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GENDER DIFFERENCES AMONGST AFRICAN GENERATION Y STUDENTS' ENVIRONMENTAL BELIEFS

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ABSTRACT

Over recent decades environmental problems have been placed under the spotlight by media and governments alike and, as such, all consumers have become at least some shade of green. Environmentally concerned consumers have a higher chance of behaving in a pro-environmental manner. The main objective of this study was to determine whether there are any statistically significant differences in gender regarding African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitude and environmental concern in the South African context. Following a descriptive research design, a self-administered questionnaire was used to collect data from a convenience sample of 329 student participants. The captured data were analysed using descriptive measures, correlation analysis and multiple regression analysis. The results of the study suggest that female African Generation Y students display a slightly higher sense of environmental concern, environmental knowledge, responsibility and positive attitude than their male counterparts. Furthermore, the findings indicate that female African Generation Y students' environmental concern is positively predicted by their environmental knowledge and environmental responsibility. In contrast, male African Generation Y students' environmental concern is positively predicted by their environmental attitude.

INTRODUCTION

In recent decades environmental problems have been placed under the spotlight by media and governments alike; more specifically environmental problems induced by the actions of humans have come under more scrutiny (Christensen, 2013: 4). Environmental topics such as global warming, climate change and the exploitation of natural resources are but a few of the major threatening topics that have received attention in recent years. Scholars argue that the majority of these environmental problems are, most likely, the result of the momentous growth rate in the human population, consequent urbanisation of natural land and the ever constant pursuit of economic growth (Miller and Spoolman, 2012: 486; Ali, Khan and Ahmed., 2011; Kalule and de Wet, 2010; Tisdell, 2008; Lynas, 2007; Ottman, Strafford and Hartman, 2006; Antilla, 2005; Chylek, Box and Lesins, 2004; Shankin, 2004). While the degradation of the natural environment has been an on-going issue throughout human history, of late the problem has intensified, placing the planet and the wellbeing of mankind in jeopardy on a global scale (Ali *et al*., 2011: 217). Consequently, environmental topics such as environmentalism or the green movement have become significant topics of discussion amongst the public and academia alike (Ali *et al*., 2011: 217; Rahbar and Wahid, 2011: 73; Haytko and Matulich, 2008: 2).

Identifying environmentally-friendly consumers is no simple task and a plethora of research has been directed towards accomplishing this task with mixed results (Albayrak, Aksoy and Caber., 2013: 27; Leonidou, Leonidou and Kvasova., 2010: 1321). The initial identification process focused on demographic and psychographic characteristics, including levels of income, age and gender (Cheah and Phau, 2011: 455; Lee, 2009: 88). However, results varied across studies, especially in terms of gender differences. Notwithstanding these studies, several studies (Sundströma and McCright, 2014: 11; Xiao

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and McCright, 2013: 16; Wells, Ponting and Peattie., 2011: 818; Lee, 2009: 92; Haytko and Matulich 2008: 9; Zelezny, Chua and Aldrich, 2000: 454) do indicate the existence of gender differences pertaining to environmental issues.

Since the beginning of the environmentalism movement, the green or environmental consumer was classified as being typically a middle-aged mother with an above-average income and education level (Ottman, 2011: 22; Straughan and Roberts, 1999: 563). Ottman (2011: 22) opines that these women display a natural tendency to safeguard their loved ones' welfare and health, and to protect the environment for future generations. Furthermore, most of the household purchases are made by these women as well as the majority of the product brand decisions.

With heightened environmental awareness increasing (Leonidou *et al.,* 2010: 1319-1320; Crane, 2000: 280; Straughan and Roberts, 1999: 558) it is undeniable that all consumers have become at least some shade of green (Ottman, 2011: 22). However, some studies still deem women as the dominant environmentalists, as was found by Sundströma and McCright (2014: 11), Xiao and McCright (2013: 16), Wells *et al*. (2011: 818), Lee (2009: 92), Haytko and Matulich (2008: 9), Zelezny *et al*. (2000: 454) who concluded that women display slightly higher levels of environmental knowledge, concern and attitudes than males. Contrastingly, various other studies have concluded the exact opposite. For example, Xiao and Hong (2010: 101) found that men were more pro-environmentally active than women. Such contrasting results warrant further investigation into gender differences in terms of environmental issues.

Even though the youth is at the crux of future environmental conservation, their environmental behaviour patterns are still somewhat under identified (Lee, 2008: 576). The youth, currently classified as the Generation Y cohort (individuals born between 1986 and 2005) (Eastman and Liu, 2012: 94; Markert, 2004: 21), are recognised as being "born green" because to these individuals living in an eco-conscious society is considered the norm (Rogers, 2013). Aged between 11 and 30 in 2016 and led by their Generation X parents, these individuals are exhibiting positive shifts in their environmental attitudes and behaviour, in some cases even asserting leadership roles in the sustainable arena (Rogers, 2013).

In 2014, 38 percent of South Africa's population comprised the Generation Y cohort and a staggering 84 percent of this generational cohort was African (Statistics South Africa, 2014). The sheer size of the African Generation Y cohort makes them a lucrative market segment to both traditional marketers and environmental marketers in the South African marketplace. According to Bevan-Dye and Surujlal (2011: 49), African Generation Y individuals attending higher education institutions (HEIs) are more likely to attain a higher future earning potential and, consequently, attain a higher disposable income. Furthermore, these individuals tend to position themselves as opinion leaders amongst the wider Generation Y cohort in South Africa making them an attractive market segment. There is limited research on consumer behaviour pertaining to the significantly sized Generation Y cohort in South Africa, including their gender environmental behaviour patterns.

LITERATURE REVIEW

Environmental concern

Today's average consumer appears to express at least some sense of concern for the environment. These environmental concerns have seemingly engrossed themselves into everyday purchasing habits as consumers are increasingly opting to favour environmentally products over conventional product offerings (Almossawi, 2014: 1; Do Paco and Roposa, 2009: 365). As such, consumers have noticed that their purchasing patterns may have a direct significant impact on various ecological problems (Laroche, Bergeron and Barbaro-Forleo, 2001: 503). According to Sodhi (2011: 180), the seriousness of natural resource depletion, environmental degradation and the need for purchase behaviour changes are undeniable and consumers are beginning to recognise this fact (Laroche *et al*., 2001: 503).

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Consumers' growing ecological concern is a significant factor that multi-national organisations cannot ignore anymore. These heightened concerns are influencing marketing practices as marketers attempt to satisfy the demands of green-minded consumers. This implies that there is a gap to be explored in gaining insight into consumers' perceived environmental beliefs; that is, how best to comprehend consumers' environmental concerns.

Perceived environmental knowledge

Environmental knowledge refers to an individual's current level of knowledge concerning the natural environment and includes their perceptions about environmental issues (Pagiaslis and Krontalis, 2014: 337; Zsóka, Szerényi, Széchy and Kocsis, 2013: 27). Environmental knowledge is an important facet in the success of pro-green marketing agendas and the acceptance of environmentally friendly products as a whole (Gam, 2011: 180). As such, environmental knowledge may be deemed as a significant predictor of both environmental concern and green purchase behaviour (Vicente-Molina, Fernández-Sáinz and Izagirre-Olaizola, 2013: 130).

According to the literature a positive relationship exists between environmental knowledge, pro-environmental attitude and environmental concern, which ultimately lead to pro-environmental behaviours (Polonsky, Vocino, Grau, Garma and Ferdous., 2012:242; Chea and Phau, 2011:456; Wells *et al*., 2011:828; Gupta and Ogden, 2009:377; Mostafa, 2007:452). This is substantiated by Wells *et al*. (2011: 828) and Mostafa (2007: 452) who point out that environmental knowledge and environmental attitudes form the crux of pro-environmental behaviour.

Environmental attitude

An individual's attitude is based on personal experience or specific issues. For the attitude to formulate, prior knowledge of the experience or issue is required (Gupta and Ogden, 2009: 377). This concept also applies to the formation of environmental attitudes. Before environmentally-friendly products are considered for purchase, a relative knowledge pertaining to environmental issues is required to form a valid environmental attitude (Chea and Phau, 2011: 456). An environmental attitude is then formed once the relevant knowledge has been obtained. Lee (2009: 88) defines an environmental attitude as "a cognitive judgement towards the value of environmental protection".

As a strong determining factor of environmental behaviour within the environmental domain, environmental attitudes have been utilised in various behavioural models (Greaves, Zibarras and Stride., 2013: 111; Kim, Njite and Hancera., 2013: 258; Polonsky, *et al*., 2012: 239-240; Ali *et al*., 2011: 179; Ajzen, 1991: 218) as a fundamental element of environmental intentions and pro-environmental behaviour (Polonsky *et al*., 2012: 242).

Perceived environmental responsibility

Environmentally-responsible consumers are individuals who are more aware of current environmental issues, environmental problems, and who aim to actively participate in eco-friendly events and willingly pursue products that are environmentally friendly from socially responsible organisations (Han and Yoon, 2015: 24). Responsible environmental behaviour entails a conscious decision made on the part of an individual to abstain from consuming products or behaving in a manner that may harm the environment. Almossawi (2014: 5) and Nagar (2013: 5) argue that heightened environmental concern is pushing organisations to be sustainably responsible in order to satisfy environmentally-responsible consumers' needs.

For consumers to act environmentally responsible manner, they need information to make informed decisions, a lack of information may hamper green product adoption and pro-environmental behaviour (Nagar, 2013: 72). Furthermore, Kotler (2011: 133) states that today's contemporary consumers place their preferred brand choice not only upon emotional and functional criteria but also according to the extent to which an organisation meets their social responsibility. As such, marketers need to reinvent

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manufacturing processes and product systems to appeal to environmentally responsible consumers (Nagar, 2013: 72).

The future of the environmentalism movement is dependent on the youth (Lee, 2009: 87). It is these young innovative individuals that will spearhead the future survival of the environment (Zsóka *et al*., 2013: 126; Lee, 2009: 87).

Generation Y

The youth of today embody the environment of tomorrow, thus making them an attractive target market for the environmental movement (Lee, 2009: 87). Young, highly educated, affluent and urbanised are some of the terms used in existing literature to describe today's young environmentally-conscious consumer. These Millennial's are more susceptible to innovative ideas and are conscious on a social or environmental front, more so than that of previous generations (Kanchanapibul, Lacka, Wang and Chan, 2014: 529; Royne, Levy and Martinez, 2011: 332). Being technological savants and having immense amounts of information at their fingertips at an instant, Generation Y consumers have been engrossed with various man-induced environmental crises in their lifetime. As a consequence, this generational cohort has become socially concerned and aware of current threatening environmental issues (Barton, Fromm and Egan, 2012; Hill and Lee, 2012: 478; Shaw and Fairhurst, 2008: 373). Furthermore, May (2013) insinuates that Generation Y consumers have indeed heightened their eco-conscious mind-sets and are being more pro-active towards the preservation of the environment; this is being achieved through reducing their carbon footprints while at the same time cutting on living costs such as ever rising electricity bills.

These findings are imperative for the green movement as today's environmentally conscious Generation Y cohort will pass on the environmental message and shape the minds of future environmental generations (Lee, 2009: 87). It is for that reason that understanding the young generation's environmental purchase behaviours is vital because, ultimately, they will be society's future workers, innovators, consumers and, finally, the future of mankind (Kanchanapibul *et al*., 2014: 528).

PROBLEM INVESTIGATED

The main objective of this study was to determine if there are any statistically significant differences in gender regarding African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitude and environmental concern in the South African context.

RESEARCH OBJECTIVES

The study was guided by the following research objectives:

- Assess African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitude and level of environmental concern.
- Determine the relationship between African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived attitude and their level of environmental concern.
- Ascertain whether gender differences exist concerning African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitudes and environmental concern.
- Determine the influence of perceived environmental knowledge, perceived environmental responsibility and environmental attitudes of female African Generation Y students' level of environmental concern.

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- Assess the influence of perceived environmental knowledge, perceived environmental responsibility and environmental attitudes of male African Generation Y students' level of environmental concern.

RESEARCH METHODOLOGY

Research design and methods

A descriptive research design was followed for this study, wherein a self-administered survey questionnaire was distributed to a non-probability convenience sample. To overcome the limitations a convenience sample presents, demographic questions pertaining to participants' home language, gender and province of origin were included in the questionnaire. These demographic questions provide an assessment to which the sample was representative of the target population. The target population consisted of full-time African Generation Y students, aged between 18 and 24 years, registered at South African public HEIs. The sampling frame consisted of the 25 registered public South African HEIs, which were narrowed down to four HEI campuses located in the Gauteng province. The four selected HEIs comprised one comprehensive university campus, one country-based university of technology campus and two city-based traditional university campuses.

Of the 500 questionnaires distributed across the four campuses (125 per campus), 329 completed and usable questionnaires were returned.

Sample characteristics

Table 1 provides an overview of the sample participants, demographic information.

TABLE 1
SAMPLE CHARACTERISTICS

Demographics	Sub-groups	Percent (%)	Sub-groups	Percent (%)
Age	18-19	44		
	20-21	40		
	22-23	14		
	24	2		
Gender	Male	42		
	Female	58		
Home province	Eastern Cape	4	Kwazulu-Natal	8
	Free state	10	Limpopo	16
	Gauteng	51	Mpumalanga	5
	North-West	6	Northern Cape	0
			Western Cape	0
Home language	Afrikaans	1	Northern Sotho	10
	English	5	Southern Sotho	24
	Ndebele	2	Tswana	15
	Xhosa	8	Swati	5
	Zulu	20	Venda	4
			Tsonga	6

Table 1 depicts a relatively even sample distribution between female (58%) and male (42%) participants. The majority of the participants fell between the age of 18 and 21 (84%). Regarding participants' home province seven of the nine provinces were represented, the Northern Cape and Western Cape being the two provinces that did not feature in the sample. All 11 of South Africa's official language groups were represented by the participants in the sample.

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Measurement instrument

The study's data collection approach included a structured, self-administered questionnaire to gather the required data. The questionnaire included existing and validated scales used in previously published research. In order to measure African Generation Y students' environmental beliefs, scales from Lee (2008: 579-590) as well as Mostafa (2007: 472) were utilised. The four scales included perceived environmental knowledge (five items), perceived environmental responsibility (five items), environmental attitudes (seven items) and environmental concern (four items). Table 2 provides the psychometric properties of the scales:

TABLE 2
PSYCHOMETRIC PROPERTIES OF QUESTIONNAIRE SCALES

Scales	Author	Sample	Number of items	Reported Cronbach alphas
Perceived Environmental Knowledge	Mostafa (2007)	1093	5	0.78
Perceived Environmental Responsibility	Lee (2008)	6010	5	0.85
Environmental Attitudes	Lee (2008)	6010	7	0.87
Environmental Concern	Lee (2008)	6010	4	0.77

In order to record the scaled responses, a six-point Likert scale ranging from 1=strongly disagree to 6=strongly agree was used. A summative plan of the proposed study and questionnaire was submitted to the Ethics Committee of the North-West University (Vaal Triangle Campus). The study adhered to the ethics committee's regulations and was classified as a low/no risk study. The questionnaire was given the following ethical clearance number: Econit-Econ-2014-007. Additionally, the questionnaire contained a cover letter explaining the nature of the study and instructed that participation in the study was clearly voluntary as well as providing assurance of confidentiality concerning the participants' information.

Data analysis

The captured data was analysed using IBM's Statistical Package for Social Sciences (SPSS), Version 23 for Windows. To assert the scales internal consistency reliability the popular Cronbach alpha coefficient technique was employed (Pallant, 2010: 97; Shukla, 2008: 84). Pallant (2010: 100) cautions that a construct containing fewer than 10 items may be susceptible to delivering low Cronbach alpha values. As all constructs in the study contained fewer than 10 items, it was determined to conclude the inter-item correlation in addition to the Cronbach alpha as precautionary measure. Descriptive statistic measures were then computed to determine African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitudes and level of environmental concern. The underlying relationships between the constructs were measured by calculating Pearson's product-movement correlation coefficient. Thereafter, a two independent-samples t-test was conducted to determine if any significant differences between females and males existed concerning African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitudes and environmental concerns. Finally, independent regression analysis was undertaken for both females and males to determine if environmental knowledge, environmental responsibility and environmental attitudes significantly influenced the environmental concerns of African Generation Y students.

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RESULTS

Internal-consistency reliability

The Cronbach alpha coefficient and the average inter-item correlation was the measure computed in this study to ascertain the internal-consistency reliability of the scales.

Table 3 provides a summary of the reliability measures of the scales utilised in the questionnaire.

TABLE 3
INTERNAL-CONSISTENCY RELIABILITY OF THE MEASURES

Construct	Number of items in construct	Cronbach alpha	Average inter-item correlation
Perceived environmental knowledge	5	0.811	0.461
Perceived environmental responsibility	5	0.648	0.278
Environmental attitude	7	0.858	0.475
Environmental concern	4	0.737	0.417

As indicated in Table 3, all Cronbach alpha values exceeded the recommended level of 0.60, thereby indicating satisfactory internal-consistency reliability (Silver, Stevens, Wrenn and Loudon., 2013: 104; Zikmund and Babin, 2013: 257; Malhotra, 2010: 319). Additionally, all inter-item correlation coefficients for each of the constructs fell within the optimal range of 0.15 and 0.50 (Spiliotopoulou, 2009: 12). Therefore, it can be asserted that the measuring instrument may be deemed reliable and valid.

Descriptive statistics

Measures of shape, location and variability were calculated across all scaled items. The six-point Likert sale used in the study ranged from 1=strongly disagree to 6=strongly agree. As such, higher mean values are indicative of higher environmental attitudes, pro-environmental beliefs, sense of environmental responsibility and environmental concerns amongst the sampled African Generation Y students. The results of the descriptive statistics are presented in Table 4 below:

TABLE 4
DESCRIPTIVE STATISTICS SUMMARY

Construct	Valid N	Mean			Standard Deviation			Skewness	Kurtosis
		F	M	T	F	M	T	T	T
Perceived environmental Knowledge	329	4.210	4.142	**4.182**	0.921	0.912	**0.916**	**-0.316**	**0.084**
Perceived environmental responsibility	329	4.715	4.392	**4.578**	0.819	0.847	**0.844**	**-0.497**	**-0.256**
Environmental attitudes	329	5.417	5.016	**5.249**	.694	0.928	**0.824**	**-1.166**	**0.521**
Environmental concern	329	4.443	4.388	**4.420**	0.867	0.077	**0.885**	**-0.673**	**0.337**

F = females, M = males, T = total

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As Table 4 indicates, skewness values for all measured constructs fell within the acceptable +2 and -2 range thus, asserting that the data is distributed normally. Regarding the peakedness of the data distribution, kurtosis values indicated no irregularities and therefore, the data may be considered as distributed normally.

All four constructs computed means above 3, as can be seen in Table 4. Environmental attitude achieved the highest mean (Mean = 5.249), followed by perceived environmental responsibility (Mean = 4.578). Similarly, means above 3 were recorded for environmental concern (Mean = 4.420) and perceived environmental knowledge (Mean = 4.182). Regarding gender differences, the sampled females scored higher in each of the constructs when compared to the African Generation Y males. The results imply that African Generation Y students have favourable environmental attitudes, display a sense of environmental responsibility, are environmentally concerned and embody at least some form of environmental knowledge. Furthermore, females display a higher knowledge, sense of responsibility, environmental attitude and express more concern than African Generation Y males. Progressive findings such as these indicate promising results for the future sustainability of the South African environment.

Correlation analysis

In order to assert whether there is a relationship between perceived environmental knowledge, perceived environmental responsibility, environmental attitude and environmental concern, the Pearson's Product-Movement correlation coefficient was computed. Table 5 below presents the results.

TABLE 5
RELATIONSHIP BETWEEN ENVIRONMENTAL KNOWLEDGE, RESPONSIBILITY, ATTITUDE AND CONCERN

N = 329	1	2	3	4
Perceived environmental knowledge	1			
Perceived environmental responsibility	0.346**	1		
Environmental attitude	0.160**	0.504**	1	
Environmental concern	0.504**	0.417**	0.290**	1
**Correlation is significant at the 0.01 level (2-tailed)				

As Table 5 clearly indicates, there is a statistically positive relationship between African Generation Y students' perceived environmental knowledge and their perceived environmental responsibility ($r = 0.346$, $p = 000<0.05$), environmental attitude ($r = 0.160$, $p = 0.000 < 0.05$) and environmental concern ($r = 0.504$, $p = 0.000 < 0.05$). In addition, perceived environmental responsibility displayed a significant positive relationship with environmental attitude ($r = 0.504$, $p = 0.000<0.05$) and environmental concern ($r = 417$, $p = 0.000 < 0.05$). Finally, environmental attitude indicated a significantly positive relationship with environmental concern ($r = 290$, $p = 0.000 < 0.05$). Furthermore, given that none of the correlation coefficients exceeded 0.90, there is no obvious evidence of multicollinearity.

Independent samples t-tests

An independent samples t-test was employed to determine if African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, environmental attitudes and environmental concerns differed in terms of their gender characteristics. The results are indicated in Table 6 below:

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TABLE 6
GENDER DIFFERENCES

	Female Mean n =189	Female Std. Dev.	Male Mean n =140	Male Std. Dev.	t-value	p-value	Cohen's D
Environmental knowledge	4.210	0.921	4.142	0.912	0.664	0.507	*****
Perceived responsibility	4.715	0.819	4.392	0.847	3.471	0.001*	0.40**
Environmental attitude	5.417	0.694	5.016	0.928	4.473	0.000*	0.50***
Environmental concern	4.443	0.867	4.388	0.077	0.551	0.582	*****

*	Statistically significant at $p < 0.05$
**	Small effect, practically non-significant
***	Medium effect and moving toward practical significance
****	Large effect, practically significant
*****	Cohen's D-statistic not calculated as the variable was not statistically significant

Table 6 illustrates that there was no statistically significant difference between female and male African Generation Y students pertaining to their environmental knowledge and environmental concern. However, a statistical difference was discovered between African Generation Y female and male respondents concerning their environmental responsibility ($p = 0.001 < 0.05$) and environmental attitudes ($p = 0.000 < 0.05$). Therefore, it may be inferred that female African Generation Y students display a statistically significant more positive environmental responsibility and favourable environmental attitudes.

In order to test if the difference in both environmental responsibility and environmental attitudes between African Generation Y female and male students is of any practical significance, the Cohen's D statistic was computed. The analysis of the Cohen's D statistic presented a value of 0.40 for environmental responsibility and a value of 0.50 for environmental attitudes. The results indicate a small practical effect that is relatively non-significant for environmental responsibility. However, environmental attitude represents a medium sized effect approaching practical significance.

Multiple regression analysis

Regression analysis was executed on both the female and male samples in order to determine if their perceived environmental knowledge, environmental responsibility, and environmental attitudes predict their level of environmental concern. The results for the female sample are shown in Table 7 below:

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TABLE 7
FEMALE REGRESSION ANALYSIS

	Standardised Beta	Adjusted R^2	t-value	Significance level
Dependent variable:				
Environmental concern		0.341	1.669	
Independent variables:				
Environmental knowledge	0.309		4.779	0.000*
Environmental responsibility	0.353		4.916	0.000*
Environmental attitude	0.103		1.553	0.122
*Significant at the 0.05 level				

As Table 7 shows, Female African Generation Y students' perceived environmental knowledge and environmental responsibility have a significantly positive influence on their level of environmental concern ($p = 0.000 < 0.05$). However, environmental attitude had a positive yet, non-significant effect on environmental concern ($p = 1.22 > 0.05$). The three constructs accounted for 34 percent of the variance in Female African Generation Y students' level of concern.

Table 8 below presents the results of the regression analysis for the male sample:

TABLE 8
MALE REGRESSION ANALYSIS

	Standardised Beta	Adjusted R^2	t-value	Significance level
Dependent variable:				
Environmental concern		0.346	2.840	
Independent variables:				
Environmental knowledge	0.519		7.156	0.000*
Environmental responsibility	0.065		0.784	0.434
Environmental attitude	0.145		1.783	0.077
*Significant at the 0.05 level				

As shown in Table 8, Male African Generation Y students' perceived environmental knowledge has a significantly positive influence in their level of environmental concern ($p = 0.000 < 0.05$). However, both environmental responsibility ($p = 0.434 > 0.05$) and environmental attitude ($p = 0.077 > 0.05$) displayed a positive yet non-significant relationship towards their level of environmental concern. Collectively, the three constructs accounted for 35 percent of the variance in male African Generation Y students' levels of environmental concern.

CONCLUSIONS

There is no denying the fact the Earth is under the tyranny of humanity. The negligence of mankind has placed Earth directly in danger, and despite this consumers continue to exploit and misuse the Earth's depleting natural resources. This continued degradation of resources may have detrimental long-term effects on the planets survival (Glenn, 2008: 39).

Results from previous studies suggest that heightening awareness of environmental issues may change consumer beliefs towards environmental behaviour, thus increasing intentions to behave in a pro-

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environmental manner (Pagiaslis and Krontalis, 2014: 344). The primary objective of this study was to investigate the differences gender plays in perceived environmental knowledge, perceived environmental responsibility, environmental attitudes and environmental concerns of the African Generation Y consumer in South Africa. Due to the sheer size (33 percent of South Africa's population) and potential spending power of the African Generation Y consumer, marketers have targeted them as a lucrative market segment (Statistics South Africa, 2014; Bevan-Dye and Surujlal, 2011: 49; Bevan-Dye, Dhurup and Surujlal., 2009: 172; Bakewell and Mitchell, 2003: 98). Consumer behaviour studies such as these, present researchers and organisations a clearer understanding of the Generation Y consumer, more specifically a profile of the environmentally-conscious Generation Y consumer in South Africa.

As earlier studies have found Generation Y students to be environmentally conscious and environmentally concerned (Trivedi, Patel and Savalia., 2015: 79; Wesley, Lee and Kim., 2012: 41; Lee, 2009: 91-92; Mostafa, 2006: 113), the findings of this study indicated similar results. Furthermore, this study showed that females displayed a slighter higher mean regarding their concern, knowledge, responsibility and positive attitude towards the environment than their male counterparts. Female's environmental concern is predicted by their perceived environmental knowledge and perceived environmental responsibility. While, male environmental concern is predicted by environmental attitude. This infers that female levels of environmental knowledge and sense of responsibility will lead to an increase in female environmental concern. An increase in male environmental attitudes will lead to greater environmental concern. This may result in positive environmental actions and possibly the adoption of pro-environmental behaviour.

MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

The findings of the present study deliver important information to South African marketers who are focussing on both the environmentally conscious consumer as well as the significantly sized African Generation Y cohort in South Africa.

With specific reference to retailers, Mostafa (2006: 114) argues that environmental knowledge of an environmentally conscious consumer is imperative for the entire supply chain, as it is environmental issues that have been put into the spotlight that influence consumers' purchase decisions. This environmental knowledge has proven to the basis of forming environmental attitudes within a consumers mind set, regardless of gender (Polonsky *et al*., 2012: 242; Gupta and Ogden, 2009: 377).

In order to understand fully the green South African consumer, it is necessary to further segment consumers by categorising gender. As environmental topics are known to have emotional connotations tied to them, targeting the female population may be a good starting point. Many studies have found that female consumers are more environmentally conscious than males in general (Sundströma and McCright, 2014: 11; Xiao and McCright, 2013: 16; Wells *et al*., 2011: 818; Lee, 2009: 92). However, this may not always be the case as other studies found males to be just as environmentally conscious as their female counterparts (Synodinos, Bevan-Dye and De Klerk, 2013: 88-89; Xiao and Hong, 2010: 101).

Irrespective of gender, green marketers in South Africa should consider the positive underlying relationships found between environmental concern, environmental knowledge, environmental responsibility and environmental attitudes. Furthermore, appealing to consumers emotional instead of their rational sides might aid in capturing the green market (Lee, 2009: 92; Spero and Stone, 2004: 154). Thus, marketers could educate consumers about environmentally friendly alternative products to increase environmental concern. This may in turn create a higher sense of responsibility and positive attitudes towards conserving the environment

LIMITATIONS

Every study is confined to a certain degree of limitations, and this study is no exception. A non-probability sampling method was utilised to select the sample. Even though numerous demographic questions were included in the study to ascertain the representativeness of the sample, caution should be heeded when generalising the findings to the population. Additionally, the study made use of a single-cross-sectional research design, which supplies a momentary observation in time and lacks the vigour of a longitudinal study. Other possible revenues of research opportunities may include segmenting environmental consumers who do not form part of the South African Generation Y student population.

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