediates between perceived behavior control and sustainable lifestyle behavior—with a VAF of 100%. Moreover, table 5 confirms the mediation of sustainable intention in the perceived behavior control and sustainable lifestyle behavior with VAF=100%, indicating a full mediation. However, Tables 3 and 4 ensure an insignificant indirect relationship between sustainable concern, sustainable knowledge, and sustainable lifestyle behavior through the sustainable intention. H4 is therefore partially acknowledged. Table 5 indicates incomplete mediation since it does not fully mediate the correlations between sustainable concern, sustainable knowledge, and sustainable lifestyle behavior.

Table 5 Specific indirect effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Accept/ Reject
H4 H4a: Perceived Consumer Effectiveness -> Sustainable Intension -> Sustainable Lifestyle Behavior	0.152	0.138	0.052	2.91	0.004	Accept
H4b: Perceived Behavior Control -> Sustainable Intension -> Sustainable Lifestyle Behavior	0.1	0.1	0.037	2.714	0.007	Accept
H4c: Sustainable Concern -> Sustainable Intension -> Sustainable Lifestyle Behavior	-0.008	0.006	0.035	0.24	0.81	Reject
H4d: Sustainable Knowledge -> Sustainable Intension -> Sustainable Lifestyle Behavior	0.095	0.09	0.037	2.6	0.01	accept

Conclusion

The purpose of this study is to determine the factors that influence the sustainable lifestyle. This study investigates how pro-sustainable perception affects sustainable lifestyle behaviours directly and through the mediating effect of sustainable intentions. The results show that the adjusted R square for Sustainable intention is 57.6%, significantly affected by PBC, PCE and SK while for sustainable lifestyle behaviour is 50.7 %, explained by PBC and SK.The findings of this study, like those of earlier research, support the notion that two aspects of the pro-sustainable perception—perceived behavioral control and sustainable knowledge—have a direct impact on leading a sustainable lifestyle. On the other hand, a sustainable lifestyle is not directly impacted by customer perceptions of effectiveness or sustainability. The paper's conclusions made it clear that sustainable lifestyles are most influenced by sustainable knowledge. This implies that a major shift in the consumer's lifestyle will occur if information is increased through various activities. This will lend credence to the idea that the best way to encourage the development of sustainable behaviors is to emphasize subjective knowledge. In addition to teaching students how their actions affect sustainability, Redman (2016) states that sustainability education must also address societal norms, attitudes toward sustainable behavior, and students' level of self-efficacy in engaging in that behavior. Numerous research suggest that perceived behavioral control significantly enhances intention prediction (Braßler & Sprenger, 2021). Karl and Friedrich, 2020). This was evident in our research as the students who had the authority to decide how to behave in regard to sustainability sincerely intended to change their behavior. Numerous research has demonstrated the connection between lifestyle choices and health, however there is no connection between environmental concerns and health (Tan et al., 2021). Lifestyles do affect green buying behavior (GPB), but in emerging economies, the emphasis is more on food and health than on environmental concerns in general. (Attia, S., and M. Farrag, 2017). Likewise, several studies have demonstrated that lifestyle and values have a major impact on the desire to buy organic food. One of the many developments and economic occurrences that have taken place in Egypt is the green movement. (Farrag, 2022). Our survey

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also supported this idea: to make consumers aware of how everything is interconnected, we need to educate them more. The results also demonstrate the clear relationship between sustainable intention and perceived consumer efficacy, perceived behavioral control, and sustainable knowledge. This implies that a consumer's intention to act sustainably is increased when they see that their actions are having some positive impact. Regarding perceived behavior control, a consumer's feeling of agency over their behaviors heightens their propensity to act sustainably.The same is true for raising awareness of sustainability and its effects on the growth of people and society, which will elevate people's intentions. These results were corroborated by research, which revealed that consumers' subjective knowledge and perceived behavior, subjective knowledge and purchase intention, and perceived behavior toward purchase intention on carbon labeling of packaged tea beverages all significantly correlated (Liang et al., 2020). These factors interact in such a way that better subjective knowledge is correlated with higher perceived consumer effectiveness in terms of purchasing behavior when it comes to carbon labeling packaged tea products.Additional research verified that buyers take the social impact of their purchases into greater consideration the more they believe they can do to reduce pollution. (Robinson, 1996). According to Verbeke and Vermeir (2008), a high PCE encourages customers to demonstrate their favorable sentiments toward sustainable products through their actual consumption habits. Stable attitudes regarding the overall efficacy of consumer choices are captured by PCE. Although our research did not uncover a significant relationship between intention and sustainable concern, this was also shown in a study by Park (2015). Purchasing environmentally friendly products is not necessarily a desirable activity, despite environmental concern (Vermeir & Verbeke, 2008). Park (2015) said.Furthermore, our research supports the findings of (Aitken et al., 2020) which suggest that enhancing consumers' perceived behavioral control can reinforce their intentions to buy organic products. Our study's conclusions indicate a strong correlation between sustainable living behaviors and intentions. The correlation between purchase intention and actual behavior has also been demonstrated by several studies (Matharu et al., 2020; Ajzen and Fishbein, 1980). Other studies (Dangi et al., 2020; Thøgersen, 2007)

found a statistically significant positive correlation between buying intention and purchase behavior. According to some, a consumer's lifestyle influences their purchasing decisions (Picha and Navratil, 2019). Ultimately, it is shown that the most significant mediating factor between perceived consumer effectiveness and sustainable lifestyle behavior was the sustainable intention. Subsequently, in moderating the connection between behavior control perception and sustainable lifestyle practices. Lastly, while balancing the association between sustainable lifestyle practices and sustainable knowledge.This implies that when a consumer believes they can solve their nation's environmental problems and teach their children to respect the environment through their actions, they will be more motivated to alter their lifestyle. Additionally, their way of life will change if they believe they oversee their actions and are valued for what they accomplish. Their habits will undoubtedly alter because of learning about sustainable objectives and how these will impact the well-being of their society. To sum up, government programs such as those from the Ministry of Planning will undoubtedly contribute to changing Egyptians' lifestyle and behavioural patterns, but to achieve this, we need government, policymakers, marketers, investors, and citizens to work together to achieve the sustainable goals to nourish our society.

Implications

The United Nations sustainable development goals (SDGs) aimed to ensure the globe access to affordable, reliable, and modern clean and sustainable services, sustainable development, health and environment, global energy and food security, and environmental protection. (Konbr, U. et al.,2021:89). Egypt government demanded serious actions to ensure the implementation of the SDGS as its strategy for 2030. Additionally, Ministry of Planning and Economic Development launched the "Environmental Sustainability Standards Guide: The Strategic Framework for Green Recovery", in cooperation with Ministry of Environment, and all relevant governmental entities to raise awareness of sectors and interventions that have a direct positive impact on the

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environment and guide government and private sectors towards investing in them, as well as performance indicators that measure progress towards that goal, allowing for serious and ambitious steps towards sustainable development, of which the "green economy" is one of the main pillars.(Environmental Sustainability Standards Guide. (mped.gov.eg). The presidential initiative “Decent Life” is one of the leading initiatives targeting the Underprivileged Villages lunched by President Abdel Fattah El-Sisi in 2019, with the aim of improving the quality of life in the poorest rural communities within the framework of the Egypt’s Sustainable Development Strategy 2030, the initiative aims to develop 4,500 Egyptian villages in three years, with total investments exceeding LE 500 billion. Many of the initiative's goals – according to a statement by United Nation’s office for Sustainable Development - align with the UN's 17 SDGs, which primarily focuses on reducing poverty, ending hunger, improving health and education, and providing safe drinking water and sanitation services. (Al-Minshawi, R. idsc.gov.eg)

Because the learners were aware of the SDGs and the necessity of sustainability, Egypt's youth are eager to make the transition from an unsustainable to a sustainable way of living. Based on the suggested framework, the study presents several useful recommendations for achieving a sustainable lifestyle. First and foremost, marketers should keep creating environmentally friendly products. They should also educate consumers about the technological differences between sustainable and non-sustainable products, as well as the attribute-based benefits of sustainable products. Additionally, marketers should create advertisements that encourage package recycling and offer customers easily accessible, widely visible, aesthetically pleasing, and sustainably certified environmentally friendly products. Policymakers should also extend invitations to opinion leaders to highlight the benefits of endorsing sustainable objectives for both national development and citizen welfare. This will facilitate public discourse and the development of sensible, sustainable purchase intent. Investors should be encouraged to fund entrepreneurial endeavours that seek to offer long-term fixes for pressing issues. Thirdly, the ministry of education should begin by including environmental

education into curricula and teaching students about how to live sustainably and act. Other environment-related ministries may offer avenues through which the public and customers can offer solutions to various environmental issues and participate in the creation of long-term remedies. Fourth, politicians should work to increase public knowledge of environmental issues and promote pro-environmental emotion through eco-friendly infomercials, organic product labeling, socioenvironmental product themes, and fair pricing techniques. The government could produce more advocacy commercials that demonstrate how to use electricity and water, as well as how to locate alternate sources of energy such as green and renewable ones. They should also highlight food waste and how it can help those in need.To raise public awareness of the significance of sustainable development goals for the advancement of our nation and the planet, as well as to lower carbon emissions that have an adverse effect on human health and welfare, the government should expand its efforts, such as the one spearheaded by the Ministry of Planning, in educational institutions, businesses, and other public and private sectors. To involve an increasing number of people until sustainability becomes a way of life, further summits like COP 27 are required. NGOs can prioritize the idea of donations rather than adding to the waste in our society, whether it be from food or clothing, and they can involve children, young people, and the elderly in more environmental awareness programs. Fifth, marketers can effectively combat environmental challenges by showcasing how everyone may adopt sustainable behavior through a variety of media channels. As a result, people would be more knowledgeable about sustainability, which might further encourage sustainable behavior and alter people's perspectives. In addition to the ministry of planning's measures centred on the concept of sustainable development, the Egyptian government can launch an awareness campaign to convince people that sustainability is a socially acceptable standard based on the recommendations and implications indicated above.

Limitations and further research directions

Future research must consider both this study's and previous investigations' limitations. The only source of data used in this

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research is the Ministry of Planning Initiatives. Addressing other concerns that influence the pro-environment view was necessary. Future research could investigate the challenges of maintaining intention in a variety of age groups and learner types. Finally, the study can be differentiated from earlier research if it is conducted in a distinct emerging market.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

Aitken, R. *et al.* (2020) 'The positive role of labelling on consumers' perceived behavioural control and intention to purchase Organic Food', *Journal of Cleaner Production*, 255, p. 120334. doi:10.1016/j.jclepro.2020.120334.

Ajzen, E. and Fishbein, M. (1980), Understanding Attitudes and Predicting Social Behaviour, PrenticeHall Press, Englewood Cliffs, NJ.

Al-Minshawi, R. (2021) "Decent Life an Unprecedented Initiative to Develop The Egyptian Countryside", 2021, Pp. 1-3. Available at: Decent Life An Unprecedented Initiative To Develop The Egyptian Countryside.pdf (idsc.gov.eg).

Attia, S., & Farrag, M. (2017). The Effect of Egyptian Consumer Values & Lifestyles on Green Purchase Behavior. *Journal of Marketing Development and Competitiveness, 11*(4). https://doi.org/10.33423/jmdc.v11i4.1500

Bapoo, M. A., Tehseen, S., Haider, S. A., Yusof, M., & Motaghi, H. (2022). "Sustainability Orientation and Sustainable Entrepreneurship Intention: the Mediating Role of Entrepreneurial Opportunity Recognition". *Academy of Entrepreneurship Journal*, 28(2), 1-23. https://www.researchgate.net/publica-tion/356634652

Braßler, M. and Sprenger, S. (2021) 'Fostering Sustainability Knowledge, attitudes, and behaviours through a tutor-supported interdisciplinary course in education for Sustainable Development', *Sustainability*, 13(6), p. 3494. doi:10.3390/su13063494.

Bai, G. and Bai, Y. (2020), "Voluntary or forced: different effects of personal and social norms on urban residents' environmental protection behavior", *International Journal of Environmental Research and Public Health*, Vol. 17 No. 10, pp. 3525

Dangi, N., Gupta, S.K. and Narula, S.A. (2020), "Consumer buying behaviour and purchase intention of organic food: a conceptual

framework", Management of Environmental Quality: An International Journal.

De Canio,F. Martinelli, E. Endrighi, E. (2021)." Enhancing consumers' pro-environmental purchase intentions: the moderating role of environmental concern". *International Journal of Retail & Distribution Management*, Vol. 49 No. 9, Pp. 1312-1329.

Farrag, M. (2022) 'The effect of Egyptian consumer values & lifestyles on organic food purchase intention: Applied on Z-generation', *المجلة العربية للإدارة*, 42(4), pp. 407–418. doi:10.21608/aja.2022.120314.

Fischer, R. and Karl, J.A. (2020) *Predicting behavioral intentions to prevent or mitigate COVID-19: A cross-cultural meta-analysis of attitudes, norms and perceived behavioral control effects* [Preprint]. doi:10.31234/osf.io/ek69g.

Foroughi, B., Arjuna, N., b, Iranmanesh M., Kumar K. d, Tseng, M. Leung N.(2022)." Determinants of hotel guests' pro-environmental behaviour: Past behaviour as moderator", International Journal of Hospitality Management 102, Pp. 1-11.

Garren, S.J. and Brinkmann, R. (2018)'"Sustainability definitions, historical context and Frameworks'", in Brinkmann, R. and Garren, S.G. (Eds), *The Palgrave Handbook of Sustainability Case Studies and Practical Solutions*, Palgrave Macmillan, Canada, pp. 1-18.

Hair JF, Risher JJ, Sarstedt M, Ringle CM (2019) When to use and how to report the results of PLS-SEM. Eur Bus Rev 31(1):2–24. https://doi.org/10. 1108/EBR-11-2018-0203

Henseler J, Hubona G, Ray PA (2016) Using PLS path modeling in new technology research: updated guidelines. Ind Manag Data Syst 116(1):2–20. https://doi.org/10.1108/IMDS-09-2015-0382

Hübscher, C. Hensel-Börner, S. Henseler, J. (2021)." Social marketing and higher education: partnering to achieve sustainable development goals", Journal of Social Marketing, Vol. 12 No. 1, Pp. 76-104

Hussein, A. Pollock, E. (2019)." Emerging Concepts for Sustainable Built Environment", IOP *Conference entitled:" Earth and Environmental Science* :297", Pp1-13

Islam,M. Managi, S.,(2019). " Green growth and pro-environmental behavior: Sustainable resource management using natural capital accounting in India", *Resources, Conservation & Recycling*, 154, Pp126-138.

Kautish, P. and Sharma, R. (2019) 'Determinants of Pro- environmental behavior and Environmentally Conscious Consumer Behavior: An empirical investigation from emerging market', *Business Strategy & Development*, 3(1), pp. 112–127. doi:10.1002/bsd2.82.

(ISSN : 2536 - 9555)

Konbr, U. Maher.E. (2021).” Boosting Sustainability in Egypt by Developing Initiatives to Promote Smart Energy Systems”. *WSEAS Transactions on Environment and Development*, Volume 17, 2021, Pp. 89-109.

Liang, T.-C. *et al.* (2020) ‘The relationship of perceived consumer effectiveness, subjective knowledge, and purchase intention on carbon label products—a case study of carbon-labeled packaged tea products in Taiwan’, *Sustainability*, 12(19), p. 7892. doi:10.3390/su12197892.

Liu, H. McCarthy, B. (2022).” Sustainable lifestyles, eating out habits and the green gap: a study of food waste segments”, *Asia Pacific Journal of Marketing and Logistics*, May 2022, Pp. 1-24.

Matharu, M., Jain, R. and Kamboj, S. (2020) ‘Understanding the impact of lifestyle on sustainable consumption behavior: A sharing economy perspective’, *Management of Environmental Quality: An International Journal*, 32(1), pp. 20–40. doi:10.1108/meq-02-2020-0036.

Nour, A. I., Sharabati, A.-A. A., & Hammad, K. M. (2020). Corporate Governance and Corporate Social Responsibility Disclosure. *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility*, 5(1), 20-41. https://doi.org/10.4018/ijsecsr.2020010102

Paswan, A., Guzmán, F. and Lewin, J. (2017) ‘Attitudinal determinants of environmentally sustainable behavior’, *Journal of Consumer Marketing*, 34(5), pp. 414–426. doi:10.1108/jcm-02-2016-1706.

Pıcha, K. and Navratil, J. (2019), “The factors of Lifestyle of Health and Sustainability influencing proenvironmental buying behaviour”, Journal of Cleaner Production, Vol. 234, pp. 233-241.

Redman, A. (2016) *Is subjective knowledge the key to fostering sustainable behavior? mixed evidence from an education intervention in Mexico.* [Preprint]. doi:10.31235/osf.io/wukyc.

Sule, O. Eniola, Omoankhanlen, J. Akhigbe (2022). “Green Human Resource Management Practices and Pro-Environmental Behavior of Knowledge Workers in Selected Private Organisations in Ogun State, Nigeria” Journal of Business Strategy Finance and Management, Vol. 04(1), 111-123.

Tan, B.C. *et al.* (2021) ‘The effects of consumer consciousness, food safety concern and healthy lifestyle on attitudes toward eating “green”’, *British Food Journal*, 124(4), pp. 1187–1203. doi:10.1108/bfj-01-2021-0005.

Thøgersen, J. (2007), “Consumer decision-making with regard to organic food products”, in Vaz, T.D.N., Nijkamp, P. and Rastoin,

J.L. (Eds), Traditional Food Production Facing Sustainability: A European Challenge, Ashgate, Farnham, pp. 173-192.

Tölkes, C. and Butzmann, E. (2018) 'Motivating pro-sustainable behavior: The potential of green events—a case-study from the Munich Streetlife Festival', *Sustainability*, 10(10), p. 3731. doi:10.3390/su10103731.

Vu, D. Manh, Ha, N. Thang Ngo, N. Thi Viet, Pham T. Huong, Duong D. Cong, (2021)." Environmental corporate social responsibility initiatives and green purchase intention: an application of the extended theory of planned behavior"., *Social Responsibility Journal*, June 2021, Pp. 1-19.

Nascimento,J. et al.Loureiro, S. (2022)." The PSICHE framework for sustainable consumption and future research directions", *EuroMed Journal of Business*, Available at: https://www.emerald.com/insight/1450-2194.htm

M.A.S. Khan, J. Du, H.A. Malik , M.M. Anuar, Pradana, M., M.R.B. Yaacob, (2022)." Green innovation practices and consumer resistance to green innovation products: Moderating role of environmental knowledge and pro-environmental behavior", *Journal of Innovation & Knowledge7*, PP. 1-7.

Opuni, F. Asiamah, N. Danquah , E. Okine, C., Ocloo, E. Quansah, F. (2022)." The associations between pro-environment behaviours, sustainability knowingness, and neighbourhood walkability among residents of Accra Metro in Ghana: A cross-sectional analysis". *Journal of Transport & Health 25*, Pp. 1-15.

Park, H.H. (2015) 'The influence of Lohas consumption tendency and perceived consumer effectiveness on trust and purchase intention regarding upcycling fashion goods', *International Journal of Human Ecology*, 16(1), pp. 37–47. doi:10.6115/ijhe.2015.16.1.37.

Saari, U., Damberg , S., Frombling, L., Ringle,C. (2021). " Sustainable consumption behavior of Europeans: The influence of environmental knowledge and risk perception on environmental concern and behavioral intention" *Ecological Economics* 189, Pp.1-14.

Shanmugavel, N., Balakrishnan, J. (2023)." Influence of pro-environmental behaviour towards behavioural intention of electric vehicles". *Technological Forecasting & Social Change 187*, Pp. 1-13.

Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidnecne and values. Ecological Economics, 64, 542-553.

(ISSN : 2536 - 9555)

Wang, J. Wang, S. Wang, H. Zhang, Z. Ru, X. (2021).” Examining when and how perceived sustainability-related climate influences pro-environmental behaviours of tourism destination residents in China”, *Journal of Hospitality and Tourism Management* 48, Pp. 357-367.

Böhme, J. Walsh,Z. Wamsler,C. (2022) Sustainable lifestyles: towards a relational approach, *Sustainability Science,* 17:2063–2076.

Hanss, D. Doran, R. (2019). Perceived Consumer Effectiveness, Responsible Consumption and Production, Encyclopaedia of the UN Sustainable Development Goals, Publisher: Springe

Kovacs, I.; Keresztes, E.R, (2022) Perceived Consumer Effectiveness and Willingness to Pay for Credence Product Attributes of Sustainable Sustainability, 14, 4338.

Berthold, A. Cologna, V. Siegrist, M. (202٢) “The influence of scarcity perception on people’s pro-environmental behaviour and their readiness to accept new sustainable technologies", Ecological Economics (196), PP.1-9

(Vuong, Q.H., (2022). Perception of Environment Sustainability, Lifestyle, Green Purchasing Behaviour, and Eco-innovation, IOP Conference Series: Earth and Environmental Science,1-10

Mouchrek, N. Cullen, C. Ganino, A. Gliga, V. Kramer, P. Mahesh, R. Maunder, L. Murray, S. Scott, K. and Shaikh. T. (2023). Investigating Environmental Values and Psychological Barriers to Sustainable Behaviors Among College Students, No. 26 (2022-2023), pp. 1-18

Camilleri, M., Carcelli, L. Mauriello, R. and Strazzullo S. (2023). “Consumer Perceptions of Sustainable Products: A Systematic Literature Review”. Sustainability2023, 15, 8923.

Vincenzi, S. L., Possan, E. Francisco de Andrade, D. Pituco M. Santos, T. Jasse, E. P. (2018). Assessment of environmental sustainability perception through item response theory: A case study in Brazil. Journal of Cleaner Production 170 (2018). 1369-1386

Cojuharenco, I. Cornelissen, G. Karelaia, N. (2016). Yes, I can: Feeling connected to others increases perceived effectiveness and socially responsible behaviour. Journal of Environmental Psychology, 48 (2016) 75-86.

Liao, C. Zhan, X. Huang, Y. (2023). Understanding the effect of proactive personality and perceived consumer effectiveness on low-carbon travel intention. Heliyon, 9 (2023) e19321, 1-11.