INFLUENCE OF CLOTHING ATTRIBUTES AND KNOWLEDGE OF SUSTAINABLE CLOTHING BENEFITS ON CUSTOMERS' PURCHASING BE-HAVIOUR SOUTH AFRICA

Nailejileji Mollel-Matodzi*, Anne Mastamet-Mason & Nalini Moodley-Diar

ABSTRACT

Sustainable clothing in the South African retail market is in its infancy. Consumers' slow response to sustainable clothing is a primary hindrance to the popularity of sustainable clothes and a factor in low production levels. In addition to consumers' attitudes towards the environment, clothing attributes influence the purchase of sustainable clothing products. Identifying the influence of socio-environmental knowledge on customers' purchasing behaviour is pertinent in developing and implementing strategies to raise sustainability awareness about clothes. Identifying clothing attributes that will increase South African customers' sustainable clothing consumption is crucial for socio-environmental goal achievement. This paper explores how clothing attributes and knowledge about the benefits of sustainable clothes influence the selection of these garments. A quantitative online survey was administered to 305 purposively selected participants aged 18 years and above. Participants were approached using social media influencers and fashion design entrepreneurs with a strong social media footprint. The collected data were analysed descriptively using Stata/SE 14.0. There were four attributes listed, and findings revealed that durability was the most valued attribute by most participants. However, the durability attribute alone was not sufficient to entice them to purchase sustainable clothes. Most of the participants across age groups expressed dissatisfaction with sustainable clothes' designs, colours, and textures. However, the same participants reported that they were likely to purchase sustainable clothing if the look and feel resembled mainstream clothes available in major retail stores. The same participants reported that they were likely to purchase sustainable clothing if the look and feel resembled that of mainstream clothes available in major retail stores. The same participants indicated that knowledge about the benefits of sustainable clothes had a significant association with how they purchase sustainable clothing. Therefore, sustainability literacy specific to the textile and clothing industry alongside sustainable product development in the industry are catalysers for increased purchases. Continual socio-environmental civic education with all role players in the textile and clothing industry is necessary to promote the purchase of sustainable clothes. Insights from this research will help in the effective design and production of multifaceted sustainable clothes that appeal to consumers.

— **Dr N Mollel-Matodzi***
ORCHID ID: 0000-003-4984-731X
Department of Design Studies
Tshwane University of Technology
Tel: +27 (0) 72 230 0733
E-mail: Nailamollel@gmail.com
*Corresponding author

— **Prof A Mastamet-Mason**
ORCHID ID: 0000-0003-1423-2075
Department of Design Studies
Tshwane University of Technology
Tel: +27 (0)12 382 6074
E-mail: MasonA@tut.ac.za

— **Prof N Moodley-Diar**
ORCHID ID: 0000-0002-9672-3953
Executive Dean
Tshwane University of Technology
Tel: + 27 (0) 12 382 6051
E-mail: MoodleyN@tut.ac.za

INTRODUCTION

Sustainability is a "paradigm for thinking about the future in which environmental, societal, and economic considerations are balanced in the pursuit of improved quality of life" (UNESCO, n.d.). There are four pillars of sustainability, namely environmental responsibility, social equity, economic viability, and cultural vitality. The four pillars are inherently linked to the sustainable development of humanity (Hawkes, 2001). The cultural and economic pillars are important concepts but are beyond the scope of this paper. Here, the focus is on the social and environmental pillars of sustainability in relation to the textile and clothing industry.

Social and environmental sustainability involves operations that ethically address fundamental human needs in the textile and clothing industry. Resources are used in a way that people and the planet flourish (Morelli, 2011; UN, 2008; UNAC, 2013). In this study, sustainable clothes refer to clothes made from durable and recyclable fabrics with a longer life cycle. These fabrics do minimal environmental and social harm at the production stage by the textile and clothing industry workers and at the maintenance stage by customers. Moreover, these clothes are made in a safe environment, and employees receive fair remuneration. Consequently, sustainable clothes are more costly than mainstream clothes because sustainable fabrics and the manufacturing process are expensive (Roozen, Raedts & Meijburg, 2021: 330).

The South African textile and clothing industry is still in the early stages of addressing sustainability (Fashion Outreach, 2017; Smal, 2016; Whyte, 2016). South African Fashion Week had a record of 580 fashion designers in 2019 (May 2019). However, only a small number of the designers identified as sustainable fashion designers. Consequently, there is a shortage of sustainable clothes in retail stores produced by local fashion designers. The shortage of these clothes means that a smaller percentage of customers is aware of and purchase sustainable clothes.

This low consumption is a problem for an industry that seeks to be sustainable. Customers have the potential to stop or reduce the negative impact of unsustainable textile processes and practices on the environment by buying sustainable products (Veleva & Ellenbecker, 2001: 128). Numerous factors influence customers' purchasing behaviour. This study will focus on two factors, namely clothing attributes and sustainability knowledge.

LITERATURE REVIEW

Knowledge and consumers' purchasing behaviour

Knowledge is a quality that potentially influences nearly all areas of customers' behaviour (Blackwell, Miniard & Engel, 2006). In a South African study, Dreyer *et al*. (2016) reported that the younger generation is less aware of environmental matters than the older generation. In contrast, a study by Oeko-Tex Association (Europe and Japan) reveals that the younger generation is more knowledgeable than the older generation on sustainability matters in the textile and clothing industry (Hahn-Petersen, 2018).

There are two opposing views regarding customers' knowledge and purchasing of sustainable products. The first view suggests that knowledge about socio-environmental challenges does not necessarily translate into sustainable behaviour (Joshi & Rahman, 2015; Malepa, 2014; Mashinini-Langwenya, 2013). A South African study by Mashinini-Langwenya (2013) revealed that although younger customers were aware of sustainable matters, they were unwilling to purchase clothing on that basis. Similarly, younger customers in Europe and Japan know the harm caused by the textile and clothing industry, and yet only a small percentage (37%) of the younger customers are willing to purchase sustainable clothes (Hahn-Petersen, 2018).

Nonetheless, the second view emphasises that knowledge regarding environmental challenges

leads to the purchase of sustainable products (Shen *et al*., 2012; Yan, Hyllegard & Blaesi, 2012). These two opposing views indicate inconsistencies in the literature about the purchase of sustainable clothes based on knowledge of their benefits. Therefore, it is important to explore how knowledge about the benefits of sustainable clothes influences South African customers' purchasing behaviour.

Based on the first view that knowledge about sustainable clothes is not sufficient to increase customers' purchasing behaviour, it is plausible that other factors may increase customers' purchasing behaviour. Studies by Mashinini-Langwenya (2013) and Malepa (2014) found that younger customers focused more on aesthetic appeal than socio-environmental matters of clothes. Attributes of the product and environmental beliefs are some of the reasons that lead to the purchase of sustainable products (Chen & Chang, 2012). In order for customers to support sustainable clothes, customers' desired clothing attributes must be addressed within the concept of sustainable development. The most common clothing attributes that customers identify are the look and feel, price, and durability (Carpenter & Moore, 2010; Niinimäki, 2010).

Clothing selection attributes

The 'aesthetic' refers to the look and colour of the garment (Aakko, 2013: 40; DeLong, 2015). The look of a garment refers to the silhouette and design detail. Customers value the look over socio-environmental benefits (Aakko 2013). According to Connell (2011) from the United States of America, customers report that sustainable clothes are not as aesthetically pleasing as mainstream or fast-fashion clothes. Sustainable clothes that are not aesthetically pleasing may deter customers from purchasing them even if they have the same value and are priced the same as mainstream clothes (Bloch, 1995). Dreyer *et al*. (2016) recommend that environmentally friendly clothes must be more aesthetically pleasing to attract customers. Furthermore, it is believed that if a garment is aesthetically pleasing, then customers will be better stewards of the garment (Aakko, 2013: 41).

With regards to the price attribute, research found that customers consider sustainable clothes to be more expensive than mainstream clothes (Connell, 2010; Joshi & Rahman, 2015; Niinimäki, 2010). When clothing customers perceive sustainable clothes to be expensive, they are unlikely to purchase the clothes (Carrigan & Attalla, 2001; Hahn-Petersen, 2018; Mashinini-Langwenya, 2013:107). Studies by the Oeko-Tex Association (Hahn-Petersen, 2018) and Mashinini-Langwenya (2013) revealed that younger customers were reluctant to purchase sustainable clothes because they cost more than mainstream clothes. Dreyer *et al*. (2016) suggested that the textile and clothing industry should price environmentally friendly garments similar to the mainstream products to enable customers to purchase garments due to environmental attributes rather than price. Moreover, customers need a clothing paradigm shift to see their clothes as an investment and not as something they cheaply purchase and quickly throw away (DeHaan 2016). This paradigm shift has to be directed by fashion design entrepreneurs and the textile and clothing industry as a whole.

Although costly, sustainable clothes are more durable than mainstream clothes DeHaan (2016). Durable garments slow down customers' consumption behaviour (Gwilt, 2014: 90). Durability is an essential component of sustainable clothing operations (Woodward, 2015: 136). Hanbury (2018) reveals that the younger generation steadily purchases sustainable clothes based on durability rather than the look attribute.

Durable garments do not always have a smooth feel against customers' skin. The feel of sustainable clothes is important to customers. Customers have pointed out that some sustainable clothes have "a scratchy hand feel and uncomfortable material", making customers unmotivated to purchase the clothes (Carrigan & Attalla, 2001).

Complaints about fabric texture and comfort reveal that high quality, smooth, and comfortable fabrics are important needs for clothing customers and may encourage the purchase of sustainable clothes (Carrigan & Attalla, 2001). Sustainable clothes are multifaceted products and require balanced attention to each attribute.

Hence, the first aim of this study was to explore customers' desired sustainable clothing. The second aim was to explore how knowledge about the benefits of sustainable clothes influences customers' purchasing behaviour. Addressing customers' clothing attribute requirements regarding sustainable clothes may improve customers' consumption behaviour. The production of saleable sustainable clothes and consumption of sustainable clothes is essential in driving towards a sustainable South African textile and clothing industry.

METHODOLOGY

Research design and sampling

A quantitative approach was employed using non-probability purposive sampling to address the two aims of this study. Purposive sampling was selected based on the researcher's knowledge of specific characteristics supporting the study's aims (Babbie, 2016: 196).

Social media influencers were chosen because they can encourage their followers to participate in their interests by posting on various social media platforms (Fastenau, 2018). The first criterion for fashion and lifestyle bloggers was individuals who regularly post their opinions and passions on mainstream and sustainable clothes. The second criterion required that they had more than 1000 followers.

The primary researcher accessed participants through social media influencers (fashion and lifestyle bloggers), sustainable fashion design entrepreneurs, and the primary researcher's social media account. The primary researcher approached sustainable fashion design entrepreneurs and her own Facebook contacts when there was a low response turnout from social media influencers. Fashion design entrepreneurs were approached because they too have a large following and would encourage their followers to participate in their interests. The primary researcher also approached her Facebook contacts, who regularly post about their interest in fashion and sustainable clothes. Fashion and lifestyle bloggers and fashion design entrepreneurs were approached via email and social media accounts. The fashion and lifestyle bloggers and sustainable fashion design entrepreneurs were asked to complete the survey and (if willing) to share the survey link on their social media platforms.

A closed-ended questionnaire was used to collect data from participants. The initial sample target was 300 responses. The researcher obtained 340 responses. However, only 305 responses were viable.

Questionnaire and data collection

A structured closed-ended online questionnaire was employed for quantitative data collection. The online questionnaire was compiled in Survey Legend, an online survey application. The questionnaire used a five-point-Likert scale because this scale ensures that responses are standardised and specify the difference in strength between items (Babbie, 2007: 189).

Social media were chosen to distribute the questionnaire because it is affordable, easy-to-use, accessible, and sustainable. The link to the online questionnaire was shared on social media platforms by social media influencers, sustainable fashion design entrepreneurs, and the primary researcher. Firstly, online questionnaires are sustainable because they eliminate the use of ink and paper for printing. Secondly, structured online questions reduce the distribution cost of the questionnaire to the participants. In addition, travelling to various locations to hand out hard copies of questionnaires and potentially returning to collect completed questionnaires is expensive and time consuming. Online questionnaires also allow participants to complete the survey at their convenience.

Data collection commenced after ethical clearance was granted under the reference number FREC20180502. Face validity was maintained by submitting the questionnaire for review to supervisors and Tshwane University of Technology's Faculty of the Arts' Research Ethics Committee (REC). A pilot study was then carried out and matters that arose were addressed. Content validity was maintained by ensuring that the questionnaire content was based on the concepts of this study. The reliability of the research instrument was tested during a pilot study. Cronbach's alpha for the various concepts ranged from 0.673 to 0.770.

Data from the pilot study were not incorporated into the final data of this study.

Firstly, stability reliability was ensured by adopting some of the questions from previous studies by Niinimäki (2010), Chan and Wong (2012), Mashinini-Langwenya (2013), and Malepa (2014). Secondly, a test-retest method was adopted by pilot testing the questionnaire before retesting it on the selected sample. Thirdly, representative reliability was maintained by administering the questionnaire to participants from various age groups. Participants were selected by approaching social influencers, fashion design entrepreneurs, and the primary researcher's Facebook contacts representing various age groups and genders. Fourthly, internal reliability was maintained using Cronbach's alpha test. Hypotheses tests were done with a 5% level of significance (Bryman, 2012).

Statistical analyses

The captured data were statistically analysed using Stata/SE 14.0 in consultation with a professional statistician. Stata/SE 14.0 is "a complete, integrated software package that provides data science needs, such as data manipulation, visualisation, statistics, and reproducible reporting" (Stata, n.d.). The quantitative data were analysed using descriptive statistics, frequency distribution tables, and univariate and bivariate analysis. The statistical testing of the hypothesis was carried out to investigate internal variables such as attributes and knowledge-led purchasing behaviour. This study used chi-square statistics to assess whether the association between variables is caused by chance or sampling error (Rubin & Babbie, 2010:546). The P-value of $\leq$ 0.05 was regarded as statistically significant for this study.

FINDINGS AND DISCUSSION

Demographics

The majority (85%) of the participants was women, and the minority (15%) was men. Their age range was divided into five groups. The largest age group of participants were aged 25–31 years (33%) and were followed by the age group 32–38 (32%) (see Figure 1). According to their age group, the percentage of participants may be explained by the population size per age group (Stats South Africa, 2018) and internet
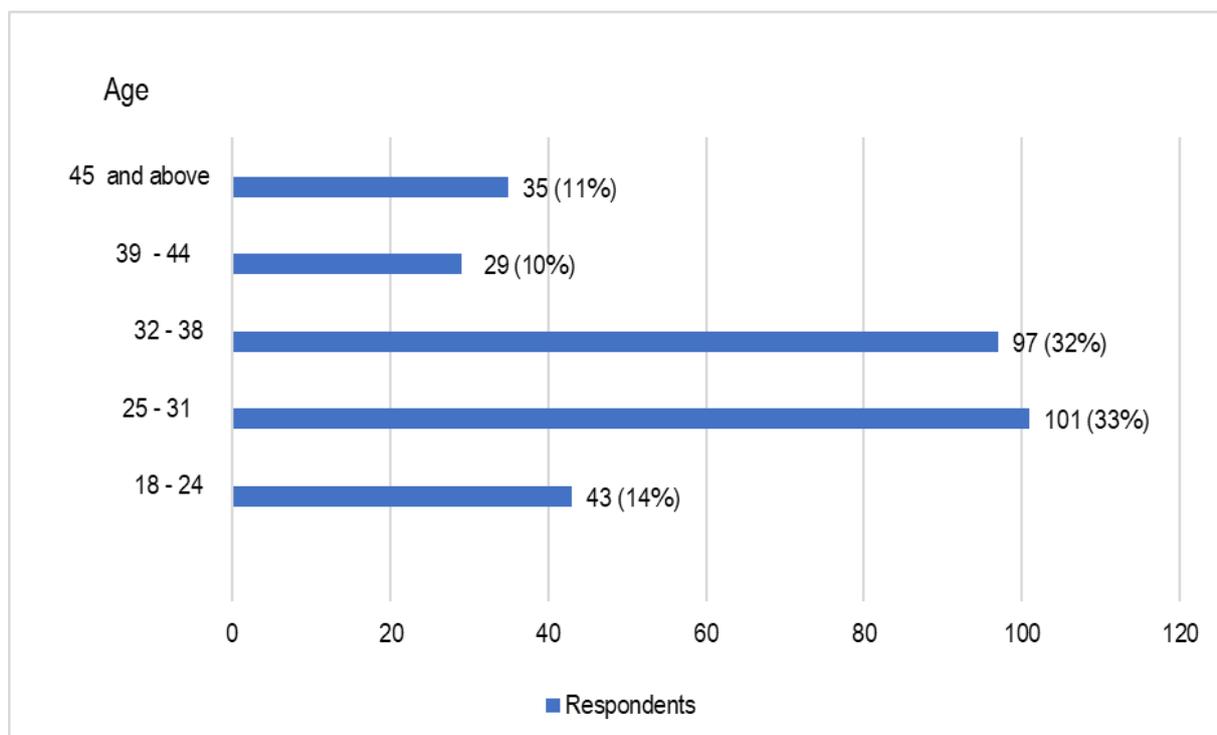

FIGURE 1: PARTICIPANTS' AGE DISTRIBUTION (N=305)

Influence of clothing attributes and knowledge of sustainable clothing benefits on customers' purchasing behaviour

TABLE 1: PARTICIPANTS' PURCHASING BEHAVIOUR IN RELATION TO ATTRIBUTES (N=305)

DURABILITY ATTRIBUTE	
How much importance do you place on the durability of socio-environmentally clothes?	
Response	Frequency (%)
Very important	229 (75)
Moderately important	64 (21)
Unimportant	12 (4)
I purchase socio-environmentally responsible clothes because they tend to be more durable than mainstream clothes.	
Response	Frequency (%)
Strongly agree	140 (46)
Strongly disagree	54 (18)
Undecided	111 (36)
LOOK ATTRIBUTE	
How much importance do you place on the look of socio-environmentally responsible clothes?	
Response	Frequency (%)
Very important	217 (71)
Moderately important	67 (22)
Unimportant	21 (7)
I would more likely purchase socio-environmentally responsible clothes if their look were the same as main-stream clothes.	
Response	Frequency (%)
Strongly agree	184 (60)
Strongly disagree	52 (17)
Undecided	69 (23)
FEEL ATTRIBUTE	
How much importance do you place on the feel of socio-environmentally responsible clothes?	
Response	Frequency (%)
Very important	203 (67)
Moderately important	83 (27)
Unimportant	19 (6)
I would more likely purchase socio-environmentally responsible clothes if their feel were the same as main-stream clothes.	
Response	Frequency (%)
Strongly agree	188 (62)
Strongly disagree	49 (16)
Undecided	68 (22)
PRICE ATTRIBUTE	
How much importance do you place on the price of socio-environmentally responsible clothes?	
Response	Frequency (%)
Very important	161 (53)
Moderately important	130 (42)
Unimportant	14 (5)
I tend to purchase more socio-environmentally responsible clothes when there are sales or special offers on.	
Response	Frequency (%)
Strongly agree	169 (56)
Strongly disagree	53 (17)
Undecided	83 (27)

use per age group (MyBroadband, 2018).

Participants' purchasing behaviour in relation to attributes

Note that in Table 1, the important and very important responses were combined and named very important. The moderately important and of little importance responses were combined and named moderately important. This grouping of the importance-value simplified the analysis and interpretation of the findings. Furthermore, the

agreed and strongly agree responses were combined and named strongly disagree. Both disagree and strongly disagree responses were combined and named strongly. This grouping of the agree-disagree-value simplified the analysis and interpretation of the findings.

Participants were asked to rate the importance of durability, look, feel, and price attributes of sustainable clothes. It is evident in Table 1 that durability ranks the highest at 75%, the look attribute is second (71%), the feel is third (67%), and the price of sustainable clothes ranks fourth (53%). Interestingly, although durability ranked highest as an important attribute, only 46% of the participants strongly agreed that they purchase sustainable clothes for their durability (see Table 1). Therefore, other attributes that may hinder participants' purchasing behaviour are the look and feel. This effect of the look and feel attribute of sustainable clothes is supported by findings in Table 1.

Table 1 clearly illustrates that most (60%) participants indicated that they would be more likely to purchase sustainable clothes if the look of the clothes resembled mainstream clothing. This finding indicates that improving the look of sustainable clothes would potentially increase customers' purchases. This finding concurs with Dreyer et al.'s (2016) study in South Africa that recommends that sustainable clothes be more aesthetically pleasing to attract customers. Furthermore, most (62%) of the participants indicated that they would be more likely to purchase sustainable clothes if the feel were similar to mainstream clothes. Therefore, most participants prefer the feel of mainstream clothes to the feel of sustainable clothes. These findings coincide with findings by Carrigan and Attalla (2001) in the United Kingdom and Niinimäki (2010) in Finland. The researchers report that sustainable clothes have "a scratchy hand feel and uncomfortable material" that makes customers unmotivated to purchase the clothes (Carrigan & Attalla, 2001; Niinimäki, 2010). Therefore, when fashion design entrepreneurs' source sustainable fabrics with a similar feel to mainstream clothes, the entrepreneurs will most likely increase customers' purchasing behaviour. Price is the fourth clothing attribute that may improve customers' purchasing behaviour if aligned to participants' desires.

Researchers report that the expensive price of sustainable clothes tends to be a hindrance when purchasing the clothes (Connell, 2010; Niinimäki, 2010; Mashinini-Langwenya, 2013; Joshi and Rahman, 2015; Hahn-Petersen, 2018). In addition, Dreyer et al. (2016) point out that the price of sustainable clothes must be similar to mainstream clothes to enable customers to purchase garments due to their environmental sustainability attributes rather than price. This price-parity incentive may explain why most (56%) participants indicated that they tend to purchase more sustainable clothes when in a sale or on a special offer (see Table 1). Therefore, participants purchase sustainable clothes when the clothes are marked down because sustainable clothes are generally considered expensive.

Association between gender and clothing attributes

It is evident in Table 2 that there is significant association between gender and purchasing behaviour based on price, look, feel, and durability clothing attributes. These findings suggest that participants' gender influenced their purchasing behaviour. In addition, it is evident in Table 2 that there is significant association between gender and purchases made based on knowledge on the benefits of sustainable clothes. This suggests that participants' gender influenced their knowledge-based purchases.

Association between age and importance of clothing attributes

Table 3 reveals a significant association between age and the importance participants place on the price (0.025 < 0.05) of sustainable clothes. Therefore, participants' age influences the importance they place on the price of sustainable clothes. Dreyer et al. (2016) also report that younger customers were less focused on the price of sustainable products.

There is a significant association between age and the importance participants place on the look (0.041 < 0.05) of sustainable clothes. Therefore, participants' age influenced the importance placed on the look of sustainable clothes. Mashinini-Langwenya, (2013) and Malepa (2014) also found that younger customers tend to be more focused on the

TABLE 2:   ASSOCIATION BETWEEN GENDER AND CLOTHING ATTRIBUTES (N=305)

I tend to purchase more socio-environmentally responsible clothes when there are sales or special offers on			
Response	Female	Male	P-value
Strongly agree	56%	48%	0.000
Strongly disagree	17%	22%	
Undecided	27%	30%	
I would more likely purchase socio-environmentally responsible clothes if their look were the same as mainstream clothes			
Response	Female	Male	P-value
Strongly agree	59%	68%	0.000
Strongly disagree	17%	17%	
Undecided	24%	15%	
I would more likely purchase socio-environmentally responsible clothes if their feel were the same as mainstream clothes			
Response	Female	Male	P-value
Strongly agree	61%	67%	0.000
Strongly disagree	16%	13%	
Undecided	23%	20%	
I purchase socio-environmentally responsible clothes because they tend to be more durable than mainstream clothes			
Response	Female	Male	P-value
Strongly agree	48%	41%	0.000
Strongly disagree	18%	13%	
Undecided	34%	46%	
I purchase sustainable clothes because I am aware of their benefits on the environment			
Response	Female	Male	P-value
Strongly agree	65%	50%	0.000
Strongly disagree	19%	28%	
Undecided	16%	22%	
I would more likely purchase socio-environmentally responsible clothes if their look were the same as mainstream clothes			
Response	Female	Male	P-value
Strongly agree	64%	57%	0.000
Strongly disagree	16%	24%	
Undecided	20%	19%	

aesthetic appeal of sustainable clothes. There was also a significant association between age and the importance participants place on the feel (0.017 < 0.05) of sustainable clothes. Therefore, participants' age influenced the importance they placed on the feel of sustainable clothes.

Contrary to the findings on the price and the look and feel of sustainable clothes, Table 3 shows no significant association (0.357 > 0.05) between age and the importance participants placed on the durability of sustainable clothes. Therefore, participants' age did not influence the importance they placed on the durability of the clothes.

Association between age and importance of clothing attributes

Table 4 indicates no significant association (0.066 > 0.05) between age and purchases made because sustainable clothes tend to be more durable than mainstream clothes. There was a significant association (0.033 < 0.05) between age and the likelihood of participants purchasing sustainable clothes if the look resembled mainstream clothes. Therefore, participants' ages influence the likelihood of purchases if the look of the clothes change. There was no significant association (0.405 > 0.05) between age and purchases made when the clothes were on special offer. Therefore, the participants' ages do not influence the purchases when there is a special offer. There was also no significant association (0.674 >

TABLE 3:   ASSOCIATION BETWEEN AGE AND IMPORTANCE OF ATTRIBUTES (N=305)

Question	18-24 years	25-31 years	32-38 years	39-44 years	45 years and above	P-value
How much importance do you place on the durability of sustainable clothes?						
Very important	79%	63%	68%	69%	54%	0.357
Moderately important	14%	33%	26%	24%	32%	
Unimportant	7%	4%	6%	7%	14%	
How much importance do you place on the way sustainable clothes look?						
Very important	74%	77%	67%	72%	60%	0.041
Moderately important	14%	20%	27%	21%	26%	
Unimportant	12%	3%	6%	7%	14%	
How much importance do you place on the way sustainable clothes feel?						
Very important	74%	76%	71%	83%	77%	0.017
Moderately important	24%	23%	25%	10%	12%	
Unimportant	2%	1%	4%	7%	11%	
How much importance do you place on the price of sustainable clothes?						
Very important	60%	50%	44%	55%	71%	0.025
Moderately important	35%	47%	50%	45%	20%	
Unimportant	5%	7%	6%	0%	9%	

TABLE 4:   ASSOCIATION BETWEEN AGE AND CLOTHING ATTRIBUTES (N=305)

Question	18-24 years	25-31 years	32-38 years	39-44 years	45 years and above	P-value
I tend to purchase more socio-environmentally responsible clothes when there are sales or special offers on						
Strongly agree	61%	57%	53%	55%	51%	0.405
Strongly disagree	18%	15%	16%	21%	23%	
Undecided	21%	28%	31%	24%	26%	
I would more likely purchase socio-environmentally responsible clothes if their look were the same as mainstream clothes						
Strongly agree	65%	69%	60%	52%	37%	0.033
Strongly disagree	19%	8%	14%	27%	40%	
Undecided	16%	23%	26%	21%	23%	
I would more likely purchase socio-environmentally responsible clothes if their feel were the same as mainstream clothes						
Strongly agree	65%	66%	59%	62%	48%	0.674
Strongly disagree	14%	10%	18%	24%	26%	
Undecided	21%	24%	26%	14%	26%	
I purchase socio-environmentally responsible clothes because they tend to be more durable than mainstream clothes						
Strongly agree	17%	16%	14%	28%	40%	0.066
Strongly disagree	60%	68%	62%	48%	46%	
Undecided	23%	16%	24%	24%	14%	

0.05) between age and the likelihood of participants purchasing sustainable clothes if the clothes resembled mainstream clothes. Therefore, participants' ages do not influence the likelihood of purchases if the feel of the clothes changes.

Participants' purchasing behaviour based on knowledge of socio-environmental benefits

Table 5 illustrates that most participants (60%) indicated that they occasionally purchase sustainable clothes because they are aware of the socio-environmental benefits. Occasional

TABLE 5:   ASSOCIATION BETWEEN AGE AND CLOTHING ATTRIBUTES (N=305)

How often do you purchase socio-environmentally responsible clothes because you know of their benefits to the environment?		
Response	Frequency (%)	P-value
Very frequently	59 (19)	0.066
Occasionally	185 (61)	
Never	61 (20)	
How often do you purchase socio-environmentally responsible clothes because of their benefits on society?		
Response	Frequency (%)	P-value
Very frequently	68 (22)	0.109
Occasionally	176 (58)	
Never	61 (20)	
I purchase socio-environmentally responsible clothes because I am aware of their benefits on the environment		
Response	Frequency (%)	P-value
Strongly agree	192 (63)	0.305
Strongly disagree	61 (20)	
Undecided	52 (17)	
I purchase socio-environmentally responsible clothes because I am aware of their benefits on society		
Response	Frequency (%)	P-value
Strongly agree	191 (62)	0.529
Strongly disagree	54 (18)	
Undecided	60 (20)	

purchases may be linked to unmet clothing attributes, such as the look, feel, and price, as discussed in previous sections. These findings concur with Dreyer *et al*. (2016), who report that the Target Group Index South Africa (TGI SA) finds that South African customers are increasingly aware of environmental challenges and support sustainable businesses. These findings suggest that most of the participants who occasionally purchase sustainable clothes are knowledgeable about the socio-environmental benefits of the clothes. With this in mind, fashion design entrepreneurs must continue raising awareness about the benefits of sustainable clothes. This sustainability awareness may increase purchasing frequency among existing customers and, consequently, attract new customers.

Table 5 shows that most participants (63%) indicated that knowledge of socio-environmental benefits influences their purchase of sustainable clothes. Some authors report that knowledge does not always translate into purchasing sustainable clothes (Mashinini-Langwenya, 2013; Malepa, 2014). However, the findings of this study reveal that knowledge of the socio-environmental benefits of clothes leads to purchasing the clothes. These findings concur with the reports of Yan, Hyllegard and Blaesi (2012) and Shen *et al*. (2012), who state that

knowledge regarding environmental challenges leads to the purchase of sustainable products. Therefore, participants' knowledge of sustainable clothing socio-environmental benefits influenced their purchasing behaviour. Thus, it is important and beneficial to continue increasing sustainability awareness of the benefits of sustainable clothes on the environment and society among customers.

Association between age and purchases based on knowledge of socio-environmental benefits

As seen in Table 5, there is no significant association (0.109 > 0.05) between age and participants' purchasing frequency based on societal benefits. There is also no significant association (0.066 > 0.05) between age and purchasing frequency based on environmental benefits. Therefore, participants' age did not influence their purchasing frequency based on socio-environmental benefits. Participants across all age groups occasionally purchased sustainable clothes due to knowledge of the benefits.

Table 5 shows no significant association (0.305 > 0.05) between age and participants' purchases based on awareness of environmental benefits. Moreover, there is no significant association

(0.529 > 0.05) between age and participants' purchases based on awareness of societal benefits. These findings indicate that participants' age did not influence their knowledge-based purchases. Thus, knowledge is an important factor that encourages customers' purchasing behaviour across all age groups.

LIMITATIONS

The demographic criteria for customers in this study were limited to age and gender. This study offers three suggestions for future studies. The first suggestion is in relation to customers' demographics. It is suggested that future studies should be representative of age, gender, and ethnicity as based on South African statistics. Furthermore, the addition of income and employment in the demographic segment will provide rich data on customer spending patterns. The second suggestion for future study is a focus on the customers' experience with locally manufactured sustainable clothes. The focus on the customers' experience will aid in elevating local fashion design entrepreneurs' sustainable clothes. The third suggestion for future study is to recruit men to assist with data collection. This inclusion of male data collectors may aid in ensuring that there is more participation from men.

CONCLUSIONS AND RECOMMENDATIONS

The purchasing of sustainable clothes is a complex matter. Various attributes and knowledge of the benefits of the clothes have various influences on customers' purchasing behaviour. Regarding attributes, there has to be a transformation of the look and feel of sustainable clothes.

The look and feel of sustainable clothes are not strong enough to attract purchases based on these attributes alone. Transforming the look and feel of sustainable clothes to eliminate comparison with mainstream clothes may increase customers' purchasing behaviour. The current feel of sustainable clothes hinders the purchasing of the clothes. Improving the look and feel of sustainable clothes may increase customers purchasing frequency. Transforming

the look and feel of sustainable clothes will add more value to sustainable clothes and consequently increase purchases beyond special offers. This study recommends that more regarding look and feel should be done to durable and sustainable clothes to increase purchases of sustainable clothing.

It is recommended that producing sustainable clothes from blended fabrics would solve this problem. For example, blending hemp (that generally has a scratchy feel) with cotton tends to be softer and results in a soft fabric with both fabrics' characteristics.

Awareness of sustainability issues resulted in purchases. Most participants indicated that they occasionally purchased sustainable clothes because they were aware of the socio-environmental benefits. This study found a lack of effect of price and durability on purchasing behaviour. This finding suggest that other attributes influence participants' purchasing behaviour. It is recommended that sustainable fashion designers identify methods that will encourage purchases. For example, pricing sustainable garments at a selling price may aid fashion design entrepreneurs in making more profits and increase customers' consumption behaviour. In addition, it is recommended that sustainable fashion designers design multifunctional garments with various detachable parts instead. The detachable parts can be purchased at various intervals, which may allow customers to save up and return to purchase other parts of the garment.

It is recommended that sustainable fashion design entrepreneurs and sustainable organisations continue raising awareness about the benefits of sustainable clothes. This increased awareness will increase purchasing frequency among existing customers and consequently attract new customers.

This study contributes to existing theories regarding customers' purchasing behaviour regarding sustainable clothes. The findings of this study provide essential information for use by fashion designers as well as the textile and clothing in the production of sustainable clothes and towards a more sustainable local textile and clothing industry. In addition, this study provides essential information for future studies.

ACKNOWLEDGEMENTS

REFERENCES

Aakko, M., 2013, 'What is the role of aesthetics in sustainability?', in Niinimäki, K., (ed.), 2013, Sustainable fashion: new approaches, pp. 38-43, Aalto University, Helsinki.

Babbie, E.R., 2007, The basics of social research, 4th edn., Cengage Learning, Belmont.

Babbie, E. R., 2016, The basics of social research, 7th edn., Cengage Learning, Boston.

Blackwell, R., Miniard, P & Engel, J., 2006, Consumer behavior, 10th edn., Thomson Southwestern, Ohio.

Brosdahl, D.J.C. & Carpenter, J.M., 2010, 'Consumer knowledge of the environmental impacts of textile and apparel production, concern for the environment, and environmentally friendly consumption behavior', Journal of Textile and Apparel, Technology and Management, 6(4),1-9.

Bryman, A., 2012, Social research methods, 4th edn., Oxford University Press, Oxford.

Carpenter, J. & Moore, M., 2010, 'Product attributes and retail format choices among U.S. apparel purchasers', Journal of Textile and Apparel Technology and Management, 6 (4), 1-11.

Carrigan, M. & Attalla, A., 2001, 'The myth of the ethical consumer – do ethics matter in purchase behaviour?', Journal of Consumer Marketing, 18 (7), 560–578.

Bloch, P.H., 1995, 'Seeking the ideal form: Product design and consumer response', Journal of Marketing, 59 (3), 16-29.

Chan, T-Y. & Wong, C.W.Y., 2012, 'The consumption side of sustainable fashion supply chain: Understanding fashion consumer eco-fashion consumption decision', Journal of Fashion Marketing and Management, 16(2), 193 –215.

Y.S. & Chang, C.H., 2012, 'Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust', Management Decision, 50 (3), 502-520.

Connell, K.Y. H., 2010, 'Barriers to eco-conscious apparel acquisition', International Journal of Consumer Studies, 34 (3), 279–286.

Connell, K.Y.H., 2011, 'Exploring consumers' perceptions of eco-conscious apparel acquisition behaviours', Social Responsibility Journal, 7 (1), 61–73.

Connell, K.Y.H. & Kozar, J.M., 2014, 'Environmentally Sustainable Clothing Consumption: Knowledge, Attitudes, and Behavior', in Muthu, S., (ed.), 2014, Roadmap to Sustainable Textiles and Clothing, pp. 41-61, Springer, Singapore.

DeHaan, E., 2016, 'Fast fashion: environmental and social impact', in The Eco Guide, viewed 1 July 2018, from https://theecoguide.org/fast-fashion-environmental-and-social-impact

Delong. M., 2015, Aesthetics of dress: bibliographical guides, Bloomsbury Academic, London.

Dreyer, H., Botha, E., Van Der Merwe, D., Le Roux, N. & Ellis, S., 2016, 'Consumers' understanding and use of textile eco-labels during pre-purchase decision making', Journal of Family Ecology and Consumer Sciences, Special Edition Diversifying clothing research in Southern Africa, 1,1- 19.

Fashion Outreach 2017, Sustainable fashion brands in South Africa, viewed 21 January 2018, from http://www.fashionoutreach.org/sustainable -fashion-brands/

Fastenau, J., 2018, 'Under the influence: The power of social media influencers', in Crobox, viewed 10 February 2018, from https://medium.com/crobox/under-the-influence-the-power-of-social-media-influencers-5192571083c3

Gwilt, A., 2014, A practical guide to sustainable fashion, Bloomsbury Publishing, London.

Hahn-Petersen, L.A., 2018, 'Millennials say they care about sustainability. so, why don't they shop this way?', in Business of Fashion, viewed 12 November 2019, from: https://www.businessoffashion.com/articles/opinion/op-ed-millennials-say-they-care-about-sustainability-so-why-dont-they-dont-shop-this-way

Hanbury, M., 2018, 'Millennials have a new shopping habit that could spell trouble for forever 21 and H&M', in Business Insider, viewed 12 November 2019, from https://www.businessinsider.com/millennials-practical-clothing-habits-threaten-forever-21-hm-2018-3?

r=UK&IR=T

Hawkes, J., 2001, 'The fourth pillar of sustainability: Culture's essential role in public planning', in Common Ground Publishing P/L, viewed 31 March 2017, from http://www.culturaldevelopment.net.au/community/Downloads/HawkesJon(2001)TheFourthPillarOfSustainability.pdf.

Joshi, Y. & Rahman, Z., 2015, 'Factors affecting green purchase behaviour and future research directions', International Strategic Management Review, 3 (1-2), 128–143.

Malepa, M. M., 2014, 'Fashion consumption and disposal practices of South African consumers and their environmental implications', Masters dissertation, Dept. of Fashion Design and Technology, Tshwane University of Technology.

Mashinini-Langwenya, P.N., 2013, 'Preferences for eco-friendly fashion: a case study of consumers in Tshwane University of Technology', Masters Dissertation, Dept. of Fashion Design and Technology, Tshwane University of Technology.

May, J., 2019, 'Nipped in the waste: why sustainable fashion is a big ask for local designers', in Timeslive, viewed 27 May 2019, from https://www.timeslive.co.za/sunday-times/lifestyle/fashion-and-beauty/2019-04-21-nipped-in-the-waste-why-sustainable-fashion-is-a-big-ask-for-local-designers.

Morelli, J., 2011, 'Environmental sustainability: A definition for environmental professionals', Journal of Environmental Sustainability, 1 (1), 1–10.

Mybroadband 2018, What we know about Internet users in South Africa, viewed 12 June 2019, from https://mybroadband.co.za/news/internet/251063-what-we-know-about-internet-users-in-south-africa.html.

Niinimäki, K. 2010, 'Eco-clothing, consumer identity and ideology', Sustainable Development, 18 (3), 150-62.

Roozen, I., Raedts, M. & Meijburg, L., 2021, 'Do verbal and visual nudges influence consumers' choice for sustainable fashion?', Journal of Global Fashion Marketing, 12 (4), 327-342.

Rubin. A. & Babbie. E.R., 2010, Research methods for social work, 7th edn., Cengage Learning, California.

Shen, B., Wang, Y., Lo, C.K.Y. & Shum, M., 2012, 'The impact of ethical fashion on consumer purchase behaviour', Journal of fashion marketing and management, 16(2), 234-245.

Smal, D. N., 2016, 'The role of environmental sustainability in a design drive fashion industry: A South African case study', D. Tech. Thesis, Faculty of Informatics and Design, Cape Peninsula University of Technology.

Stata n.d., Why Stata, viewed 25 February 2019, from: https://www.stata.com/why-use-stata/

Statista 2017, Apparel, viewed 21 June 2019, from https://www.statista.com/outlook/244/112/fashion/south-africa#market-users.

Stats South Africa 2018, Mid-year population estimates, viewed 21 July 2019, from https://cdn.24.co.za/files/Cms/General/d/7701/a22404868eef4b45a9ae138dfd5a313f.pdf

UN 2008, Achieving sustainable development and promoting development cooperation, viewed 12 February 2016, from: http://www.un.org/en/ecosoc/docs/pdfs/fina_08-45773.pdf

UNAC 2013, Insights Series 2: The human rights approach to sustainable development: Environmental rights, public participation and human security, viewed 26 February 2018, from: http://unac.org/wp-content/uploads/2013/07/HRandSD-EN-PDF.pdf

UNESCO n.d., Sustainable Development, viewed 21 July 2017, Available from http://en.unesco.org/themes/education-sustainable-development/what-is-esd/sd

Veleva, V. & Ellenbecker M., 2001, 'Indicators of sustainable production: framework and methodology', Journal of Cleaner Production, 9 (6), 519-549.

Whyte, G., 2016, 'The relationship between sustainable supply chains and economic success in the retail clothing industry in South Africa', M.Sc., School of Animal, Plant & Environmental Sciences, University of the Witwatersrand.

Woodward, S., 2015, 'Accidentally sustainable: Ethnographic approaches to clothing', in Fletcher, K. & Tham, M., (eds.), 2015, Routledge handbook of sustainability and Fashion, pp 131-138, Routledge, London.

Yan, R., Hyllegard, K.H. & Blaesi, L.F., 2012, 'Marketing eco-fashion: the influence of brand name and message explicitness', Journal of Marketing Communications, 18(2),151-168.