

Article

The Antecedent of the Sustainable Purchasing Attitudes among Generation Z: A Terror Management Theory Perspective

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Abstract: Sustainable purchasing attitudes have been a topic of increasing research interest; however, to date, limited studies have investigated its antecedents, particularly within Generation Z in developing countries. In this paper, we empirically explore the factors that affect young consumers' attitudes to purchasing sustainably within the holistic approach of terror management theory (TMT) by qualitatively exploring how the TMT constructs of death salience and self-esteem influence sustainability attitudes within Gen Z in Saudi Arabia, while considering the role of religion in the proposed TMT framework. Using purposive sampling, qualitative rich data were collected from 18 interviews with young consumers (Gen Z). Our findings revealed insights that help to understand the attitudes that influence sustainable purchasing judgments among young consumers in Saudi Arabia. This contributes to a better understanding of the holistic literature on sustainable purchasing attitudes and may have several implications for sustainable brand management in addition to opening up new research avenues for further investigation.

Keywords: sustainable purchasing attitudes; qualitative data; terror management theory (TMT); Saudi Arabia



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1. Introduction

Environmental issues have emerged as a major concern in recent years, drawing attention from a variety of stakeholders [1]. The increase in environmental concerns has had a major influence on consumers' purchases of sustainable products because shoppers are now more receptive to environmental regulations and are equally concerned about the potential ecological consequences of product disposal after consumption [2]. Prior empirical studies reveal that consumers are now aware that their consuming practices may contribute to environmental degradation, which could potentially change consumers' habits, encouraging environmentally friendly purchases and green or sustainable shopping [3].

However, consumers are not necessarily motivated to adopt a sustainable purchasing attitude to help in conserving the environment [1,4]. For example, it has been revealed in a cross-countries survey that about 90% of Malaysians, while conscious of environmental issues, are not willing to change their purchasing habits to be geared towards adopting sustainable purchasing behaviour [5]. Several factors have been reported as the main reasons for preventing consumers from making a sustainable purchasing decision; for instance, compared to non-green/sustainable items, consumers perceive green/sustainable services as highly priced and designed for high-income market segments [3]. For that reason, governments such as the Malaysian government have launched various initiatives to encourage individuals to purchase environmentally friendly items and adopt sustainable behaviours [3]. Such initiatives have positively influenced consumers, particularly millennials, who reported a willingness to pay extra for eco-friendly and sustainable purchases [5].

Although the development of sustainable policies is receiving more attention, a foundation for change ultimately rests on changes in human attitudes and behaviours [6]. This has sparked interest in the reasons for consumers' pro-environmental and pro-social beliefs and behaviours, often known as sustainability attitudes and behaviours [7]. However, there is still a lack of agreement on what motivates consumers to adopt sustainable attitudes [8,9]. This provides compelling justification for further research into what motivates people in general to adopt a pro-sustainable perspective that results in sustainability.

Within the current study, post-millennials, or Generation Z (Gen Z), refers to young consumers who were born in or after 1990 [10]. Experiences people have as they grow up, such as the use of information technologies, have an impact on their values [11,12], which, in turn, alters their purchases, values, beliefs, and attitudes [13]. Previous studies have shown that Gen Z shares many traits and similarities, particularly in terms of attitudes toward adopting emerging digital technologies, using social media platforms, and sharing inclinations for convenience [14,15]. Unlike other generations, Gen Z is characterised by seeking convenience, safety, ease of use of products and services, and curiosity about new technologies, which stimulates an exploratory attitude and behaviour, particularly when it comes to purchasing [10,14,16].

In addition, it has been revealed that young consumers generally tend to be environmentally conscious when it comes to enforcing good purchasing and consumption habits, such as managing waste and recycling [17], as a result of the influence of their parents and guardians [18]. However, as young consumers have not received enough attention so far when it comes to sustainability, scholars have called for more research that focuses on young people's experiences, goals, and attitudes toward a sustainable future, to determine how to motivate them to act as more active agents for change [19].

On the other hand, sustainability has been a top priority for many governments around the world [20]. Within the Saudi Arabia context, the Kingdom of Saudi Arabia has recently included a special chapter for realising sustainable development in its Vision 2030 through three main goals, including ending poverty, reducing air pollution, the preservation of all natural resources, ensuring people's health and safety, spreading sanitation and cleanliness, and making use of renewable energy [21], which encourage various stakeholders to explore factors that may help in achieving such a vision.

Accordingly, within the current study, we borrowed terror management theory (TMT) from the environmental literature to understand the extent to which young consumers realise the long-term influence of their unsustainable attitudes (i.e., the death of flora and fauna) and the antecedent of their sustainable purchasing attitudes [22,23]. However, the literature currently available is still in its early stages; as such, it only provides a partial picture of TMT's application in sustainability research, as sustainability includes social and economic aspects and beliefs that need to be taken into consideration [24]. As a result, scholars have called for more empirical research on how TMT is fitting the overall picture of sustainability attitudes that lead consumers to adopt a sustainable attitude and behave sustainably [9,25]. According to TMT, religion is a significant component of worldview and symbolises core beliefs that influence numerous elements of consumer attitudes and behaviour; however, there is insufficient knowledge about how religion affects sustainability [9,26,27]. We, therefore, address such gaps in the current study by empirically exploring the factors that affect young consumers' attitudes to purchasing sustainably within the holistic approach of terror management theory (TMT). The paper further examines how TMT constructs of death salience and self-esteem influence sustainability attitudes within Gen Z in Saudi Arabia, while considering the role of religion in the proposed TMT framework.

Several important contributions are made by our research. First, we contribute to the sustainability literature by considering Gen Z awareness and definitions of both the environmental and social aspects of sustainability. Second, we broaden TMT's applicability to holistically encompass broader sustainability concepts, which were previously limited to the study of TMT's effect on environmentalism, except for a study by Rahimah et al. [9], in which they quantitatively incorporated consumer materialism and social aspects of

sustainability. Third, we diverge from other studies that were limited to examining the direct impacts of TMT (mainly mortality salience and consumption materialism) on environmental preferences by digging into the elements of self-esteem and religiosity and their ultimate influence on sustainable purchasing attitudes. This offers a distinct perspective on the mechanisms via which TMT variables can affect sustainability attitudes. Fourth, we contribute towards extending the scant literature on the role of religion in the TMT and sustainability literature by shedding light on the unforeseen consequences of religion that both strengthen the connection between mortality salience and materialism and influence materialism and sustainability attitudes. Fifth, our study adds to the body of knowledge in marketing on the variables that directly and indirectly influence Gen Z consumers' attitudes toward sustainability purchasing. Finally, a set of practical recommendations based on empirical evidence is offered for practitioners and marketers to use TMT to encourage Gen Z consumers' attitudes toward sustainability.

The paper is organised as follows. We first review the literature to identify our research gaps and justify our study aim before deciding on the adopted methodology. We then present and discuss the results using thematic analysis. Finally, we conclude the study by presenting theoretical contributions, managerial implications, limitations, and opportunities for future research.

2. Theoretical Underpinnings

2.1. Sustainability Awareness

Sustainability refers to achieving our current development goals without affecting the capacity of the generations to come to achieve their own goals through preserving natural resources while balancing our social and economic agendas [28,29]. Conserving the environment is considered only one aspect of sustainability, and hence most definitions of sustainability include other aspects, such as social fairness and economic development [30]. Within the social aspect of sustainability, people's well-being and equitable levels have been fundamental pillars that attract scholars' attention, particularly when planning for a holistic sustainable development that ensures bringing economic benefits to local communities [29]. Therefore, various countries have been incorporating economic, social, and environmental sustainability concepts to create and implement social policies that improve the overall achievement of sustainable development [31]. However, various stakeholders may have different interpretations of the concept based on their agendas and goals; for instance, some policymakers look at the economic aspect of sustainability and prioritise it over the other two aspects [28]. Other environmentalists focus only on preserving natural resources, particularly with protected areas and national parks [32], while socially connected communities prioritise the sustainability of culture, values, and the overall sustainable development benefits to the local community, along with preserving the environment [29]. Accordingly, scholars have referred to the importance of raising sustainability awareness and knowledge among the local communities and particularly the young generation, which is a research area that needs to be further investigated [33]. This would enhance the current knowledge of the factors that motivate young consumers to develop a better sustainability attitude, which would affect their sustainable purchasing intention and behaviours [19].

As the younger population have recently been found to be attracted to learning about sustainability issues and climate change [34,35], formal education is being increasingly developed to provide a solid foundation for understanding relevant sustainability topics, which can then be reinforced through educational programs and initiatives [33,36]. In this vein, colleges, universities, and schools are serving as green engines for sustainable communities by raising sustainability awareness among youngsters [20]. For example, the Canadian government has prioritised young consumers' education and acknowledged the significance of involving young Canadians in environmental issues and empowering them to participate in the formulation of environmental policy through several initiatives [37]. Further, in Italy, a recent study revealed that university students are showing a more positive sustainable attitude at the end of their term after studying about the efficiency of

the energy system, which raises their confidence as the building blocks of a sustainable society [20]. Nevertheless, Barnes et al.'s recent studies findings about education for suitability (EfS) imply that majority of the Australian schools surveyed in their study did not prioritise this EfS project or consider it to be cross-curricular [36]. Therefore, they suggested new strategies to make sure that schools promote and prioritise sustainability, as well as providing teachers with the resources related to it for the ultimate goal of influencing young consumers' attitudes [33].

Besides education and initiatives, social media and mobile applications are found to have a vital role in shaping young consumers' attitudes, and hence behaviour [38]. In China, for instance, a study revealed the positive influence of social media on shaping university students' attitudes towards eco-branding, habits, green purchasing, and green consumption [39]. Further, during and after COVID-19, youths were more focused and active on social media, particularly Facebook [40], which is found to be one of the most important media platforms that are influencing and changing the green and sustainable attitudes and habits of youngsters [41,42]. Accordingly, various governments, policymakers, and marketers have been using social media platforms to disseminate sustainable and green messages to raise young consumers' awareness and hence positively change their attitudes [40]. Other studies' findings revealed that field visits to sustainable product locations (i.e., sustainable oil palm industry) are positively influencing young Malaysians' knowledge, perception, and interest attitudes toward sustainability issues [33].

2.2. The Sustainable Purchasing Attitude

The attitude towards sustainable purchasing refers to the consumer's mental assessment of their sustainable purchasing decisions, which includes the consumer's attitude toward ethical, fair, and environmentally friendly shopping [43]. Within the current literature and with the growing market share for sustainable and green products and services, different terminologies were developed to explore related and similar consumers' tendencies, such as "environmentally responsible attitude" and "green attitude," to provide a better interpretation of customers' attitudes towards purchasing sustainability in various contexts [44–46]. According to Banyte et al. [47], consumers are more conscious of environmental issues and health vulnerability, as well as flora, fauna, and natural resource protection; hence, they consider these factors during their purchasing decision-making process. Consequently, the recent literature focused on promoting sustainability across several industries, such as travel and tourism [48], and the food-related literature sought to examine consumer perceptions and attitudes towards organic and green food that is sourced locally, while preserving animal welfare, protecting the environment, and reducing wastes [49].

Due to its remarkable capacity for acting, the attitude has continued to be the focus of the environmental literature, as it shapes individuals' behaviour [46]. It demonstrates that people's behaviour diverges from their intentions, from having a favourable view toward environmentally friendly products [50,51]. Consumers' sustainable purchasing intentions are found to be influenced by their attitudes [52].

Many academics have focused on the attitude as an exogenous or endogenous construct because of its significance in fostering sustainable development [53,54]. According to terror management theory (TMT), antecedents of green or sustainable purchasing attitudes that influence green purchase intention are factors such as self-esteem, religiosity, mortality salience, and materialism, which are found to influence consumers' sustainability attitudes [9]. While self-esteem is a crucial component of the human ego that reflects the subjective assessment of one's value and indicates how positively one feels about oneself [55], religiosity refers to the individual's belief in God and adherence to the principles of religion, which consequently affect values. True religiosity may influence individuals' beliefs, subjective norms, attitudes, and values [27,56]. For instance, Islamic religiosity is found to have a positive impact on Egyptian customers' subjective norms, attitudes, and intentions to visit green hotels [57]. In addition, materialism is defined as the value people

place on belongings, while mortality salience is defined as being reminded of one's death or the deaths of loved ones, which terrifies people about their impending demise; hence, individuals' mortality awareness would motivate them to infuse their lives with meaning to impress their societies [9,58].

However, some studies reported controversial results when the relationship between consumers' ecological attitudes and environmental behaviour was assessed. For instance, individuals with positive ecological attitudes are more likely to engage in ecologically responsible behaviours and purchase sustainable items [59,60]. On the other hand, consumers constantly and firmly take both their benefits and the benefits of eco-friendly items into account, which influences their attitude [61]. Prior studies referred to the extra prices that consumers must pay for eco-friendly products and consumers remorse, which is considered a key component of long-lasting change towards a sustainable way of life and encouraging a sustainable mindset [62]. However, important information and knowledge, environmental awareness, and eco-labels are playing a significant role in achieving this goal [63].

2.3. *Terror Management Theory (TMT)*

TMT reflects humans' universal need to control their awareness of their mortality and make an effort to allay their concerns about dying by adhering to accepted beliefs, values, and cultural norms [22]. The awareness that death is imminent and eventually unavoidable creates a special human capacity for experiencing potentially crippling anxiety, considering the biological propensity for living, which further leads to increased self-esteem and positive subjective belief to lessen this suffering [9,63]. TMT is conceptualised in previous research through understanding mortality salience (i.e., being reminded of one's death or that of relatives) and materialism or the value people place on things as desirable actions to achieve desired end states [58,64]. Prior studies revealed that to reduce morality salience and individuals' insecurity about their existence, people with high mortality salience would potentially gear their attention towards obtaining high-status goods (i.e., materialism) that will impress their community members [65,66], and hence, within the TMT model, materialistic behaviour is something that is proven to be related to the morality salience [67].

On the other hand, TMT relates self-esteem to the human ego, insecurities, and self-doubt, further reflecting the extent to which individuals positively feel about themselves and the subjective assessment of their value, which are found to increase under potential threats [55,68,69]. Such individuals are convinced of their poor social value and think that their abilities, life ambitions, and social identities are unworthy and, accordingly, individuals with low self-esteem strive to own material possessions to elevate their social position and raise their sense of worth [9,66,69–71]. This implies that there is a negative relationship between materialism and self-esteem, as revealed in prior studies [67]. For instance, a study by Rahimah et al. [9] quantitatively assessed the association between self-esteem and materialism and the extent to which both constructs influence consumers' concerns for the environment. Similarly, a study by Bock et al. [72] reported that materialist consumers could become concerned about environmental issues to lessen the guilt they experience as a result of their excessive purchasing and enhance their self-esteem [72].

Furthermore, TMT has revealed the role of religiosity (i.e., a person's belief in supernatural beings and their commitment to living up to their precepts [73,74]) in influencing consumers' sustainable purchasing attitudes [9]. Religious persons hold religious orientation and beliefs that can influence values, attitudes, and behaviour at both the individual and societal levels [27,75], which ultimately lead to reducing the panic and terror resulting from thinking about mortality and fear of death [26,63]. In other words, materialists who practice religion would be more concerned with social and environmental issues as they give high priority to the laws of God, particularly regarding preserving nature and benefiting humankind while seeking societal approval [27,74]. In contrast, other scholars, such as Kay et al. [76], assert that religious individuals believe that God can handle the

planet without humans' interference or actions. Due to such contradictory results, scholars have been calling for further investigations to back up such claims within the TMT framework, particularly concerning its influence on shaping customers' sustainable purchasing attitudes, as current evidence is still scarce [9,26].

3. Research Design and Methods

To study the sustainable purchasing attitudes of young consumers, the inductive approach is appropriate for the exploratory interview employed, allowing us to dig deeper and understand motives, attitudes, and collected data that are not revealed otherwise [77–79]. This study employed a non-probability approach (i.e., purposive sampling) by using similar criteria for selecting study respondents [80]. Criteria included being a young consumer within the age group (19–28 years old) and having recently purchased at least one product in the last three months, preferably of sustainable or green material.

Since semi-structured interviews allow scholars to understand feelings and attitudes and reveal current realities, this type of data collection is considered a grounded theory instrument [81]. Between July 2022 and January 2023, several attempts were made to invite young consumers to contribute to the study. More than 74 people were approached and only 19 agreed to contribute and accepted our interview invitation.

In the current study, a manual coding approach was employed after the interviews were recorded and transcribed [82]. Respondents were approached in environments such as their universities and were asked if they would like to volunteer to be interviewed for the study. Each recorded interview lasted approximately 30–45 min. Since this method requires the data to reach saturation (i.e., no new themes can be extracted from the collected data), interviews continued until saturation was reached at the 19th interview [83,84]. Initial themes were developed after going through the interview transcriptions; then, data were coded and connections between the codes generated the focused categories, which enhanced the data interpretation [85,86]. The prevailing literature was used to ensure the validity of the coded data after each interview and to finalise the codes under the light of current associated research [84].

Procedures and Pre-Test

Considering that the native language of the respondents was Arabic, which is different to the language of this article, two versions of the semi-structured interview questions were used for data collection [84]. The original questions were composed in English and translated into Arabic by the researchers and a bilingual colleague. Another bilingual colleague, whose first language is Arabic, reversed the translation back to English to ensure that the translation was valid. Following that, these two English versions were examined and discovered to be devoid of any elements that provide a distinct cultural background in terms of language. Interviews with each respondent started with a brief introduction about the study's aims while introducing concepts such as mortality salience, materialism, religiosity, and sustainable purchasing attitudes. Examples of the interview questions included: What do you know about sustainability and sustainable purchases? How do you think being a religious Muslim helps you to form a sustainable purchase attitude? What are your inspirations to consider purchasing sustainable products, is this related to the idea of death or self-esteem? Particularly in Saudi Arabia (this could include food and clothes) Respondents were asked to choose the language they preferred for conducting the interview. While 88% preferred to respond in Arabic, 12% preferred to mix between Arabic and English languages. Step two involved a pre-test for the questions with five university students to ensure that the questions were easily understandable and valid. As a result, to increase the language clarity, four questions were revised based on the pre-test input. Interviews quotes are presented in the Discussion Section, followed by the respondents' information, including the first initial of the interviewee, sex (male or female), and age (e.g., Interview 3, O/F, 20Y). Table 1 shows the study respondents' profiles.

Table 1. The study respondents' profiles.

Respondents	First Initials	Male/Female	Age	Education	City
1	R	F	25	Master	Jeddah
2	B	F	24	Bachelor	Jeddah
3	O	F	20	Bachelor	Riyadh
4	L	F	19	Bachelor	Madinah
5	Sh	F	20	Bachelor	Riyadh
6	A	M	25	Bachelor	Riyadh
7	S	F	19	Bachelor	Riyadh
8	R	F	19	Bachelor	Tabouk
9	E	F	28	PhD	Jeddah
10	Ab	M	26	Bachelor	Jeddah
11	H	M	27	Bachelor	Jeddah
12	F	M	27	Master	Riyadh
13	J	F	22	Bachelor	Jeddah
14	B	M	24	Bachelor	Jeddah
15	F	F	21	Bachelor	Jeddah
16	N	F	22	Bachelor	Jeddah
17	R	M	28	Bachelor	Jeddah
18	A	M	24	Bachelor	Riyadh

According to Table 1, the sample contained 11 female and 8 male respondents, and all of them were between 19 and 28 years. In total, 88% of the sample obtained at least a bachelor's degree. Further, respondents are from different Saudi main cities, such as Jeddah, Tabouk, Madina, and the capital of Riyadh.

4. Results and Discussion

In the following sections, the various interview themes are explored, in line with TMT. The initial themes in the replies were identified, and links between various codes were then cogently utilised to create the targeted categories. The prevailing literature and related studies were used to demonstrate the validity of the coded data. After each interview, this process was recapped, leading to the subsequent interview and, lastly, the themes were refined for selective coding [28,29]. Gen Z's understanding of the concept of sustainability was explored by directly asking them to provide simple definitions from their perspectives. Second, TMT was tested by exploring the hidden motivation of Saudi Gen Z to adopt a sustainable purchasing attitude. Initial interview quotes, themes, and categories were discussed in the following section in light of the previous literature.

4.1. Gen Z Perceptions of Sustainability Definitions

Majority of respondents have provided sustainability definitions that relate to only its two pillars (i.e., environmental and social aspects), which is in line with previous literature [29]. For example, one of the respondents indicated that "Sustainability is the capacity to enhance human well-being and safeguard ecosystems so that people, plants, and animals can live healthy, sustainable lives" (Interview 7, R/F, 19Y). This shows a good understanding of only two pillars of the sustainability concept discussed in previous studies as it does not include the economic sustainability aspect [31]. Only one respondent showed a comprehensive understanding of the concept and its three pillars, as follows: "Sustainability is about preserving the economy, social life, and ecology" (Interview 1, R/F, 25Y), which reveals a holistic understanding of the sustainability concept with its three

main pillars [28]. Another respondent focused on only one pillar, enhancing human life, as follows: “Sustainability, in general, is the capacity to increase the quality of human life” (Interview 9, E/F, 28Y). Interestingly, during the interviews, it was observed that majority of respondents initially associated sustainability with issues of environmental preservation and the protection of natural resources, which is similar to the environmentalist views [32]; however, after participating in conferences, sustainability initiatives, and reading about sustainable development, they gradually began to understand the concept more through including the social aspect and even the economy, as indicated in Interview 1.

Other perspectives of sustainability definitions were also presented during the discussions with the study respondents. Possessing survival is the extent to which individuals can preserve the things they purchase and own, such as materialistic goods (i.e., clothes, food, and shelter), which refer to the individuals’ materialistic status [68]. Non-materialistic individuals are more spiritual and seek less metaplastic goods in their lives [71]. However, if they own them, they tend to preserve them as a part of their spiritual beliefs. For example, according to Interviewee 4, sustainability is the idea of finding techniques for things to last longer, such as using sustainable construction techniques to help buildings last for more years in good condition: “As a religious person, I’m not seeking to own many clothes and handbags, and I consume less metaplastic goods, but if I bought some, I try to keep it preserved for as long as possible” (Interviewee 4, L/F, 19Y).

Humankind’s survival is another perspective from which some respondents explained their understanding of sustainability. This refers to the continuous generations of human beings on earth, as indicated in Interview 5: “Sustainability is about the lifestyle we adopt for the vibrant society to continue, human capabilities to be continuous, and humankind to continue” (Interview 5, Sh/F, 20Y). Both concepts of possessing survival and humankind’s survival can be considered theoretical contributions of the current study towards explaining Gen Z’s understanding of the sustainability concept.

4.2. Sources of Gen Z Sustainability Knowledge

Younger generations should be supported in schools and universities by promoting student involvement in practical sustainable initiatives and the growth of sustained, structured, teacher–student interactions [20]. Respondents referred to various sources of information for their existing sustainability knowledge. First, education is one of the main sources for learning about sustainability concepts [33]. Even if sustainability concepts are not included in a certain curriculum or level, students learn from their interactions with their professors and through events and initiatives, as indicated in the following quote: “There is no curriculum specialised in the subject of sustainability, but awareness is disseminated through university professors in various occasions” (Interview 1, R/F, 25Y). However, one of the respondents referred to her university degree in biology and chemistry and the extent to which such topics extensively equipped her with the knowledge required to change her attitude towards being sustainable, as follows: “I believe that students of biology and chemistry are the ones that are most interested in the subject of sustainability as they try to find solutions for food and environmental problems” (Interview 2, B/F, 24Y). Hence, within the current study context, university students, whether studying courses specifically related to sustainability or not having had a good opportunity, learn about sustainability in the university environment through interactions with teachers and events.

Other respondents believe that sustainability is an Islamic concept since it is more about preserving our resources, which is one of the things that Muslims are obliged to do to obey Allah and the Prophet Mohammad (PBUH), as indicated in the following quote: “Sustainability is an Islamic concept, and according to our religion we are supposed to save water and preserve natural resources. As Muslims, our religion urges us to consider sustainability” (Interview 3, O/F, 20Y). Hence, sustainability knowledge can be considered an integrated part of learning about practising Islam.

In general, initiatives and awareness campaigns, whether inside universities and schools’ boundaries or outside, can be another source of sustainability knowledge [33,36].

One of the respondents indicated that his sustainability knowledge was developed through his interaction with his manager at work and the initiatives he used to arrange on the topic, as indicated in the following quote: “There is a continuous number of sustainability and the environment initiatives from my manager at work. He is a man with academic training skills, and he had once an initiative called ‘Tarsheed’ (i.e., decrease consumption (through which he sought to inform the community about some good practices, particularly at home, such as energy consumption, food consumption, and the problem of waste disposal” (Interview 11, H/M, 27Y). In addition, conferences on green and sustainable practices can be a valuable source of information for community members to gain sustainability knowledge: “Awareness about sustainable development has increased due to many conferences and awareness campaigns in Saudi Arabia to achieve sustainable development for the individual to suit his needs and ambitions, such as the green Saudi initiatives” (Interview 1, R/F, 25Y).

Another respondent (i.e., Interview 10, Ab/M, 26Y) referred to initiatives developed through a large restaurant chain in Saudi Arabia (i.e., Albaik Restaurants), which aimed at educating children about the need to protect parks and tourist places from waste. Such initiatives can have a positive influence on disseminating sustainability knowledge among young Saudi generations, who are eager to acquire all types of knowledge, as indicated in the following quote: “It is difficult to influence the elderly since their beliefs are frequently formed and their convictions are strong and may be permanent, so we can only make a small impact for them and raise awareness for them. However, my younger siblings possess the capacity to learn about and get more information about sustainable development and they exhibit great enthusiasm” (Interview 2, B/F, 24Y). Individuals of a young age can also obtain sustainability knowledge from their parents, older siblings, and the community: “I see that teenagers between the age of 13 to 17 are the most significant segments in getting influenced by sustainability knowledge. Children are influenced by the actions of adults as well as their siblings because they look up to their older siblings as role models” (Interview 11, H/M, 27Y). Since the current generation tends to be more attached to devices [85], particularly social media [40] and mobile applications [38], one of the respondents referred to a previous conference in which a three-step application program was introduced to raise the children’s sustainability awareness, as follows: “The first step involved educating people on sustainable concepts and ideas; the second involves taking them on a virtual tour of their immediate surroundings, including nearby oceans, parks, and urban areas. The third stage is to organise a gathering of interested kids in a chat group so they can talk to one another and then discover how sustainability may be applied using basic concepts” (Interview 3, O/F, 20Y). This could provide children with a memorable experience of how to preserve the environment and natural resources and help in raising their sustainability awareness at a young age.

One of the other sources of acquiring sustainability knowledge is writing and podcasting about the topic, as indicated by one of the study respondents: “I have participated in writing an article on desalination, and a podcast on how we benefit from seawater which increased my interest in sustainable issues” (Interview 1, R/F, 25Y). The following table (Table 2) includes the codes and categories of Gen Z sustainability knowledge identified from the interviews.

Indeed, sources of sustainability knowledge can be either education, religion, family (i.e., parents and siblings), initiatives and awareness campaigns, interactions with interested individuals, applications and games, reading, writing, and podcasting about sustainability. Hence, if the government is willing to develop sustainability knowledge within Gen Z, policymakers and stakeholders may hope to transmit knowledge and information through these sources, producing a better-educated generation.

Table 2. Codes and categories of Gen Z sustainability knowledge identified from interviews.

Initial Interview Quotes	Identified Themes	Categories
“There is no curriculum specialised in the subject of sustainability, but awareness is disseminated through university professors on various occasions” (Interview 1, R/F, 25Y) “I believe that students of biology and chemistry are the ones that are most interested in the subject of sustainability as they try to find solutions for food and environmental problems” (Interview 2, B/F, 24Y). “Sustainability is an Islamic concept, and according to our religion we are supposed to save water and preserve natural resources. As Muslims, our religion urges us to consider sustainability” (Interview 3, O/F, 20Y) “There is a continuous number of sustainability and environment initiatives from my manager at work. He is a man with academic training skills, and he had once an initiative called ‘Tarsheed’ (i.e., decrease consumption) through which he sought to inform the community about some good practices, particularly at home, such as energy consumption, food consumption, and the problem of waste disposal” (Interview 11, H/M, 27Y). “A campaign for the company (Albaik Restaurants) (Nazieh and Wartan) aimed at educating the children about the need to preserve the parks and tourist places, and the same idea can be applied concerning sustainable ethical consumption” (Interview 10, Ab/M, 26Y).	Initiatives and awareness campaigns	Sources of Gen Z sustainability knowledge
“Sustainability is an Islamic concept, and according to our religion we are supposed to save water and preserve natural resources. As Muslims, our religion urges us to consider sustainability” (Interview 3, O/F, 20Y).	Religion	
“There is a continuous number of sustainability and environment initiatives from my manager at work. He is a man with academic training skills, and he had once an initiative called ‘Tarsheed’ (i.e., decrease consumption) through which he sought to inform the community about some good practices, particularly at home, such as energy consumption, food consumption, and the problem of waste disposal” (Interview 11, H/M, 27Y).	Work environment	
“Awareness about sustainable development has increased due to many conferences and awareness campaigns in Saudi Arabia to achieve sustainable development for the individual to suit his needs and ambitions, such as the green Saudi initiatives” (Interview 1, R/F, 25Y).	Conferences on green practices	
“It is difficult to influence the elderly since their beliefs are frequently formed and their convictions are strong and may be permanent, so we can only make a small impact for them and raise awareness for them. However, my younger siblings possess the capacity to learn about and get more information about sustainable development and they exhibit great enthusiasm” (Interview 2, B/F, 24Y). “I see that teenagers between the age of 13 to 17 are the most significant segments in getting influenced by sustainability knowledge. Children are influenced by the actions of adults as well as their siblings because they look up to their older siblings as role models” (Interview 11, H/M, 27Y). “The first step involved educating people on sustainable concepts and ideas; the second involves taking them on a virtual tour of their immediate surroundings, including nearby oceans, parks, and urban areas. The third stage is to organise a gathering of interested kids in a chat group so they can talk to one another and then discover how sustainability may be applied using basic concepts” (Interview 3, O/F, 20Y).	Applications and initiatives for young ages	

Table 2. Cont.

Initial Interview Quotes	Identified Themes	Categories
"I have participated in writing an article on desalination, and a podcast on how we benefit from seawater which increased my interest in sustainable issues" (Interview 1, R/F, 25Y).	Writing and podcasting	

4.3. Mortality Salience

Respondents referred to their understanding of the value of life, the facts of death, terror ideas, and the extent to which such ideas form parts of their judgments and attitudes in different situations. This includes their sustainable purchasing behaviour as well. For example, a respondent indicated that she purchases sustainable goods for helping the earth and humankind to live longer: "My inspiration or driving force behind my sustainable purchasing decisions lies in that I believe individuals are required to help the planet that is abundant with life as we live in a challenging time where there are danger and death everywhere" (Interview 7, S/F, 19Y). Another respondent referred to her willingness to preserve the human race and the other living organisms for many coming generations: "Since it is in our nature to reproduce, we care about the sustainability of our race and the quality of life for our grandchildren and subsequent generations" (Interview 7, S/F, 19Y). This indicates that respondents care more about not only their inevitable physical death [86], but also for other living organisms on the planet, which causes anxiety and, hence, inspires sustainability attitudes: "Because conservation leads to sustainability and non-conservation leads to extinction, my inspiration for supporting sustainability is to help achieve the balance in the relationship between humans and other living things" (Interview 7, R/F, 19Y). Accordingly, respondents seem to attempt to alleviate their fears of living organisms' death as well as the extinction of humankind through forming a sustainable attitude [64], as indicated in the following quote: "If there is no environmental sustainability, people will not only be unable to understand that our existence is dependent upon sustainability, but they will also be unaware of the seriousness of the threat that this behaviour poses to humans. If we continue in this barbaric manner, the earth will eventually be destroyed, and we will not be its successors. We will also be putting humans in danger, and it may even be possible to destroy humans" (Interview 8, I/F, 28Y). Initial interview quotes, identified themes, and categories are presented in the following table (Table 3).

Table 3. Codes and categories of mortality salience identified from interviews.

Initial Interviews Quotes	Identified Themes	Categories
"My inspiration or driving force behind my sustainable purchasing decisions lies in that I believe individuals are required to help the planet that is abundant with life as we live in a challenging time where there are danger and death everywhere" (Interview 7, S/F, 19Y).	Concerns for the earth and humankind	Mortality salience
"Since it is in our nature to reproduce, we care about the sustainability of our race and the quality of life for our grandchildren and subsequent generations" (Interview 7, S/F, 19Y).	Preservation of the human race and the living organisms	
"Because conservation leads to sustainability and non-conservation leads to extinction, my inspiration for supporting sustainability is to help achieve the balance in the relationship between humans and other living things" (Interview 7, R/F, 19Y).	Achievements of a balance between humans and the living things	
"If there is no environmental sustainability, people will not only be unable to understand that our existence is dependent upon sustainability, but they will also be unaware of the seriousness of the threat that this behaviour poses to humans. If we continue in this barbaric manner, the earth will eventually be destroyed, and we will not be its successors. We will also be putting humans in danger, and it may even be possible to destroy humans" (Interview 8, I/F, 28Y)	Fears of living organisms' death as well as the extinction of humankind	

While the previous quotes seem to be in line with the previous literature, i.e., [9,86], respondents in the current study referred to their concerns regarding mortality salience for others more than themselves and, hence, their sustainability attitudes are mostly focused on lessening the potential suffering of the earth [47].

4.4. Self-Esteem

Mortality salience was found to be related to increasing individuals' self-esteem [9], and self-esteem is found to increase under potential threats [55]. According to TMT, low self-esteem individuals show signs of insecurities and self-doubt, while high self-esteem individuals are found to be positive about themselves and their self-value [55,68,69]. Respondents referred to their self-esteem to explain why they possessed a sustainability attitude, desiring to help the entire society and achieve a core personal goal, as indicated in the following quote: "It is sufficient that having a sustainable purchasing attitude is beneficial to me personally and to preserve the entire society; this is the most motivating factor for me because sustainability is one of my most important goals" (Interview 3, O/F, 20Y). Unlike previous studies which revealed that high mortality salience individuals are found to have low self-esteem and, accordingly, purchase more goods to increase their self-value without taking into consideration sustainability issues [9,68,69], the current study showed a positive relationship between mortality salience and self-esteem since, while respondents showed high awareness of the facts of death and extinction, they still displayed high self-worth and confidence about themselves, with no signs of fears.

4.5. Materialism

There is a negative relationship between materialism and self-esteem, as revealed in prior studies [67]. Overall, the study respondents who showed high self-esteem, confidence about themselves, and self-worth indicated that they think carefully before purchasing goods, seeking to make sustainable purchases whenever possible, as indicated in the following quote: "I have a human inspiration to consider sustainability issues whenever possible in my purchasing for the ultimate goal of improving the quality of my life and help the humanity in general" (Interview 1, R/F, 25Y). According to TMT, low self-esteem individuals are convinced of their poor social value and think that they are unworthy; accordingly, they strive to own material possessions to elevate their social position [66,70].

Within the current study, respondents did not show any signs of being materialistic and they indicated that only necessary goods are purchased after looking at their description to ensure that they are sustainable whenever possible: "A person should seek continuous improvement throughout purchasing only things he needs after looking carefully at its details to ensure it is from sustainable materials, and therefore increasing the sustainability purchasing attitudes awareness is crucial" (Interview 1, R/F, 25Y). Another respondent showed that guilt could provide the stimulus for a sustainable purchasing attitude: "The fact that we feel guilty when we see images of oceans with trash and waste dumped in them and species that might go extinct makes us feel guilty and accordingly, we have to be careful with our sustainable purchases" (Interview 4, L/F, 19Y). In that vein, Bock et al. [72] mentioned the guilt feelings that materialistic consumers may possess as a result of their excessive purchases. Due to these feelings, they become concerned about environmental issues. This decreases their guilt and boosts their self-esteem. However, since our study respondents seem not to be materialistic, their guilt feelings stem from their general concerns about the planet, which reveals their sustainability awareness.

4.6. Islamic Religiosity

TMT has demonstrated how religiosity influences consumers' sustainable purchasing attitudes [9]. Within the current study context, all respondents are Muslims who are, in general, following the rules and guidelines of Islam. This seems to have a positive influence on forming their sustainable purchasing attitudes, as revealed in the following quotes: "I have a religious inspiration for my sustainable purchasing attitude because as a

Muslim, I'm required to continuously improve the reconstruction of the earth and not its destruction" (Interview 1, R/F, 25Y). Another respondent indicated that: "According to the Holy Quran 'The wasters are the brothers of demons'; Islam urged us to moderate, and this is the foundation of sustainability" (Interview 5, Sh/F, 20Y), and another stated that: "My primary inspiration for my sustainable purchasing attitude is certainly because I am a Muslim. Islam teaches us lessons that help us understand our responsibilities for leading better lives" (Interview 7, S/F, 19Y).

Overall, the religion of Islam is associated with ethics, sustainability, rationalisation, and non-overconsumption of natural resources [27,73]; hence, almost all respondents referred to the role of their Islamic religiosity in forming their sustainable purchasing attitude, which falls in line with previous studies [9]. This is also found to help lessen mortality panic and may eventually result in lessening the horror brought on by contemplating fear of death [26,47]. Further, while Kay et al. [76] indicated that those who practice religion think that God can manage the world without human involvement or intervention, one of the respondents indicated that: "As a religious Muslim, I have a strong attitude to purchase and consume sustainable products because I do not want to harm others or myself. It is also for my health and for obeying Allah" (Interview 2, B/F, 24Y), and another stated that: "Since I'm part of this Muslim community, I have a very high motivation to preserve it through possessing a sustainable purchasing attitude" (Interview 11, H/M, 27Y). Indeed, the study respondents, while showing signs of religiosity, demonstrated a high concern for sustainability issues, believing that they have a crucial role in preserving humankind and the planet. This, in turn, had a role in shaping their sustainable purchasing attitudes.

4.7. The Proposed Study Framework

Previous studies have revealed that discussing crucial issues (i.e., sustainability) enables people to interact with reality and equips them to make smart choices in the future [87]. On the other hand, it is expected that the lack of awareness and knowledge about various sustainability issues could potentially lead to a negative sustainability purchasing attitudes among young generations. This ultimately influences young consumers' sustainable purchasing intentions and behaviours. This study also revealed that Gen Z respondents (male and female) engaged in various education channels to equip themselves with sustainability knowledge, and hence, understood more about the value of life, but revealed concerns about humankind and the living organisms' mortality [22], more than about their own mortality. Accordingly, respondents showed self-esteem and signs of being less materialistic while showing their Islamic religiosity, which influenced the strength of the relationship between their sustainable purchasing attitude and TMT factors. Based on the above discussion, Figure 1 portrays the suggested conceptual framework of the current study. Our framework suggests that the sustainable awareness that can be acquired through various educational and awareness channels influences individuals' mortality salience, self-esteem, and materialism, which further influence their sustainable purchasing attitudes. Further, within the current study context, Islamic religiosity was found to have a moderating role that can strengthen the relationship between the sustainable purchasing attitude and the individuals' morality salience, self-esteem, and materialism. Hence, sustainability awareness is considered the triggering point of stimulating the TMT factors, which ultimately impacts the sustainable purchasing attitude.

According to Figure 1 and based on the previous discussions, the following propositions are made:

Proposition 1. *Sustainable awareness has a significantly positive impact on morality salience.*

Proposition 2. *Sustainable awareness has a significantly positive impact on self-esteem.*

Proposition 3. *Sustainable awareness has a significantly positive impact on materialism.*

Proposition 4. *Mortality salience has a significantly positive impact on the sustainable purchasing attitude.*

Proposition 5. *Self-esteem has a significantly positive impact on the sustainable purchasing attitude.*

Proposition 6. *Materialism has a significantly positive impact on the sustainable purchasing attitude.*

Proposition 7. *Islamic religiosity has a moderating role between the sustainable purchasing attitude and mortality salience, self-esteem, and materialism*

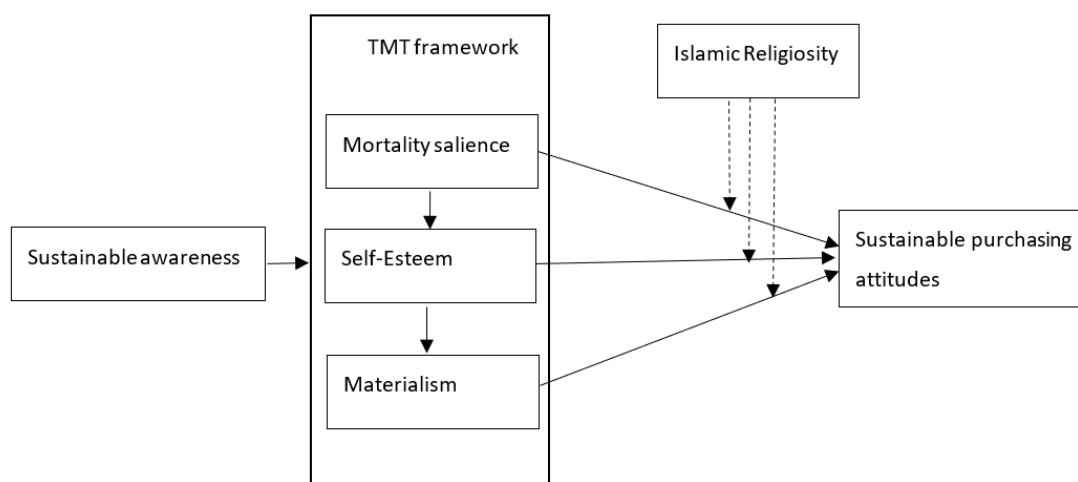


Figure 1. A model proposed for the factors affecting Gen Z's sustainable purchasing attitudes within the TMT framework.

5. Conclusions

The present study achieved several outcomes and significantly contributed to our knowledge of the young Saudi generations' sustainable purchasing understanding and attitudes. By adopting the TMT paradigm and using the qualitative approach, the study revealed interesting results related to the antecedents of sustainable purchasing attitudes in Saudi Arabia, a contemporary research field that must be expanded.

5.1. Theoretical Implications

The current research contains some theoretical implications. Firstly, a theoretical model was proposed to understand the antecedents forming the young Saudi generation's (Gen Z) attitudes towards sustainable purchasing intentions, and some fresh correlates were provided within the TMT framework. To the authors' knowledge, this is one of the first studies qualitatively examining the attitudes towards sustainable product purchasing within the Saudi context, a concern that falls in line with achieving the 2030 Saudi vision. The theory adopted (i.e., TMT) in the current study to examine sustainable purchasing attitudes is considered novel since most of the prior studies employed other theories, such as social learning theory [46], the theory of planned behaviour [87], the theory of reasoned action, and motivation theory [88,89]. Consequently, in contrast to prior studies which took place in countries such as Pakistan [46], China [89], and developed nations such as Italy [63] and Athens, Greece [90], the current understanding of the attitudes of young generations (Gen Z) in developing and conservative countries such as Saudi Arabia is expanding.

Secondly, the current research extends the sustainable purchasing attitude literature by revealing hidden constructs that emerged as predictors of young generations' sustainable awareness and the various understandings and knowledge that are shaping their perceptions, since prior studies were context-specific. This makes the present study meaningful as it contributes to the current knowledge and can be considered as a bridge between sustainable purchasing attitudes, theories, and practice. In conclusion, our research

makes a significant contribution to the body of knowledge already available and offers a fundamental cognitive process for promoting a sustainable purchasing attitude among young generations.

5.2. Practical Implications

The current study offers significant insights for managers, marketing professionals, as well as government officials and other stakeholders who are responsible for developing effective marketing campaigns to promote sustainable and green products and services. Since raising sustainability awareness is increasingly at the top of governments' priority lists [35], the study insights are related to exploring the young generations' understanding and attitudes so professionals can manoeuvre their communications to ensure that relevant sustainable messages are promoted. Government officials may formulate public policies that sponsor reliable sustainability knowledge initiatives and campaigns, through which relevant messages and up-to-date information can be disseminated about the country's sustainability vision and policymakers' support for encouraging individuals' sustainable practices. This will assist in improving the overall achievability of sustainable development and building individuals' confidence in the value of eco-friendly and sustainable products. Further, this may significantly positively influence young generations' intentions to purchase and willingness to pay more for eco-friendly products and services. In addition, understanding the various antecedents that may be standing in the way of promoting the general sustainable perception, such as the extensive advertisement of non-sustainable products through various media, social media platforms, and social media influencers, may better help the government to form strategies that can shift the attention more towards sustainable products. This could include more focused campaigns to raise environmental and ecological awareness within Gen Z, specifically, and highlight the importance of protecting the environment for the next generations to ensure that the remaining natural resources will fulfil their needs. Social media platforms and SMIs can also be good avenues for shifting young consumers' attention towards positive sustainable purchasing attitudes; hence, officials may promote environmental awareness among SMIs to further influence their followers' attitudes to become more environmentally friendly. Eventually, these activities will potentially be of great help in shaping young consumers' positive attitudes towards sustainable purchasing, which will facilitate the ultimate aim of achieving sustainability.

5.3. Limitations and Future Study Recommendations

The current study has certain limitations. First, qualitative data were collected through semi-structured interviews from a single country (i.e., Saudi Arabia) to explore Gen Z's understanding and attitudes towards sustainable purchasing. Hence, future studies could quantitatively assess, or through using the experimental approach, the influence of each factor on sustainable purchasing intentions. Further, future empirical studies could investigate the various young generations' actual sustainable behaviours, such as purchasing green and sustainable products and services. It would also be viable for a comparative empirical study to be performed to better understand the differences among various generations' attitudes and behaviours, perhaps within different times, such as in times of crises (i.e., the COVID-19 pandemic), which generally may have a diverse influence on consumers' attitudes and behaviour and hence may offer valuable insights. The second limitation is that the study of Gen Z only included young people with a university education. Future studies could include other generations with various educational levels. Third, the study's proposed conceptual framework was not further tested by actual data. Therefore, future studies could test the conceptual framework that has been established to empirically evaluate actual quantitative data by using the analytical tool of structural equation modelling (SEM). This could enhance our understanding and extensive knowledge of sustainable purchasing attitudes, which could ultimately lead to better general results.

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