



Sustainability Awareness, Health Literacy, and the Inclination to Buy Smart Lights: A Conceptual Paper

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ABSTRACT

Expansion of businesses and industrialization has led to depletion of natural resources and has turned the concerns of the global communities, especially countries like China and America, on. The excess population of China has led to creating huge depletions of natural resources and carbon emissions. This is why China is now considering green initiatives as compulsory and important for mitigation of negative environmental impacts, negative impacts on the growth of economy, and on the health and literacy of the common man. Therefore, the aim of the current study was to analyze the various factors that lead to increased opportunity of buying from online domains. The framework presented within this study entails that social and environmental sustainability awareness and health literacy can lead to enhancing the purchase decisions of smart and green products such as smart light. Altruism has been used as a connection variable between these factors as altruistic nature of consumer has shown to enhance the buying behavior. The conceptual framework presented in this study needs to be validated through empirical research in the future.

Keywords: Altruism, Social Sustainability Awareness, Environmental Sustainability Awareness, Health Literacy, Smart Lights.

INTRODUCTION

The effects of environmental degradation are becoming more generally acknowledged. The entire world has united to safeguard the environment. Consumers are becoming more aware of the environmental impact of their buying patterns, which can help firms achieve a competitive advantage (Rese et al., 2017; Ashraf, 2019; Ashraf, 2021). Marketers must understand the impact of increased sustainability awareness on other parts of customer pro-environmental behavior. Smart lights are significantly useful and well-known for efficiency. However, these contribute to efficiency and have various other significant characteristics that persuade the adoption of this alternative. The purpose of smart lighting is to save energy, make life easier, and provide a sense of safety and security. Automated controls, such as occupancy and daylight sensors, can alter lighting based on these conditions (Chew et al., 2017; Noor, Hossain & Shirazi, 2022). The characteristics like consumer energy saving, environmental sustainability, and long-term positive impacts on the environment are all factors that must be considered along with the adoption of smart lights (Ashraf et al., 2014; Anane, 2022). Moreover, this concept also targets the products and forms of energy that can be consumed for a long period and last for a long time (Çelik & Yilmaz, 2011; Siddiqui, 2022). Consumers need to indulge in these concepts before making choices regarding the application and utilization of any product to ensure that the environment is protected and long-term sustainability and Environmental Protection is targeted.

With the huge technological advancements, the customer's behavior and desire to gain a sustainable approach have gained greater attention. Studies on smart light systems and their linkage with consumer behavior have been scarce. The increased improvement in the safety of heat emissions enhanced energy efficiency. Its duplicated life spans over conventional light bulbs have formulated the LED bulbs to avail the sustainable option of lightening before considering the dimming capabilities (Juric & Lindenmeier, 2019). The current study has been conducted to analyze the influence and linkage between smart light design features and how customers react to them (Zipperer et al., 2013). The movement of smart lights is suitable and adequate in accordance with affordability and an integral step in the appropriate direction when it comes to protecting the environment through environmental sustainability. Firstly, LEDs can be recycled and played longer than conventional bulbs, decreasing the greater volumes of waste lightening that results in landfilling each year. The way consumer reacts towards introduction of smart lights into the market have been scarcely studied. This gives an urge to the current study to fill up the gap.

In addition to sustainability awareness, health-related literacy is very high in China, and that is why the Chinese people always demand superior quality goods from their manufacturers as they know how the production activities of the products used by them can harm or save the society from potentially harmful effects (Lunney et al., 2016; Martins et al., 2014). Therefore, the objective of the current paper is to present a conceptual framework that explains how sustainability awareness and health literacy contribute to the positive buying behavior of health-conscious products like smart lights.

Intention To Buy Smart Lights

Intention to buy has been studied in many contexts in various studies over the past years in the marketing literature (Hajli, 2015; Ismagilova et al., 2020; Ueasangkomsate & Santiteerakul, 2016). However, the purchase of smart lights is not explored to a great degree in the past. Some relevant studies, nonetheless, are summarized in the table below.

Table 1: *Summary of Recent Studies on Buying Smart Lights*

STUDY	RELEVANT FINDINGS	SHORTCOMINGS
(Karlin et al., 2018)	Discusses various smart home appliances that can be used for energy management in the future and the intentions of consumers towards their purchase and use	No empirical research on smart lights specifically conducted
(Rahman et al., 2020)	Studied the green purchase behavior of consumers toward energy-saving lights	The variables suggested in the current study are not explored
(Moghavvemi, Jaafar, Sulaiman, & Parveen Tajudeen, 2020)	The adoption of energy-efficient lighting systems is studied in the presence of guilt and pride	The consumer intention antecedents are different as studied in the current study

Sustainability Awareness and Smart Light Buying Behavior

Social sustainability, in general, is referred to as a life-enhancing condition within communities and a process within communities that can achieve that condition (McKenzie, 2005). Consumers' purchase decisions are likely influenced by this increasing awareness and inclination toward sustainable consumption (De Pinto de Moura et al., 2012; Yadav et al., 2019). Moreover, businesses are placing much more emphasis on sustainability due to stricter environmental regulations and rising pressure from stakeholders to protect the environment (Vermeir and Verbeke, 2008; Khan and Mohsin, 2017; Kumar et al., 2018; Yadav et al., 2018). Paul et al. (2016) suggested motivating the consumption of green products among customers to attain sustainability. In order to promote such products, sellers need to understand consumer preferences and the

decision-making process in the context of green products (Cherrier et al., 2011). Peattie and Charter (2003) indicated that each customer has divergent preferences towards different attributes of an eco-friendly product. It is very challenging to correlate the attributes of the green consumer with customers' demographic characteristics.

Fluctuating preferences of environmentally cautious customers have made it difficult for marketers to sell green products (Kilbourne and Pickett, 2008; Ha and Janda, 2012). Hence, consumer environmental behavior has greatly interested practitioners and academicians (Cornelissen et al., 2008). Many studies investigated the link between customer purchasing intention and green behavior (Gadenne et al., 2011; Ha and Janda, 2012; Prakash and Pathak, 2017). Much of the existing literature in this area refers to the framework of cognitive behavioral theories to explore antecedents of consumers' environmental behavior. Consumers' knowledge of environmental matters positively correlates to pro-environmental behavior (Prakash and Pathak, 2017). However, environmentally cautious customers may or may not exhibit environmental saving behavior, which leads to the origination of the value-action gap (Gadenne et al., 2011; Prakash and Pathak, 2017; Kumar et al., 2018). Moreover, individuals differ; they grasp and respond to similar types of environment-related information in highly diverse ways (Blake, 1999; Khan, Khan & Khan, 2022). Sustainable consumption behavior refers to the extent to which individuals' choices and actions toward products and services lessen environmental impacts, lessen the change of available materials or energy in the environment, or alter the structure of ecosystems (Thøgersen, 2005). Some behaviors, such as buying eco-friendly apparel or recycling clothing, can be sustainable because those behaviors directly or indirectly affect the environment. Apparel consumption refers to purchasing, storing, and using apparel and caring for the apparel product life cycle, as every process, from the manufacture of fibers to the disposal of garments, impacts the environmental system (Hong and Kang, 2019; Elkheloufi & Yean, 2022). Consumer behavior is the customer's evaluation of the positive or negative implications of applying a product/service (Ajzen & Fishbein, 1975; Nguyen, Nguyen, Dang, & Nguyen, 2016; Nguyen, Nguyen, & Vo, 2019; Phan, Nguyen, & Bui, 2019). Customers who have a positive attitude about the service will increase their intention to use it (Davis, 1989; Xu et al., 2020).

In addition to social sustainability, environmental sustainability awareness is also equally important. One way in which environmental sustainability awareness is displayed is through green consumption. Green consumption is considered a behavior to help protect the environment (Mostafa, 2006), in which green consumers always pay attention to environmental protection, use of pollution reduction products/services, responsible use of natural resources, and recyclable products after use.

Consumers are increasingly aware that their consumption activities have caused bad environmental impacts and are always inclined to consume green in their consumption decisions. (Choi & Johnson, 2019; Kumar et al., 2017; Mostafa, 2006). There have been many studies on green consumption behavior and customers' intention to purchase green products. In particular, some studies show that health consciousness positively influences attitudes and intentions to purchase green products. (Xu, Wang, & Yu, 2020; Yadav & Pathak, 2017).

Enhancement of individual environmental responsibility triggers green purchase decisions. Environmental perception refers to individuals' environmental concepts and subsequent action strategies to solve environmental problems.

According to Incekara et al. and Hassan, Shaw, Shiu, Walsh, and Parry (2016), students' apathetic attitudes toward the environment are due to a lack of knowledge and interest in environmental issues. Other research has revealed that students are well-informed about environmental issues and are interested in them (Akman & Mishra, 2015; Anser et al., 2020; Benamati & Rajkumar, 2008). Few studies, however, have found that students' conceptual understanding of environmental issues has influenced them to conserve the environment (Akman & Mishra, 2015; Greaves et al., 2013; Kumar et al., 2017). According to Kumar (2012), consumers favor those products which do not harm the environment. Pagiaslis and Krontalis (2014) have also proven that environmental concern was a major motivator behind the purchase intention of eco-friendly products. Coddington (1993) pointed out that consumers were concerned about the impact of poor environmental conditions on their health. So this state of tension leads to the integration of these concerns in their decision-making, resulting in consumers' inclination toward organic food.

To summarize, both social and environmental sustainability awareness leads to better choices of buying practices. Hence, it can be posited that:

Proposition 1: *Social sustainability awareness significantly impacts the intention to buy smart lights.*

Proposition 2: *Environmental sustainability awareness significantly impacts the intention to buy smart lights.*

Health Literacy and Smart Light Buying Behavior

Public concern regarding environmental issues has been growing progressively (Kirk, 1995; Laroche, Bergeron, & Barbaro-Forleo, 2001). Consumers are aware that their purchasing behavior might have direct or indirect adverse impacts on the environment. Consequently, consumers are modifying their purchasing

behavior and gravitating towards products perceived to be environmentally friendly. Therefore, the rising “green consumerism” entails the production, promotion, and advancement of goods and services that are understood to have more positive impacts on the environment (Akenji, 2014). is now having a considerable influence on the decisions being made in various business segments and is modifying manufacturing processes and operational procedures (D’Souza & Taghian, 2005). The term “green,” in these contexts, is well understood to have such connotations as “eco-friendly,” “environmentally friendly,” or “sustainable” (Kim et al., 2013). Within the world of green consumerism, organic products play a central role. Evidence for this can be seen partly by the positive growth that pushed global sales in the organic market up to 97 billion US dollars in 2017. This suggests that, as the idea spreads, organic product markets will continue to experience correspondent growth. The EU Health Literacy Project describes health knowledge as “the knowledge, motivation, and competencies to access, understand, appraise and apply health information in order to make judgments and take decisions in everyday life concerning health care, disease prevention and health promotion to maintain or improve quality of life throughout life” (Sørensen et al., 2015, p. 1). Also, health knowledge refers “content and context specific knowledge about health and health care” (Gellert et al., 2016, p 2034). Quite discernible from what is popularly known about that which is defined and applied, while improved health outcomes and increased knowledge on preferred health options (Chin et al., 2011). Factual and procedural health knowledge are the two subdivisions for greater detail of an understanding of the knowledge on health. The two categories of health knowledge are closely related and have a dependent relationship. The knowledge of the design by which a health condition is treated is factual.

In contrast, the detailed mannerism of timing and executing the factual knowledge design is referred to as procedural health knowledge (Schulz et al., 2005). Organic products are looked to as being supportive of healthy lifestyles. Health and sustainability can be explained by lifestyle (Kim & Chung, 2011). Health knowledge is highly important in coping with and preventing chronic problems. Simply put, knowledge of health is related to health behavior (Gellert et al., 2016). Yin et al. (2010) found that health benefits, like health development and preservation, are the dominant motivators for green consumption. Purchase intention refers to the evaluation or attitude of consumers to the related products, with the stimulation of external factors, which constitutes a consumer’s willingness to buy. At the same time, consumers are willing to buy some products. The higher the purchase intention, the greater the probability of purchase (Dodds, Monroe & Grewal, 1991). Consumer buying behavior can usually predict by their wishes (Bai, Law & Wen, 2008). Basis Zeithaml, Berry & Parasuraman (1996) also agreed that the willingness to buy is a behavioral intention. However, the willingness to buy is not the same as buying behavior occurred. However, it is no doubt that

consumers usually base their own experience and search for relevant information to assess by comparison and judgment before arising from the purchase behavior. In other words, the personal willingness to buy the green product is likely to be consideration of health reasons and the level of interest in environmental values.

Proposition 3: *Health literacy significantly impacts the intention to buy smart lights.*

Altruism: The Underlying Connection

Many management scholars have incorporated the concept of altruism as the mediating role or moderating concept. The concept of altruism has been of great importance in studies as it is referred to as the happiness of other societal members or living beings (Kim, 2016; Lai & Chang, 2011). This concept is based upon the principles concerning the sustainable development of natural resources and the resources essential for people's prosperous life. This can be individual or collective but directly related to society's overall well-being. Similarly, the study of Ritchie et al. (2021) disclosed that sustainability in society is attached to the consumer's attitude toward altruism. China's industrial zones are collaborating with their consumers to attract them to have their renewable products after a certain usage time. Similarly, the study of Robina-Ramírez et al. (2020) has highlighted that consumers' attitude is essential and attached to product ease of use.

Energy and environmental awareness have been investigated to understand their influence on behavioral variables and explain the gap between the consumers' attitudes and orientations towards energy conservation and their actual behavior. Ma et al. (2011) examined the influence of government propaganda and information campaigns on the general awareness level of household consumers in China. They found a high level of awareness about the energy challenges because of the increased information campaigns executed over the preceding year. This awareness is believed to cause Chinese consumers' highly positive attitudes. Similar results were found by Ha and Janda (2012), who examined the influence of environmental awareness on the purchasing intention of electrical appliances and small electronic products through its influence on the subjective norms amongst South Korean households.

Similarly, other researchers (Giang and Tran, 2014; Buchanan et al., 2014) found that environmental knowledge relates to consumers' attitudes toward purchasing EEP. The attitudes towards purchasing such products are the most substantial factor influencing their purchase intention. However, those findings directly contradict the findings of Mei et al. (2012), who found that energy purchase intentions can be predicted by the level of energy awareness, and the findings of Buchanan et al. (2014), who also suggested a positive influence of the energy awareness on the purchase intention of EEP. The debate on the specified contribution

of energy awareness on behavior intention has not matured in the literature. It is always considered subject to different contingent factors that make it a fruitful area of investigation.

Altruism is about acting on others' behalf without expecting any benefit (Schwartz, 1977). It is a significant predictor of environmental safeguarding (Nath et al., 2014; Yadav and Pathak, 2016). Consumers with higher levels of altruism are more cautious about the ecological benefits of their behavior than the consequences for their selves (Steg et al., 2014). Therefore, this group of consumers is more conscious of the environment. In the wake of past research (Guéguen and Stefan, 2016; Yadav and Pathak, 2016), the findings show that altruism significantly affects customers' green purchase intentions. Ajzen (1991) explored in his TPB model that the decision-making framework related to ethical behavior, showing that customers' consciousness of ethical behaviors and green purchase decisions also come under the umbrella of ethical behavior. According to many researchers, an altruistic value is also a personal value structure that significantly influences behavior (Teng et al., 2015). In green marketing, an altruistic value is a subset for accounting for pro-environmental behavior (Kaufmann et al., 2012). Altruistic values, of course, reflect concern for the welfare of society and others (Teng et al., 2015; Rahman and Reynolds, 2016).

According to Teng et al. (2015), an individual's sense of what is right and ethically right to do is composed of personal norms that belong to a deliberate commitment that individuals feel in making the best choice, irrespective of what other individuals think. Altruistic values include accomplishing something good for others without anticipating anything (Teng et al., 2015). Although some researchers argued that altruistic values have an important role in predicting consumer pro-environmental behavior (Straughan and Roberts, 1999; Mas'od and Chin, 2014), studies on green hotel selection as an altruistic behavior are scarce, and little is known about the importance of altruistic value in terms of their effect on consumers' green hotel selection. However, despite the limited studies, altruistic values have shown some promising effects on consumer pro-environmental attitudes, intentions, and behavior (Straughan and Roberts, 1999; Kaufmann et al., 2012; Mas'od and Chin, 2014; Teng et al., 2015). Mas'od and Chin (2014) study analyzed a sample of 200 respondents to determine the variables influencing consumers' green hotel selection in Malaysia. The author has defined altruistic values as concern for the welfare of society and others and concluded that altruistic values are one of four psychographic variables that significantly influence consumer green hotel selection. Also, Teng et al. (2015) explored the relationship between altruistic values and the theory of planned behavior in Taiwan and China. Analysis of the results from a random sampling of 258 respondents showed that altruistic values have the most predictive power for explaining perceived behavioral control towards green hotel selection, following influenced attitude and intention. In a study conducted in the USA, Straughan and

Roberts (1999) used the norm-activation theory to predict consumers' ecologically conscious behavior. Adopting a convenience sampling of 235 respondents, they argued that altruistic value is the second most important characteristic among all the psychographic characteristics that significantly influence consumer pro-environmental behavior.

Proposition 4: *Altruism mediates the relationship between social sustainability awareness and the intention to buy smart lights*

Proposition 5: *Altruism mediates the relationship between environmental sustainability awareness and the intention to buy smart lights*

Altruism can play an important role in building a relationship between health literacy and the green environment to support a healthy change in the world (MacAskill & William, 2015). This can also lead to sustainable development, thus preserving natural resources for future generations. Thus, Altruism is considered to mediate between "health literacy" and "green environment." Studies have been conducted in the past to support this statement, some of which are discussed.

Lights are considered to be very important in today's households around the world. They are the basic energy-providing products in any building. It has been observed that the rays from normal light bulbs or tube lights are ineffective, and they even damage human health, and they require a lot of voltage to work. This leads to poor health and ineffective economic effectiveness (Moghavvemi, Jaafar, Sulaiman, & Tajudeen, 2020). That's why the concept of smart lights (also known as "light emitting diodes (LED)") was introduced. People were made well aware of these smart lights' usefulness economically and for health benefits. These lights are found to be user-friendly as they emit rays that are safer for patients as well as for normal individuals. Less voltage is required for work these lights, so they are also found to be environmentally and ecologically friendly (H & SS, 2017). The LED supports a pollution-free environment. However, the consumer's behavior is considered highly responsible for adopting LED lights instead of regular light bulbs or tubes. The companies also make their policies by keeping in mind the nature of consumer buying. For this purpose, a study was conducted in Malaysian households (Zhang et al., 2018). The main aim of this study was to determine different factors involved in the intention of the consumer to buy LED lights. For this purpose, about 1075 questionnaires were designed to be filled out by authentic householders in Malaysia to understand the reasons for the purchasing of LED by these individuals. The "partial least square" technique was then used to analyze the data obtained (Nardelli et al., 2017). The results obtained from this research study showed that the consumers' awareness of the usefulness of the LED encouraged them to buy these smart lights. They felt

guilty if, even after knowing the importance of LEDs for health and ecological purposes, they do not buy them. Thus, it was concluded that the act of selflessness (also known as Altruism) played an important role in buying LED lights by the consumers, and this increased the use of these smart lights in houses and hospitals for safety and health purposes (world, 2018). Thus, based on the above discussion the following proposition is proposed:

***Proposition 5:** Altruism mediates the relationship between health literacy and the intention to buy smart lights*

DISCUSSION

In the Chinese market, people are quality-oriented rather than price oriented. These consumers prefer green and high-quality products in terms of lights or electricity-related products. They know how the energy is provided and what it costs through natural resources. Environmentally cautious people only wish to disburse their savings into high-quality-oriented goods and respond only to the huge green energy utilization parameters (Groß, 2015; Haba et al., 2017). The energy-cautious people always suggest using smart energy products or smart lights as they would feel at ease doing business with companies with sources of excess product quality and concerns about the sustainability of the world's energy resources. Keeping in mind the need for sustainability and green products in Chinese consumers, this study explores the factors that can lead to increasing the purchase decisions for smart lights in Chinese consumers and constructed oh conceptual framework, see figure one below, based upon the literature findings and propositions that have been drawn from these findings.

The findings of the study indicate that Chinese consumers have a high level of sustainability awareness in terms of social as well as environmental awareness. Moreover, it has been posited that social and environmental sustainability awareness has a significant positive impact on the purchase decisions for smart lights. Furthermore, it is also positive that health literacy is high among Chinese consumers, and this literacy level leads to smart purchases, including an increased intention to buy smart lights. The altruistic nature of the consumers in the Chinese market is a significant factor that impacts the purchase of smart lights as it leads to increasing the impact of sustainability awareness and health literacy on the purchase intention of smart lights by including an element of emotion and positive social intentions.

Chinese consumers have better and hygienic intentions to spend money on products that are sustainable for their survival, as the Chinese are well aware of social and environmental sustainability (Hew et al., 2018).

This was seen as huge competition in the Chinese market, and firms are striving hard to enable themselves as part of community needs. The brands are now struggling to provide materials to customers who are sound and which have significant benefits for the environment and people of the country as people are having excess information through different studies and articles because recent global environmental concerning platforms have spread out the latest information that the environment is being harmed by the industries rapidly and the governments must take few actions to carry out the substantial use of green energy and resources which are renewable as only these can save the environment from potential harms (Kalantari, 2017). On the other hand, energy consumption and environmental preservation are the worldwide sustaining issues in this era, and undesirable industrial behavior is causing much harm to sustainability issues as well.

Therefore, the impacts of the usage of LED lights have been seen to be more effective as this usage is quite sustainable because such smart lights have great adaptive technology, which is useable for lower energy consumption and steady sustainability in the environment. Similarly, the study of Malik et al. (2020) analyzed individual decision-making regarding the use of technology. Scholars suggested that people prefer to use the technology if it is environmentally friendly and up to the mark for the public. Moreover, suppose the technology in mitigating the harmful effects of overall survival or carbon emission from the country. In that case, the Chinese people are positioned to spend a lot on such products, which can be proved significant against the huge guilt of lacking sustainable developments (Kamal et al., 2020).

From a sustainable perspective having a holistic view of the customers' needs is essential now to strategize the models of businesses. The research of Alipour et al. (2020) has disclosed that only mismanagement can lead to decreased efficiency in social sustainability and the overall output of the firms. The research of Asadi et al. (2021) has also identified that Chinese firms are now focusing on producing products or services that comply with the customer's centric behaviors of sustainability in the societies. This has turned huge variances in green products and green production practices. The companies with much variance between these things have to suffer a lot rather than the companions who do not have max differences (Lai & Ulhas, 2012).

Green practices are now being undertaken by the customers of the Chinese markets as well as they know that social sustainability is required to have significant impacts on the long-run survival. The study by Bhat et al. (2021) has shown the positive impact of social sustainability on the customers buying intentions of technological products as customers think such products are unique and are in compliance with the green environment of society. Some Chinese firms have been seen to be fairly aligned with the customers' interests and provided them with the goal of huge achievements in the form of social sustainability awareness through

TV advertisements and social media marketing techniques. The research of Butcher and Chomvilailuk (2021) has also provided strong arguments that the customers have spread out the positive word of mouth in the form of high sales and a positive image of the companies which are utilizing their resources to keep the green practices in line and incorporate such practices which are in the interest of both the business and society as well. Moreover, some places have given evidence that the customers are now well recognized in any country as the consumers have become far more rational than before (Lee, 2013).

Overall, the propositions that have been presented within this study are the positive impact of social sustainability awareness on smart light buying behavior, a positive impact of environmental sustainability awareness on smart light buying behavior, a positive impact of health literacy on smart light buying behavior, and the mediation of altruism between these relationships. These positive relationships are represented in the conceptual framework given below.

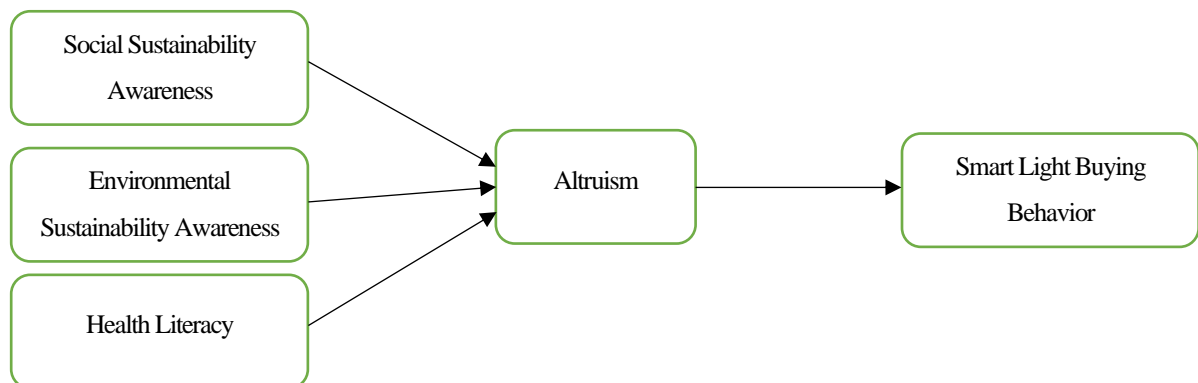


Figure 1: Conceptual Framework

CONCLUSION

In this paper, the researcher conducted deep literature analysis in order to examine how various variables can impact the smart light buying behavior of the Chinese consumer. The literature review revealed that the most significant variables in this perspective include sustainability awareness and health literacy of the consumers. The findings of the study conclude that the higher the awareness of consumers regarding the importance of social sustainability and environmental sustainability, the higher the tendency to buy environmentally friendly and sustainable products. Health literacy also impacts pro-environmental behavior as it leads to informing consumers regarding the impact of green products on their health. Therefore, the Chinese consumer shows a greater tendency to buy sustainable and being products that have a pro-environmental aura. Another factor that has emerged as a vital motivator of Jesus giving products in this study is altruism, as it is shown that

altruism connects external and internal factors such as health literacy, social awareness, and environmental sustainability awareness with the purchase decision-making process of a consumer.

This study has several benefits to literature and practice. The discussion of the mediation of altruism between smart light purchasing and independent variables like social sustainability awareness, environmental sustainability awareness, and health-related literacy is also significantly contributing to theoretical knowledge and information, and literature. Moreover, this study is practically significant for analyzing the level of social sustainability awareness and environmental sustainability awareness of the customers, health-related literacy, and buying of smart lights in China, so the experts and practitioners can utilize this information while designing and producing the product according to the customers. On the basis of the results of the study, the practitioners and experts can develop policies for enhancing the level of social sustainability awareness, environmental sustainability awareness of the customers, and health-related literacy.

The study has some limitations as well. First, this study was of a conceptual nature. Therefore, future research on actual data is required. Moreover, the study did not use a systematic review strategy to derive the conceptual framework but instead simple content analysis of the research papers that fall into this domain. In the future, researchers must conduct meta-analyses and systematic reviews to get a better understanding of gaps in past literature. The presented conceptual framework also needs to be validated by conducting a quantitative analysis in the future in various contexts.

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