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Generation Z's Perceptions of Sustainability in the Apparel and Textile Industry

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Abstract

Fast fashion is poorly constructed clothing through wasteful production methods to meet the rapid demand of fads and trends. Consumers are the driving force behind what is sold and not sold. If there is a demand for fast fashion, those types of clothing and textiles will be produced. If consumers made a point to only buy sustainably made and ethically produced clothing, companies would pivot to meet those demands. Currently, fast fashion is prevalent rather than sustainable apparel, which means that consumers either do not care about their impact on the environment, or they are unaware of the production methodologies and do not have the information to make informed decisions. The waste problem and irresponsibility of the fashion industry is a problem that needs to be addressed. Generation Z (gen Z), the upcoming generation, is beginning to enter the workforce and will inherit the majority of the spending power. How they spend their money will set consumer trends for the generations to follow. It is necessary to understand how gen Z perceives the problems with sustainability in the apparel and textile industry so that they can be better informed in the future. Understanding their opinions will also show how they can be encouraged to make better purchasing decisions and set good habits for their future. The study quantitatively assessed gen Z's perceptions of sustainability and eco-friendly apparel purchase decisions using an electronic survey to collect data. Research can be used to assess the degree to which gen Z should be educated about problems that exist within the industry.

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Introduction

Background and Need

Environmental sustainability has become an issue of importance in the apparel and textile industry. The industry generates millions of tons of waste each year, which has huge impacts on the environment and communities. In 2018 in the U.S. alone, more than 17 million tons of textiles were generated, with only 2.5 million tons recycled, and 3.2 million combusted with energy recovery. This means that the remaining 11.3 million tons of municipal solid waste from textiles ended up in landfills (Environmental Protection Agency,).

While disposal methods of apparel and textiles result in millions of tons of waste being dumped in landfills, the production side of the industry also leads to issues with environmentally harmful effects. Generating apparel and textiles requires large water and energy consumption (Reichart & Drew, 2019). For example, 2,700 liters of water are required to make one cotton shirt, which is enough water for one person to consume for two and a half years (Reichart and Drew, 2019). For areas facing water stress, the consumption of water at this rate is damaging. In Central Asia for example, where cotton farming is popular to supply the apparel industry, the Aral Sea has nearly disappeared because cotton farmers are drawing irrigation water from the two main rivers that feed this body of water, the Amu Darya and Syr Darya rivers (Drew & Yehounme, 2017). Besides the water being used to grow textile fibers such as cotton, water is also being used to manufacture garments. Up to 20% of industrial water pollution comes from garment manufacturing with about 1.3 trillion gallons used for fabric dyeing alone (Drew & Yehoume, 2017). This polluted water cannot be reused or cleaned to be consumed. It is wasted water, which causes stress to areas with water shortages. The massive consumption of water

impacts the ecosystem and people's health because water sources are being depleted or wasted as well as degraded.

Textiles are composed of natural, regenerated, and synthetic fibers. Each fiber comes with its own waste issues. Clothing made from natural fibers such as wool or cotton requires responsible farming and livestock practices to avoid land erosion and overgrazing. Apparel and textiles made from regenerated or synthetic fibers require another level of stewardship due to the chemical waste component. Regenerated fibers must be treated and processed, which creates chemical waste. Synthetic fibers are mostly created from nonrenewable resources such as petrochemicals. Synthetic fibers such as nylon, acrylic, and polyester derived from petroleum extraction, which make up 70% of the world's textile consumption (Echeverria et al., 2019). Because of the large percentage of textiles being generated from petroleum, the industry accounts for 10% of the world's carbon emissions, which makes it the second most polluting sector in the world (Bell et al., 2018). The production process of textiles alone impacts the environment because of water consumption, chemical pollution, carbon emissions, and poor livestock and farming practices.

The driving force behind the mass amounts of textiles being generated in the apparel industry is consumers. The fashion cycle, following a trend from its rise to decline, has become increasingly fast paced, and the fashion industry has adopted increasingly unsustainable production methods to keep up with demand and increase profit (McNeil & Moore, 2015). This concept is known as "fast fashion." The lifecycle of clothing consists of the rise in popularity of a trend to its peak popularity, to its decline and obsolescence. When the style or trend ends, new clothing is bought and the old is thrown out. Because the lifecycle of clothing is short, apparel products are being produced by methods that increase profit margins, so that consumers can invest in more products for shorter periods of time. This leads to poorly constructed clothing that

is thrown out as soon as a trend ends. Consumers are reluctant to adopt sustainable changes in their consumption choices because they have grown accustomed to the rapid turnover of goods in the apparel market (McNeil & Moore, 2015). Rather than investing in a quality item that will last several years, and can be easily recycled, consumers are purchasing large quantities of clothing that is often poorly constructed or was produced by unsustainable methods only for it to end up in landfills. This is what contributes to the millions of tons of apparel and textiles in landfills each year.

Generation Z (gen Z) is the upcoming generation of consumers. This generation was born from the mid 1990s to the early 2010s. Because gen Zs are maturing and starting to enter the workforce, they will be the driving force behind consumption and set consumption trends in the years to come. Generation Z already has the highest consumption rate and will hand down available natural resources to the future generations, determining if the environment will remain sustainable (Bulut, et al., 2017). If gen Z understands the need to make sustainable consumer choices, the demand for green products and production methods might increase in the coming years and influence brands to meet these demands.

Problem Statement

Fast fashion can be poorly constructed clothing through wasteful production methods to meet the rapid demand of fads and trends. Consumers are the driving force behind what is purchased and not purchased. If there is a demand for fast fashion, those types of clothing and textiles will be produced. If consumers made a point to only buy sustainably made and ethically produced clothing, companies would pivot to meet those demands. Currently, fast fashion is move prevalent rather than sustainable apparel, which means that consumers either do not care about their impact on the environment, or they are unaware of the production processees and do

not have the information to make informed decisions. The waste problem and irresponsibility of the fashion industry are problems that need to be addressed.

Purpose of the Study

The purpose of this study is to explore Generation Z's consumer perceptions of sustainable brands and better understand the level to which gen z consumers are aware of the negative impacts fast fashion has on the environment.

Research Objectives

The research objectives for this study are:
• To assess Generation Z's perception of sustainability in the apparel and textile industry between classifications.

• To assess Generation Z's awareness of the need for sustainable apparel brands between classifications of students. (eco-friendly apparel)

• To identify Generations Z's recognition of price when shopping for eco-friendly apparel between classifications.

Literature Review

Consumer's perceptions of sustainable apparel and their purchase behaviors are influenced by many factors. Prior research on these perceptions and behaviors can be categorized into internal and external influences. Internal influences include everything that an individual considers internally when making a purchase decision like feelings, finances, or personal preferences for example. External influences are outside the individual like societal pressures or social media. These influences will be examined in the following sections. Prior research was also analyzed to examine Generation Z's perceptions of sustainability in the apparel and textile industry.

Internal influences on Consumer Purchase Behavior

Consumers are positively impacted by internal influences such as personal convictions or beliefs; they are more inclined to shop sustainably because of their values (Kang, et al., 2013). Green consumers are those who intentionally purchase goods that were made, sold, and able to be disposed of in a sustainable way. Environmentally responsible shoppers choose green products because of their ideals concerning the environment, as well as the aesthetics and financial benefits of the product (Cowan & Kinley, 2014). People have instilled values about green consumerism and tend to act on these values when it comes to buying clothing. Financial barriers also impact behavior. Green consumers prefer to shop sustainably because of the long-term cost benefits of the clothing. Individuals who value frugality are more motivated to choose clothing that will last over a long period of time to gain long-term cost benefits rather than buying cheaper clothing more frequently (Kang, et al., 2013).

Another internal influence is consumer indifference. Some consumers may be indifferent to sustainable practices or care more about appearance than their concern for the environment. They feel as though the problems with the apparel industry do not affect them personally. In one study, subjects claimed they cared about the environment and wanted to improve it, but their actions reflected the direct opposite when the questions were extended to purchase behavior (Crommentuijn, et al., 2010). Other consumers value aesthetics and appearance over green products. Consumers tend to view sustainable clothing as unattractive, so they avoid it (Baier, et al., 2020). These consumers value appearance over ethical implications of fast fashion. If consumers do feel concerned about the environment, they still might purchase fast fashion and not act on their knowledge.

External Influences on Consumer Purchasing Behavior

The motivation to shop sustainably also comes from external influences such as societal pressures. Purchasing decisions are swayed by many emotional factors rather than a concern for ethical problems in the industry (Crommentuijn, et al., 2010). While consumers might be aware of sustainability problems in the textile industry, their purchasing decisions are based more closely off emotional responses to their surroundings than their care for the environment. Peer pressure is an example of "emotional factors." If an individual's community encourages purchases from a specific brand, that individual might be swayed to make purchases from that brand as well. This response might come from their need to "fit in" with their community, or even their aesthetic or quality preferences to adapting to their environment.

Literature suggests there are different "triggers" externally that influence a consumer's decision to buy a green product. These are an external motivation to alter behavior, a facilitator which makes the preferred behavior look more accessible or require less effort, or something that reminds the individual of the preferred behavior (Soyer & Dittrich, 2021). External triggers in the environment remind consumers of the preferred behavior, i.e., to shop sustainably and make green choices. These triggers include advertising, social media, or even peers talking about a brand or the preferred behavior. Social pressure in the media has been influential on the younger generations; young individuals are more easily swayed by influencers or social media marketing accounts to make positive environmental decisions (Soyer & Dittrich, 2021). Purchaser intentions are influenced by society in all aspects of daily life.

An important external factor influencing purchase behavior and perceptions of sustainable apparel is an awareness or education of the problems within the industry. Negative practices by consumers result from a lack of education or awareness of environmental problems caused by the apparel and textile industry. Companies striving for corporate social responsibility

are realizing that to tangibly see change, they need to hire a workforce with the knowledge and skills to solve arising problems such as those created by fast fashion (Delong & McDermott, 2013). There is a lack of education preparing university students to solve these problems in the workforce (Delong & McDermott, 2013). People are also unaware of disposal methods used by the textile industry. Young consumers are unaware of how to recycle clothing, or that it can be recycled at all (Baier, et al., 2020). There is a lack of knowledge about the lifespan of clothing. Research shows by associating individuals' actions with environmental benefits, and increasing the awareness of such problems, individuals will in turn change their own attitudes and enforce a new social norm of shopping sustainably (Cho, et al., 2015). Educating consumers about their direct impacts on the environment will lead them to change habits.

Generation Z

Generation Z is currently the largest generation in the United States, making up 25% of the population and holding $29-$143 billion in spending power, gen Z controls 93% of their families' purchase decisions (Uche, 2017). This generation has a powerful influence over consumption and purchase behavior in America. They are marked by their open-mindedness, diversity, and technology (Uche, 2017). There is a need to research gen z perceptions of sustainable apparel. It is difficult to understand consumption habits of this younger generation and determine their level of awareness surrounding sustainable consumption (Bulut, et al., 2017). Research shows that because they grew up in a world of convenience with smartphones and tablets, and were raised in a failing economy, they prefer convenience in their purchase decisions, which lends itself to fast fashion (Uche, 2017). Other literature shows that generation z is the most environmentally conscious generation (Vajkai & Zsoka, 2019). Because of their

open-mindedness, this generation might be susceptible to education about environmental issues in the apparel and textile industry.

Consumer behavior and attitudes toward shopping sustainably comes from many sources. Internal influences such as personal beliefs, values, and virtues might cause one to lean towards shopping more environmentally friendly. Other internal influences include financial restrictions and consumer indifference. If consumers are aware of issues within the industry but care more about the quantity of products produced or the aesthetics, fast fashion will continue to grow. External influences such as societal pressures or triggers in one's environment can influence behaviors. One external inhibitor of responsible consumer behavior is simply a lack of education and awareness about problems within the apparel and textile industry. Consumers are unaware of the detrimental effects of their purchasing behavior. Within Generation Z, literature is divided about their perceptions of sustainability. More research is needed to examine how this generation perceives sustainable apparel and how it affects their purchasing behavior.

Methodology

The researcher assessed consumer perceptions of sustainable apparel and textiles through a survey instrument. Generation Z was specifically selected for this study. Methods are described in the following sections.

Research Design

To observe consumer perceptions, the researcher used a quantitative non-experimental survey that was adapted from Kumar and Mohan's study of sustainable apparel purchase intentions (Kumar & Mohan, 2020). Survey research involves a large sample of individuals and administers questions that usually use a numerical rating to assess behavior (Cook & Cook, 2008). Using a survey allows the researcher to assess consumer attitudes and behaviors towards

sustainable apparel (Soyer & Dittrich, 2021). Surveys are a form of descriptive research, describing a phenomena or attitudes. Based on the survey questions, the respondents self-assessed their behaviors and perceptions of environmentally friendly apparel and textile products.

Rigor

Potential threats to internal and external validity are repeatability, the ability of the study to be generalized, selection bias, and instrumentation. Instrumentation was strengthened by using a pre-existing survey that had previously been tested for reliability and validity. The survey questions selected were reviewed by a committee of faculty from the Apparel Merchandising and Product Development Department at the University of Arkansas. The questionnaire was also submitted to the Internal Review Board to monitor its implementation. This ensured that the survey questions chosen apply to the research being done, and that they can be applied in broader contexts. Using pre-existing instrumentation ensured that the findings could be repeated in more general settings.

Population and Sampling

Data was collected using a convenience sampling method. This method of sampling was preferrable because it sampled the accessible population. Generation Z students enrolled in a mid-south university for the fall 2022 semester were sampled to assess consumer sustainability perceptions. This student population was chosen because of its accessibility to the researchers. The students were from one college in the mid-south university and represented 14 different majors. Only responses from students meeting the criteria of Generation Z were assessed. Recruitment materials and the survey link were sent to all students in the college by email. In total, 2,524 students responded to the survey. Incomplete surveys and surveys taken multiple

times by a single participant were removed, and the remaining total of 1,844 surveys were analyzed. Those responses were categorized according to number of years in attendance at the mid-south university. There were 97 first year students (5%), 504 second year students (27%), 460 third year students (25%), 425 fourth year students (23%), 152 students in their fifth or more year of school (8%), and 206 graduate school students (11%).

Instrumentation

The survey was adapted from a study observing sustainable apparel purchase intentions (Kumar & Mohan, 2020)..The researchers used their survey to discover purchase intention and individual's actual behavior. In addition to this model, they also looked at individual's concern for the environment, and collectivist orientation, that is, individuals who are concerned with others' perceptions of them. Their questionnaire was pre-tested by being distributed to 50 consumers who had purchased eco-friendly apparel. In addition, 29 respondents were approached for random surveying in a mall. The survey was also circulated through social media channels. In total, 383 responses were analyzed to yield results for Kumar and Mohan's research. Their questionnaire was adapted to better evaluate the research objectives for this study. The last four items of the survey were omitted, because they did not apply to apparel and textiles. Small grammatical changes were made, and the first five items of the survey, observing environmental concern, were rephrased. The final survey was a Likert-type quantitative questionnaire comprised of 25 items that examined consumer perceptions and behaviors of Generation Z students (See figure 1).

Figure 1.

To what extent do you agree or disagree with the following statements:

1. Environmental problems are becoming more severe day by day.
2. To attain sustainable development, individuals should steward the environment.
3. I think we are not putting enough effort into saving natural resources.
4. We have the responsibility to safeguard the environment.
5. Purchasing eco-friendly apparel is good.
6. Purchasing eco-friendly apparel is desirable.
7. Purchasing eco-friendly apparel is enjoyable.
8. Purchasing eco-friendly apparel is wise.
9. Purchasing eco-friendly apparel is pleasant.
10. Purchasing eco-friendly apparel is responsible.
11. People close to me think that I should buy eco-friendly apparel while shopping.
12. People's opinions I value would suggest that I purchase eco-friendly apparel while shopping.
13. My colleague's/friend's favorable opinions influence me to purchase eco-friendly apparel.
14. I would purchase eco-friendly apparel.
15. If it is up to me, then I would purchase eco-friendly clothes.
16. I am willing to buy eco-friendly clothes with the existing resources.
17. I find eco-friendly apparel at my frequent shopping place.
18. It seems that purchasing eco-friendly clothes is not in my control.
19. I pay attention to the attached price while purchasing eco-friendly apparel.
20. I collect a lot of price-related information to have the best purchase.
21. I always compare prices before finalizing the apparel purchase.
22. It is worth spending more on an eco-friendly apparel.
23. I am willing to purchase eco-friendly apparel.
24. I will purchase eco-friendly apparel.
25. I will put the required efforts into purchasing eco-friendly apparel.

Data Collection

The survey instrument was distributed through electronic survey created in Qualtrics and the Qualtrics link was distributed via e-mail. Once the survey was opened, it remained open for one month, during which time two reminders were emailed to encourage participants to complete the survey. After the survey closed, data was collected, and responses were analyzed by Qualtrics and SPSS software. Responses were evaluated using a one way ANOVA and Tukey's Post Hoc tests that allowed for themes to emerge.

Data Analysis

This study on perceptions and behaviors of sustainability in the apparel industry analyzed data collected by the survey to evaluate perceptions of Generation Z students according to six different categories and by years in school. Data was analyzed using SPSS to examine demographics of the students surveyed, and significance between the following variables: Environmental Concern (EC), Attitude (AT), Subjective Norm (SN), Perceived Behavioral Control (PBC), Price Sensitivity (PS), and Purchase Intention (PI).

The first variable, Environmental Concern, was analyzed using items 1-4 from the survey which consisted of the following statements: (1) *Environmental problems are becoming more severe day by day*, (2) *To attain sustainable development, individuals should steward the environment*, (3) *I think we are not putting enough effort into saving natural resources*, and (4) *We have the responsibility to safeguard the environment*. These items ascertained how aware participants were about environmental issues and their attitudes regarding their own personal responsibility about the environment.

Attitude was analyzed with items 5-10. The statements were as follows: (5) *Purchasing eco-friendly apparel is good*, (6) *Purchasing eco-friendly apparel is desirable*, (7) *Purchasing eco-friendly apparel is enjoyable*, (8) *Purchasing eco-friendly apparel is wise*, (9) *Purchasing eco-friendly apparel is pleasant*, and (10) *Purchasing eco-friendly apparel is responsible*. These items analyzed participant's positive or negative emotions towards purchasing eco-friendly apparel. This was achieved by asking participants how much they agreed or disagreed with a positive statement about sustainable purchases.

Items 11-13 analyzed the external influence of Subjective Norms (SN) as follows: (11) *People close to me think that I should buy eco-friendly apparel while shopping*, (12) *People's*

opinions I value would suggest that I purchase eco-friendly apparel while shopping, and (13) *My colleague's/friend's favorable opinions influence me to purchase eco-friendly apparel.* Subjective Norms describe social pressures that individuals feel to perform a certain way. This pressure can come from friends, family, or other individuals in one's community.

The next variable is Perceived Behavioral Control (PBC). Items 14-18 are as follows: (14*) I would purchase eco-friendly apparel*, (15) *If it is up to me, then I would purchase eco-friendly clothes*, (16) *I am willing to buy eco-friendly clothes with the existing resources*, (17) *I find eco-friendly apparel at my frequent shopping place*, and (18) *It seems that purchasing eco-friendly clothes is not in my control.* These items analyzed Perceived Behavioral Control by making statements regarding an individual's perceived control over their resources, and their access to making to make eco-friendly decisions. They evaluated consumer perceptions towards one's ability to buy green products or not.

Price Sensitivity (PS), items 19-22, evaluated how consumers are swayed in their purchase behavior by the price of a product. This looked at sensitivity to higher costs. Statements regarding PS are as follows: (19) *I pay attention to the attached price while purchasing eco-friendly apparel*, (20) *I collect a lot of price-related information to have the best purchase*, (21) *I always compare prices before finalizing the apparel purchase*, and (22) *It is worth spending more on an eco-friendly apparel.*

The last variable, Purchase Intention (PI), items 23-25, evaluated to what degree consumer's plan to purchase eco-friendly apparel in the future. Those items are as follows: (23) *I am willing to purchase eco-friendly apparel*, (24) *I will purchase eco-friendly apparel,* and (25) *I will put the required efforts into purchasing eco-friendly apparel.* These six variables were compared according to how many years participants have attended the mid-south university.

Results

  The standard level of significance that was used for the one-way ANOVA and Tukey

post hoc test was p< 0.05. A one-way ANOVA test is used to test variance within multiple

groups relative to variance within groups (Larson, 2008). Each dependent variable was analyzed

using this statistical test (See Table 1). There was a significant effect of classification on

Environmental Concern at the p<.001 level for the three conditions [F (7, 1859) =6.737, p=.000].

There was a significant effect of classification on Attitude at the p<.001 level for the three

conditions [F (7, 1859) =11.282, p=.000]. There was a significant effect of classification on

Subjective Norm at the p<.001 level for the three conditions [F (7, 1859) =13.821, p=.000].

There was a significant effect of classification on Perceived Behavioral Control at the p<.001

level for the three conditions [F (7, 1859) = 8.214, p=.000]. There was a significant effect of

classification on Price Sensitivity at the p<.001 level for the three conditions [F (7, 1859)

=12.245, p=.000]. There was a significant effect of classification on Purchase Intention at the

p<.001 level for the three conditions [F (7, 1859) = 5.548, p=.000].

Table 1. ANOVA Results

	1st year		2nd year		3rd year		4th year		5th year or more		Graduate		F (df between groups, df within groups)
	m	Sd	m	Sd	m	Sd	m	Sd	m	Sd	m	Sd	
EC	3.822	.755	3.758	.681	3.734	.712	3.555	.712	3.456	.697	3.680	.787	.000***
AT	3.833	.669	3.825	.698	3.799	.690	3.526	.705	3.504	.567	3.767	.653	.000***
SN	3.787	.682	3.711	.817	3.714	.763	3.356	.843	3.550	.682	3.381	.731	.000***
PBC	3.798	.555	3.779	.756	3.722	.700	3.492	.756	3.537	.570	3.630	.660	.000***
PS	3.822	.614	3.759	.771	3.784	.704	3.426	.851	3.540	.639	3.535	.611	.000***
PI	3.880	.584	3.780	.780	3.807	.749	3.562	.776	3.680	.595	3.715	.616	.000***

*Note. ***p < .001, **p < .01, * p < .05.*

Environmental Concern

The first variable analyzed was Environmental Concern. There were significant differences found between the group of first year students and fourth year students (p=0.022) (See table 2). First year students also had a significant difference between five or more-year students (p=0.002). Second year students showed that there was a significant difference compared to fourth year students (p=0.001). There was also a significant difference between second- and five or more-year students (p=0.000). When evaluating third year students, there was a significant difference compared to fourth year students (p=0.005). There was also a significant difference compared to five or more years students according to the value (p=0.001). There were no significant differences found between first year students and second, third, or graduate students. There were no significant differences between second year students and first, third, or graduate students. There were no significant differences between third year students and first, second, graduate. There were no significant differences between graduate students and any other group.

Table 2. Environmental Concern between Student Classifications

First Year		Mean Difference	Std Error	Significance
	Second Year	.06423	.07980	.993
	Third Year	.08793	.08042	.958
	Fourth Year	.26746	.08099	.022*
	Five or more Years	.36657	.09353	.002*
	Graduate Student	.14188	.08849	.749
Second Year		Mean Difference	Std Error	Significance
	Third Year	.02370	.04641	1.000
	Fourth Year	.20323	.04740	.001*
	Five or more Years	.30234	.06660	.000*
	Graduate Student	.07765	.05932	.896
Third Year		Mean Difference	Std Error	Significance
	Fourth Year	.17953	.04843	.005*
	Five or more Years	.27865	.06734	.001*
	Graduate Student	.05395	.06014	.986
Fourth Year		Mean Difference	Std Error	Significance
	Five or more Years	.09911	.06802	.830
	Graduate Student	-.12558	.06091	.440
Five or more years		Mean Difference	Std Error	Significance
	Graduate Student	-.22470	.07680	.068

*(p<.05)

Attitude

When attitude was assessed first year students and fourth year students showed a significant difference (p=0.002) (See table 3). There was also a significant difference compared to five or more-year students (p=0.005). Second year students showed a level of significant difference compared to fourth year students (p=0.000), and five or more-year students (p=0.000). There were significant differences between third- and fourth-year students (p=0.000) and the significant difference between third- and five or more-year students yielded the same value (p=0.000). Graduate students showed significant differences compared to fourth year students according to the value (p=0.001). There was also a significant difference between graduate

students and five or more-year students based upon the value (p=0.007). All other comparisons

for Attitude were nonsignificant.

Table 3. Attitude between Student Classifications

First Year		Mean Difference	Std Error	Significance
	Second Year	.00860	.07545	1.000
	Third Year	.03406	.07603	1.000
	Fourth Year	.30706	.07657	.002*
	Five or more Years	.32895	.08843	.005*
	Graduate Student	.06651	.08366	.993
Second Year		Mean Difference	Std Error	Significance
	Third Year	.02546	.04388	.999
	Fourth Year	.29846	.04481	.000*
	Five or more Years	.32035	.06297	.000*
	Graduate Student	.05791	.05608	.970
Third Year		Mean Difference	Std Error	Significance
	Fourth Year	.27300	.04578	.000*
	Five or more Years	.29489	.06366	.000*
	Graduate Student	.03245	.05686	.999
Fourth Year		Mean Difference	Std Error	Significance
	Five or more Years	.02189	.06431	1.000
	Graduate Student	-.24055	.05758	.001*
Five or more years		Mean Difference	Std Error	Significance
	Graduate Student	-.26244	.07261	.007*

*(p<0.05)

Subjective Norm

Subjective Norm was the third dependent variable analyzed and a significant difference

(p=0.000) was found between first year and fourth year students (See table 4). Between first year

and graduate students, there was a significant difference (p=0.001). Between second year and

fourth year students, there was significant difference (p=0.000), and the same value was present

between second year students and graduate students. When comparing third year and fourth year

students, and third year and graduate students, there were significant differences (p=0.000).

There was no significant difference between first year and second, third, or five or more-year students. No significant differences were present between second year and first, third, and fourth-year students. All other comparisons to third year students were nonsignificant. Students of five or more years had nonsignificant values when compared to every other group. Graduate students, when compared to other groups, showed no significant differences.

Table 4. Subjective Norms between Student Classifications

First Year		Mean Difference	Std Error	Significance
	Second Year	.07596	.08663	.988
	Third Year	.07245	.08730	.991
	Fourth Year	.43086	.08792	.000*
	Five or more Years	.23650	.10154	.278
	Graduate Student	.40553	.09607	.001*
Second Year		Mean Difference	Std Error	Significance
	Third Year	-.00351	.05038	1.000
	Fourth Year	.35490	.05146	.000*
	Five or more Years	.16054	.07230	.340
	Graduate Student	.32957	.06439	.000*
Third Year		Mean Difference	Std Error	Significance
	Fourth Year	.35841	.05257	.000*
	Five or more Years	.16405	.07310	.326
	Graduate Student	.33308	.06529	.000*
Fourth Year		Mean Difference	Std Error	Significance
	Five or more Years	-.19436	.07385	.145
	Graduate Student	-.02533	.06612	1.000
Five or more years		Mean Difference	Std Error	Significance
	Graduate Student	.16903	.08338	.464

*(p<0.05)

Perceived Behavioral Control

Perceived Behavioral Control was analyzed next. Between first- and fourth-year students, there was a significant difference (p=0.003) (See table 5). There were significant differences found between second- and fourth-year students (p=0.000). There were also significant

differences when compared to five or more-year students (p=0.006). Third year students showed

significant differences compared to fourth year students (p=0.000). All other groups compared to

first year students yielded nonsignificant differences. There were no significant differences

between second year students and first, third, or graduate students. There were no significant

values between third year students and any other group. There was an absence of significant

values when graduate students were compared to any group.

Table 5. Perceived Behavioral Control between Student Classifications

First Year		Mean Difference	Std Error	Significance
	Second Year	.01937	.07850	1.000
	Third Year	.07576	.07910	.980
	Fourth Year	.30617	.07967	.003*
	Five or more Years	.26110	.09201	.087
	Graduate Student	.16717	.08705	.537
Second Year		Mean Difference	Std Error	Significance
	Third Year	.05640	.04565	.921
	Fourth Year	.28681	.04663	.000*
	Five or more Years	.24173	.06552	.006*
	Graduate Student	.14780	.05835	.182
Third Year		Mean Difference	Std Error	Significance
	Fourth Year	.23041	.04764	.000*
	Five or more Years	.18533	.06624	.096
	Graduate Student	.09140	.05916	.783
Fourth Year		Mean Difference	Std Error	Significance
	Five or more Years	-.04508	.06691	.998
	Graduate Student	-.13900	.05991	.283
Five or more years		Mean Difference	Std Error	Significance
	Graduate Student	-.09393	.07555	.919

*(p<0.05)

Price Sensitivity

When looking at Price Sensitivity, there were significant differences found between first

year students and fourth year students (p=0.000) (See table 6). Significant differences were also

found between first year students and graduate students (p=0.035). There were significant differences between second year students when compared to fourth year students (p=0.000), five or more years (p=0.029), and graduate students (p=0.006). Significant differences were found between third year students and fourth year students (p=0.000). Significant differences were found between third year students and students of five or more years (p=0.010). Between third year and graduate students, significant differences were found (p=0.002). There were no significant differences present between first year students and second, third, or students of five or more years. There were no significant differences between second year students and third year students. There were nonsignificant values between fourth- and fifth-year students, fourth and graduate students, and graduate and five or more-year students.

Table 6. Price Sensitivities between Student Classifications

First Year		Mean Difference	Std Error	Significance
	Second Year	.06274	.08211	.995
	Third Year	.03847	.08274	1.000
	Fourth Year	.39687	.08333	.000*
	Five or more Years	.28269	.09624	.066
	Graduate Student	.28269	.09624	.066
Second Year		Mean Difference	Std Error	Significance
	Third Year	-.02427	.04775	1.000
	Fourth Year	.33413	.04877	.000*
	Five or more Years	.21995	.06853	.029*
	Graduate Student	.22457	.06103	.006*
Third Year		Mean Difference	Std Error	Significance
	Fourth Year	.35840	.04983	.000*
	Five or more Years	.24422	.06929	.010*
	Graduate Student	.24884	.06188	.002*
Fourth Year		Mean Difference	Std Error	Significance
	Five or more Years	-.11418	.06999	.731
	Graduate Student	-.10956	.06267	.655
Five or more years		Mean Difference	Std Error	Significance
	Graduate Student	.00462	.07903	.449

*(p<0.05)

Purchase Intention

When analyzing Purchase Intention, a significant difference was found between first year students and fourth year students (p=0.003) (See table 7). Second year students and fourth year students had a significant difference (p=0.000). Third year students and fourth year students yielded a significant difference (p=0.000). There were no other significant values compared to first year students. All other values were nonsignificant when comparing second year students to third, five or more, or graduate students. There were also nonsignificant values between third- and fourth-year students, five or more years, and graduate students. Students of five or more years and graduate students yielded no significant differences when compared to any group.

Table 7. Purchase Intentions between Student Classifications

First Year		Mean Difference	Std Error	Significance
	Second Year	.09996	.08110	.922
	Third Year	.07248	.08173	.987
	Fourth Year	.31737	.08231	.003*
	Five or more Years	.19990	.09506	.413
	Graduate Student	.16498	.08993	.596
Second Year		Mean Difference	Std Error	Significance
	Third Year	-.02748	.04717	.999
	Fourth Year	.21741	.04817	.000*
	Five or more Years	.09994	.06769	.820
	Graduate Student	.06502	.06028	.961
Third Year		Mean Difference	Std Error	Significance
	Fourth Year	.24489	.04921	.000*
	Five or more Years	.12742	.06843	.577
	Graduate Student	.09250	.06112	.800
Fourth Year		Mean Difference	Std Error	Significance
	Five or more Years	-.11747	.06913	.688
	Graduate Student	-.15239	.06190	.213
Five or more years		Mean Difference	Std Error	Significance
	Graduate Student	-.03492	.07805	1.000

*(p<0.05)

Conclusions and Limitations

The study analyzed Gen Z university student's perceptions of sustainability in the apparel and textile industry. Prior research shows that individuals are influenced by internal and external factors when making eco-friendly purchase decisions. This study showed that there were significant differences between less educated and more educated students. Based on the data, first-, second-, and third-year students had a significant difference when compared to fourth- and five or more-year students. First, second-, and third-year students also showed a significant difference compared to graduate students, but less frequently than the latter two groups forementioned. Based on this theme that emerged during data analysis, it can reasonably be inferred that more educated students, those in their fourth or more year of college, knew more about sustainability and had more intention to make eco-friendly purchase decisions. Fourth year students knew the most about sustainability. Students with less years of schooling were less aware or cared less about making sustainable decisions when it came to apparel. Undergraduate students gained more information the more years they were educated. Classes about eco-friendly apparel and sustainability are important in undergraduate education to inform students about problems in the industry. This curriculum could be incorporated into graduate level courses as well, since it could be reasonably inferred from the data that these students knew less than students in their fourth or fifth year of undergraduate study. Perceptions and behaviors regarding eco-friendly purchases could be improved by incorporating more education into more lower level classification university apparel curriculums. This can also help corporations and universities understand better how to market eco-friendly products to upcoming generations like Generation Z.

Limitations of the study included only sampling students from one college at a large mid-south university. Also, graduate students sampled for this study might not have completed their undergraduate education at the university sampled. For further research, a wider population of Generation Z should be sampled to reduce selection bias and represent the whole of the generation. Students sampled were all from the same generation. To better assess the perceptions of sustainability by Generation Z, older generations such as Millennials and Generation X should be sampled and analyzed comparatively. For further research, participants should also be analyzed based on more demographic data than just years of university. This could include the different colleges enrolled and different universities across and between regions. The instrumentation could also be expanded to assess levels of education about the topic of sustainability rather than just perceptions and behaviors.

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