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# Perceptions of Older International Tertiary Students towards the Sustainable Future Environment in New Zealand

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*Sustainable living is the awareness of utilising the earth's natural resources wisely to meet the needs of future generations. Resources are limited regarding the effect of age towards living a sustainable life. This research investigated the influence of age on perceptions of 92 international students towards sustainable living in New Zealand. Quantitative results revealed a negative correlation between students' perception towards sustainability and an increase in age.*

**JEL Codes:** F34, G21 and G24

## 1. Introduction

Peoples' awareness and perception about sustainability and understanding of the complexity of issues presented by modern lifestyles has grown since the 1980's (Fien and Tilbury 2002), especially among the younger generations (age 40 years and younger). This awareness allows people to respond positively towards the ecological and environmental problems the world is currently facing (Ryan, Tilbury, Corcoran, Abe & Nomura 2010), but unfortunately the older generations tend not to be as aware of these changes. This generation consist of a large number of professionals in high positions with powerful influence, but not necessarily educated in terms of sustainability. Results also showed a close connection between old age village residents' sustainability literacy and their behavior in terms of daily activities after educated (Pillemer & Wagenet 2008). Various studies have been done regarding influence of culture, religion and nationality (Du Plessis**,** Sumphonphakdy; Hobfoll 1989; Ni, Sun, Li, Huang, & Borthwick 2010; Ryan, Tilbury, Corcoran, Abe & Nomura 2010), but in terms of the effect of age (40 years and up) towards sustainability, resources are limited. According to Moschis, (2003) as cited in Stolz and Bautista (2015), more research on older peoples' sustainable consumption is required due to relatively little and often contradictory information available.

Projections for international student enrolments to 2025 for the public tertiary education institutions are 7% from 2013 to 2025 and for annual student growth in 34 schools are 2% to 2025, and 5% for private English language schools (The Economic Impact 2008; Ministry of Education New Zealand 2011). This information validates the study that was done among international tertiary students towards the end of May 2015 at UUNZ Institute of Business, Auckland. The question can be asked whether the older (age 40 and up) international students are prepared to accept the fact that New Zealand has a clean green image.

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In 2002, more than 80,000 international (foreign) students studied in New Zealand. The education sector is the fourth largest export earner for New Zealand (Ministry of Education New Zealand 2011). The country earned about $1.7 billion with nearly 86% of all foreign fee paying students from Asia and Confucian Heritage Culture (CFC). Projections prepared by the British Council, Universities UK, and IDP Australia, assumed 6% annual growth to 2020 in international tertiary enrolments, in the main English speaking destination countries of the USA, the United Kingdom, Australia, Canada and New Zealand (Brida, Osti, & Faccioli 2011). Du Plessis et al (2012) are of the opinion that sustainability refers to the quality of a state or process that allows it to be maintained indefinitely. Emanuel & Adams (2011) refer to sustainability as an "economic, social, and ecological concept" (p.81) that was derived from the term sustainable development and includes conservation of natural resources through recycling, waste and water management, using renewable energy resources and developing environmental friendly land and property assets. Du Plessis, Chen and Toh (2012) describe sustainable development as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. The word sustainability has become the buzzword in recent years and simply implies the sustainable use as well as management of natural resources (Hobfoll 1989; Ni, Sun, Li, Huang, & Borthwick 2010). It is clear that these buzzwords are an addition to the industry quite recently. So the question arises to investigate the previous generation's perceptions regarding these concepts.

As per nature's law of equality, future generation is also supposed to receive equal share of natural resources which is being enjoyed by the members of current generation (Weiss 1990). To investigate whether there is a difference in perception towards sustainable living over different generations would be a very valuable approach. All sustainable educational systems tend to focus on younger generations. The question may arise whether different generation have different perceptions toward sustainable living. It might be identified that the older generations need increased awareness of sustainable living due to the fact that they have not grown up in such educational environment and mindset. A survey was executed to explore and understand the older students' (age 40 and up) perceptions and attitudes towards environmental sustainability and other issues related to the subject. The objective is to identify trends in student perceptions among various age groups towards sustainability issues. Since the area of student perception is under-researched, it is an important step towards changing their behaviours to intentional sustainable actions (Treanor 2010).

The next section of this paper discusses a literature review followed by the problem statement, aim of the study and the methodology sections. A discussion follows on the comparative t-Test analysis of the data collected and correlations identified.

## 2. Literature Review

All countries market themselves as the best place for tourists to visit. New Zealand is doing the same by the emphasis on a 'clean green' country. It suggests that the ever increasing population and the free trade policies result in exploitation of resources and increase effluence stresses (Keys, Thomsen, & Smith 2010). Employers have the opportunity to engage employees and get them committed to the organisation so that they can add value in business recovery and sustainability after the recent recession. If employers and the educational system know exactly who to focus on whilst implementing this approach, it may be even more successful. With the introduction of regulations and public pressure, the climate change strategies of many companies are beginning to move in a similar direction that supports regulations (Kolk & Levy 2001 as cited in Lockyer, Du Plessis & Maritz 2007).

There are even schools of thought saying that this is only a cycle that the earth is going through and they refer to the “ice-age”, concluding from this that there are definitely different perceptions regarding sustainability and conservation. Therefore, the questions that lead to this research include the different influences and possible reasons why people have different perceptions towards sustainable living. Sustainability refers to utilising the earth’s natural resources wisely to meet the necessities; also to save the resources for future generations. The ever increasing world population and free trade policies have resulted in the exploitation of resources and has increased effluence stresses as well (Du Plessis et al 2012). Recently the UK and USA experienced the coldest winter in a hundred years during and this has drastic effects on people across the world (Nel, Werner, Poisat, Sono, Du Plessis & Ngalo 2011).

The New Zealand conventional system of tertiary education (excluding specific papers and programmes in sustainability) does not provide any training to the students that may help in developing solutions to the sustainability issues. The environmental issues have several aspects and cannot be addressed by the traditional and conventional theories. It needs professional guidance from experts on the subject and a positive approach towards environmentalism (Sibbel 2009). The current literature discusses the importance of student’s learning about sustainability, especially the younger generation. However less is known about what they actually know about the subject as vast library database search using all the key words on the subject obtained only a few articles. It is assumed that people who are sociable and friendly have positive interactions with others, no matter their age, make positive contributions to the neighbourhood making it more affable and organised.

People in a positive community get influenced by other’s actions, so when one person or a small group of people change their ways towards eco-friendly, others tend to learn by their examples and start following. This research project was undertaken at UUNZ New Zealand as students are from different backgrounds, cultures, ethnicities and communities (Nel et al 2011). In the past, managers concentrated primarily on transactional and traditional activities. These activities are still necessary, but high-level competencies and management skills to support management and goal achievement to be sustainable but still competitive are essential to be effective in future (Du Plessis**,** Sumphonphakdy, Oldfield, Botha, 2013). Tertiary institutions could assist in the effort to control the increasing atmospheric temperatures by creating awareness and outlining policies regarding the issue at a global level in their programmes they present to students of various age groups (Brewster et al 2008; Kouzes & Posner 2009; Nel et al 2012).

### 2.1 Attitudes and Perceptions

In order to determine the inevitable effects of sustainability issues on a population and people perceptions about it, it is important to understand their reactions and analyse their attitudes towards sustainable development (Brida, Osti, & Faccioli, 2011). An attitude can be defined as an individual assessment of an object of thought in the person’s mind towards people, environment, situations or ideas (Bohner & Dickel 2011). Understanding people’s perceptions and their approach towards sustainability, would allow one to understand if they support or oppose the ‘green’ behaviour (Sharma & Dyer 2009; Brida et al 2011).

### 2.2 Emergence of Sustainable Living

The beginning of sustainable living started in 1954 (Nearing and Nearing 1953), when people realised that natural resources are irreplaceable. The United Nations held a series of

conferences, which focused on increasing sustainability within societies to conserve the Earth's natural resources during 1992-2002. The concept of Sustainable Living has gained increased relevance since 1980s. The concept was defined in 1987 by the World Commission on Environment and Development (Fien and Tilbury 2002). Before this period, there were limited awareness among people to meet the needs of the present without compromising the ability of future generations to meet their own needs. The reason behind the emergence of this concept was the increasing level of pollution and the reducing amounts of natural resources. Then by spreading awareness among the global world, an emphasis was made on the management and conservation of the natural resource base to ensure the sufficient availability of these resources for the present and future generations. Then in the 2005 World Summit on Social Development, three goals were identified as sustainable development goals such as economic development, social development and environmental protection (Fien and Tilbury 2002).

### 2.3 Generations and Sustainable Living

The concept of sustainable living has been visualized differently by different generations over the decades. Boomers have been influencing society since the 1960s when they planted the seeds as an initiative towards green movement (Ottman 2011). This is the generation which took an initiative to impart education to their children and grandchildren by making them socially conscious towards their shopping habits. They instilled values upon the society for boycotting the products of the companies that pollute the environment. Generation X witnessed environmental concerns through a lens that aligns social, educational and political issues. Then the people of Generation Y were found to be the strong supporters of buying green products. After Baby Boomers, Generation Y was found to be the new leaders of the modern day- green movement. Then the Generation Z was the only generation that was entirely brought up in an environmentally conscious world. They were taught the relevance of 3R (Reduce, Reuse and Recycle) concepts in their schools (Ottman 2011). This way the concept of Green Living emerged since the times of Boomers and gained much relevance till the times of Generation Z (Ottman 2011). It can therefore be deduced that the later generations were much more educated regarding sustainability as they grew up with the idea. It was not only an idea that was introduced later in their life.

The main objective in this research study is to summarise the essential role of the specific generation (age group) during which one has grown up and their perceptions towards environmental sustainability and to get feedback from respondents on their perceptions on environmental sustainability. Introduction of sustainable living into a person's life at various age stages may also play an essential role toward sustainable living. Some of these key points are driven from the literature and various sources include the introduction of sustainable living to children and youth. Therefore, the question was whether the more mature generations have a different perspective on sustainable living.

### 2.4 Problem Statement

The need was identified that International tertiary students who get permanent residency or citizenship in New Zealand could be some of the future leaders of New Zealand and therefore need to be educated towards sustainable living. It is important for a tertiary institution to determine what their perceptions, attitudes and behaviours are towards sustainability before proper education can take place. This project investigated whether age has a significant influence on the students' concern for conservation of the natural resources. A study such as this one could shed some light on their perceptions and

behaviours so that curricula could be altered or upgraded to include sustainability papers. The curricula of a tertiary institution and professional companies could include sustainable development programmes with the objective of changing individual attitudes and approaches, specifically of the older un-educated towards sustainability and conservation of natural resources.

### 2.5 Research question

**Research question:** Does an increase in age among students have an effect on personal concern for conservation of natural resources?

### 2.6 Aim of the Study

The aim of this study is to determine whether age has a significant influence on the students' concern for conservation of natural resources. This paper focuses on a comparative analysis of an international tertiary student survey executed towards the end of May 2015 at UUNZ Institute of Business, Auckland, New Zealand to understand student approaches and current trends towards environmental sustainability. To investigate whether the time period they have grown up in affect their 'green' behaviour, and how perceptions and behaviours are formed, with specific correlation to age specific differences. The research is based on the assumption that positive attitudes lead to positive behaviours and aims to establish what people's attitudes towards environmental sustainability are. The study aims to enable international comparisons of similar studies.

## 3. Methodology

### 3.1 Research Design

This study focussed on quantitative measures of concern for conservation and sustainability and the underlying constructs in a local sample. A post hoc design was used, comparing the concern for conservation and sustainability and the underlying constructs of students studying at UUNZ in two age-grouped categories. The two groups included students aged between 20 and 39 years, and the other group included students 40 years and older. The group included different nationalities and religions.

The target population were international tertiary students of UUNZ Institute of Business, Auckland. The questionnaire was distributed and 94 usable questionnaires returned resulting in 87.9% response rate. Sample method included the combination of Quota and Convenience Sampling. The 107 questionnaires were distributed to undergraduate and post graduate students studying business at the institute. The choice of business students is deliberate because the researchers believed they'll get a cohort of respondents with similar plans for the future, almost similar background, and within a certain age group in addition to materialistic aspirations. Some of these students already have their own business in NZ or are currently in senior positions who could have a deciding standpoint on these issues.

Confidentiality was assured and it was explained to the student that he/she might, at any stage, withdraw from the study if he/she did not want to continue. The researcher was responsible for the questionnaires and interviews, as well as the quality of data collection. There was no harm, cultural or social sensitivity nor deception in the questionnaire or study. There was no conflict of interest and the intellectual and cultural property ownership was respected.

### 3.2 Questionnaire Design

A questionnaire was designed (using a Likert scale from 1 very strongly disagree to 7 very strongly agree) regarding some important characteristics about the views of students towards environments, culture, self feelings towards life regarding money and health, human and their interaction with natural resources. Two questions, Q 10 and Q13 were in the negative statement and had to be reversed scored.

### 3.3 Data Collection

Questionnaires were distributed amongst the international tertiary students at UUNZ classes by the lecturers. Students completed the surveys anonymously and returned it to a box in their respective classes without the lecturer being present. Participation of all business students in the study was voluntary and through informed consent. Questionnaires are locked in the primary researcher's cabinet for a period of five (5) years and will be destroyed thereafter.

## 4. Analysis

The data was entered into Excel and then transferred into SPSS 21.0. Descriptive and correlation analysis were done in SPSS 21.0 package.

*Demographic information included:* Gender, Age, Qualification, Occupation, Nationality and Religion.

*The questions included*: Pollution is not a crucial issue, I am concerned about the pollution caused by power stations, Industrial growth – economic development, Pollution does not affect me, I do what I can to conserve natural resources, I must save resources for the future, the choices I make today influence what happens to future generations and the future is more important than the past to me.

### 4.1 Demographic Information

The demographic characteristics of the sample are summarised in Table1. According to the demographic characteristics of the sample, seen in Table 1, it is clear that the sample size consisted of 93 students. Out of this sample, 58% were female and 42% were males. The majority (78%) of the students were age between 20 and 39, and 22% were older than 40 years. Of all the students, the majority (57%) were studying a post graduate degree, 43% had a College/ University degree. Indication of an advanced level of education. The majority were full time students (67%) and the rest working while studying. Regarding nationality, it is clear to see that 41% were Indians, 18% were Korean, 19% were Chinese, followed by 10 % Philippine, 10% Other, 1% Russian and 1% New Zealander. Religious orientation included 5% Buddhist, 25% Christians, 31% Hindu, 5% Muslim, 20% Non-religious and 13% other religions not mentioned.

**Table 1: Demographic characteristics of the sample**

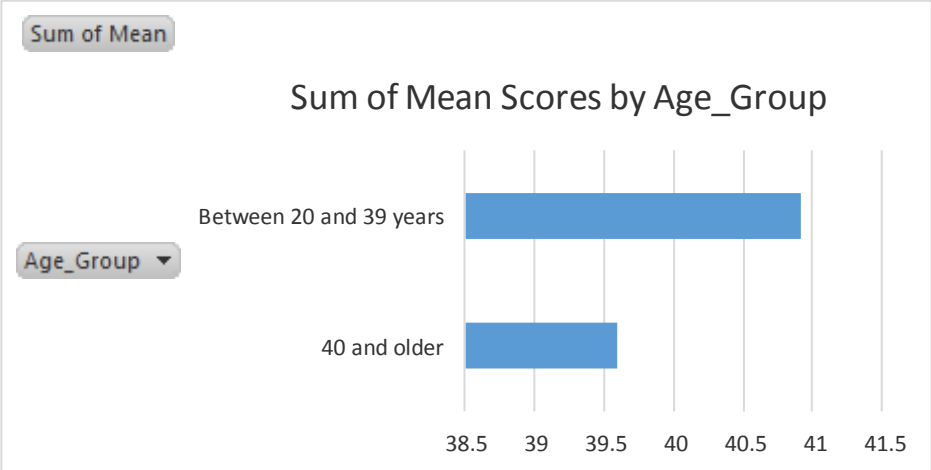
| N=93 | Frequency | Percent |
|---|---|---|
| **Gender:** Male | 39 | 41.9 |
| Female | 54 | 58.1 |
| **Age:** Between 20 and 39 years | 73 | 78.5 |
| 40 and older | 20 | 21.5 |
| **Education:** | | |
| College/ University degree | 40 | 43,0 |
| Post graduate degree | 53 | 57.0 |
| **Occupation:** Work and Study | 31 | 33.3 |
| Full time student | 62 | 66.7 |
| **Nationality:** Indian | 38 | 40.9 |
| Korean | 17 | 18.3 |
| Chinese | 18 | 19.4 |
| Russian | 1 | 1.1 |
| New Zealander | 1 | 1.1 |
| Philippine | 9 | 9.7 |
| Other | 9 | 9.7 |
| **Religion:** Buddhist | 5 | 5.4 |
| Christian | 23 | 24.7 |
| Hindu | 29 | 31.2 |
| Muslim | 5 | 5.4 |
| Non-religious | 19 | 20.4 |
| Other | 12 | 12.9 |

**Table 2: Comparing perception towards conservation means regarding age**

| Group Statistics | | | | |
|---|---|---|---|---|
| | Age_Group | N | Mean | Std. Deviation |
| Pollution is crucial | Between 20 and 39 years | 73 | 5.973 | 1.6994 |
| | 40 and older | 20 | 6.150 | 1.4965 |
| Concern pol power stations | Between 20 and 39 years | 73 | 5.356 | 1.4373 |
| | 40 and older | 20 | 5.000 | 1.7168 |
| Pollution affects me | Between 20 and 39 years | 73 | 6.301 | .8926 |
| | 40 and older | 20 | 6.200 | 1.0563 |
| Conserve natural resources | Between 20 and 39 years | 73 | 5.973 | .9856 |
| | 40 and older | 20 | 5.350 | 1.4244 |
| Save for future generations | Between 20 and 39 years | 73 | 5.986 | 1.2527 |
| | 40 and older | 20 | 6.150 | 1.2258 |
| My choices influence future gen | Between 20 and 39 years | 73 | 5.370 | 1.5139 |
| | 40 and older | 20 | 5.350 | 1.6631 |
| Future more important than past | Between 20 and 39 years | 73 | 5.959 | 1.0333 |
| | 40 and older | 20 | 5.400 | 1.3139 |

When considering the sum of the mean scores according to Figure 1, it is clear that the younger age group obtained a higher overall mean score.

**Figure 1: Sum of Mean Scores by Age Group**




To be able to test the hypothesis, the relations among different perceptions and age were determined by doing an independent t-Test. The variables to be correlated were all summated Likert scale scores. Based on analytical results, it was concluded that the seven questions (variables) did not have normal distributions. Therefore, the non-parametric Spearman's rank order correlation was indicated to be used. The second assumption underlying both Pearson's product moment correlation and Spearman's rank order correlation was that there is a linear relationship between the two variables in each pair of variables to be correlated. To investigate this, scatter plots for each pair of variables were created. It was noted from the scatter plots that the data formed a cigar shape around the regression line, indicating that there were correlations between the variables. The regression lines have a definite positive slope indicating a positive relationship amongst the seven questions. Based on this, it was assumed that there were linear relationships between the seven questions and it would be appropriate to use Spearman's rank order correlation.

An independent t-test was conducted to compare the two age groups' scores (Table 3), with definite differences noted. T-tests for unequal variances were used because the scores were not normally distributed (p>0,05) and variances were not equal (p>0,05). According to the analyses (Table 3) there was no significant difference between younger students and older students' perceptions of conservation of natural resources (p>0.05).

### 4.2 Correlation between Increase in Age and Perception

The correlation matrix shows the correlations of all seven the variables with age (Table 4). When considering the size of correlations, Cohen (1988) suggests values between 0,50 and 1,0 are indicative of a strong correlation. As shown in Table 4 the results obtained from the present study showed mostly negative correlations among the variables and age, some more than others.

**Table 3: Independent t-test between two age groups (20-39 years; 40 years and older)**

| Independent Samples Test | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference |
| Pollution is crucial | Equal variances assumed | .236 | .628 | -.424 | 91 | .673 | -.1774 |
| | Equal variances not assumed | | | -.456 | 33.689 | .652 | -.1774 |
| Concern pol power stations | Equal variances assumed | 1.185 | .279 | .941 | 91 | .349 | .3562 |
| | Equal variances not assumed | | | .850 | 26.738 | .403 | .3562 |
| Pollution affects me | Equal variances assumed | 1.593 | .210 | .432 | 91 | .667 | .1014 |
| | Equal variances not assumed | | | .392 | 26.890 | .698 | .1014 |
| Conserve natural resources | Equal variances assumed | 5.550 | .021 | 2.259 | 91 | .026 | .6226 |
| | Equal variances not assumed | | | 1.838 | 24.202 | .078 | .6226 |
| Save for future generations | Equal variances assumed | .048 | .828 | -.520 | 91 | .604 | -.1637 |
| | Equal variances not assumed | | | -.527 | 30.763 | .602 | -.1637 |
| My choices influence future gen | Equal variances assumed | .010 | .919 | .051 | 91 | .960 | .0199 |
| | Equal variances not assumed | | | .048 | 28.222 | .962 | .0199 |
| Future more important than past | Equal variances assumed | 1.870 | .175 | 2.017 | 91 | .047 | .5589 |
| | Equal variances not assumed | | | 1.759 | 25.789 | .090 | .5589 |

The relations among the variables (age and perception on conservation) were investigated using Pearson Product-moment correlation coefficient. The correlation coefficient indicates the direction (positive or negative) and the strength of the correlation between two variables.

According to Table 4, there is a significant negative correlation between an increase in age and the concern for natural conservation (r= -0,230, 5%. p<0,05). The other significant negative correlation between an increase in age and the perception regarding that the future is more important than the past was (r= -0,207, 4%. p<0,05).

**Table 4: Correlations of all the variables with age**

| | | Age_Group |
|---|---|---|
| Age Group | Pearson Correlation | 1 |
| | Sig. (2-tailed) | |
| | N | 93 |
| Pollution is crucial | Pearson Correlation | .044 |
| | Sig. (2-tailed) | .673 |
| | N | 93 |
| Concern pol power stations | Pearson Correlation | -.098 |
| | Sig. (2-tailed) | .349 |
| | N | 93 |
| Pollution affects me | Pearson Correlation | -.045 |
| | Sig. (2-tailed) | .667 |
| | N | 93 |
| Conserve natural resources | Pearson Correlation | -.230* |
| | Sig. (2-tailed) | .026 |
| | N | 93 |
| Save for future generations | Pearson Correlation | .054 |
| | Sig. (2-tailed) | .604 |
| | N | 93 |
| My choices influence future gen | Pearson Correlation | -.005 |
| | Sig. (2-tailed) | .960 |
| | N | 93 |
| Future more important than past | Pearson Correlation | -.207* |
| | Sig. (2-tailed) | .047 |
| | N | 93 |

This indicate that with increase in age, significantly less concern was showed toward the conservation of natural resources and also a less concern for the future. Although non-significant, a negative correlation between increase in age and the concern of the pollution caused by power stations (r= -0.098, p>0,05), pollution affects me (r= -0,045, p>0,05) and personal choices affects future generations (r= -0,05, p>0.05) were seen. A non-significant, a positive correlation between increase in age and that pollution is crucial issue (r= 0,044, p>0,05) and my choices influence future generations (r= 0,054, p>0,05) were seen. To conclude, regarding the significant negative correlations between age and concern for conservation, an increase in age implied a decrease for the concern for natural conservation, and that the future is more important than the past. An increase in age is associated with a decrease in concern for pollution caused by power stations, a decrease in the concern that pollution might affect and also a decrease in the concern that personal choices affects future generations. These correlations were not significant but definitely observed. This trend corresponds to the findings cited in the literature (Ryan et al., 2010).

## 5. Conclusion

The sample 93 international UUNZ students consisted of 58% female and 42% males. The majority (78%) of the students were age between 20 and 39, and 22% were older than 40 years. Of all the students, the majority (57%) were studying a post graduate degree, 43% had a College/ University degree. This is an indication of an advanced level of education. Regarding nationality 41% were Indians, 18% were Korean, 19% were Chinese, followed by 10 % Philippine, 10% Other, 1% Russian and 1% New Zealander. Religious orientation included 5% Buddhist, 25% Christians, 31% Hindu, 5% Muslim, 20% Non-religious and 13% other religions not mentioned.

When divided into two groups according to age, considering the sum of the mean scores according to Figure 1, the younger age group obtained a higher overall mean score. To be able to test the hypothesis, the relations among different perceptions and age were

determined by doing an independent t-Test. The variables to be correlated were all summated Likert scale scores. An independent t-test scores (Table 3), indicated differences noted but not statistically significant. T-tests for unequal variances were used because the scores were not normally distributed (p>0,05) and variances were not equal (p>0,05). It was concluded that there was no significant difference between younger students and older students' perceptions of conservation of natural resources (p>0.05) (Table 3). Although there was a significant negative correlation between age and concern for conservation, an increase in age implied a decrease for the concern for natural conservation, and that the future is more important than the past. This means that with an increase in age, a decreased concern for natural conservation was measured. The other significant difference means that with an increase in age, there were a decreased concern for the future and that the older students were more concerned about the past. The following correlations were observed but were not statistically significant. An increase in age is associated with a decrease in concern for pollution caused by power stations, a decrease in the concern that pollution might affect and also a decrease in the concern that personal choices affects future generations.

It can be concluded that an increase in age does have a statistic significant effect on the seven questions investigated of the perceptions towards conservation and that students of 40 years and older seems to be less concern about conservation than the group of age between 20 and 39 years. Interesting factors came to the fore in this research project. It was found that one must protect natural resources, all religions, and even the non-religious respondents strongly agree that mankind is responsible for the resources (nature) and they have to protect natural resources for future generations.

Education for sustainable development has become the focus of environmental education. This research determined and exemplified the current trends and attitudes of international tertiary students within UUNZ across all courses. Furthermore, in order to explore several determinants sustainability behaviours and perceptions were identified as well as trends to environmental sustainability issues.

Ryan, Tilbury, Corcoran, Abe and Nomura (2010) refer to higher education students becoming the managers and leaders of the future; therefore, it is vital to "educate" them on sustainability, more so for the older international students. With the increasing proportion of aging population around the world, the actions of older people are likely to have a corresponding increasingly important role in the sustainable development of the community. However, older people can also make major contributions to solving environmental problems Considerable personal strength is required in the future to conserve resources, and the notion that one now require audacious leaders to take advantage of opportunities does seem to become a reality. A positive trend is that the majority of respondents are aware and even concerned about the choices that they make now and its influence it will have on the future. Another positive trend towards sustainability is evident in this research project in that respondents are very concerned about certain issues including pollution and conservation.

Limited previously research has been done on correlation between age and perception of sustainability, therefore the inability to compare to other studies. The majority (78%) of the students were age between 20 and 39, and only 22% were older than 40 years, therefore restrictions towards generalisability.

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