PERCEPTIONS OF OLDER INTERNATIONAL TERTIARY STUDENTS TOWARDS THE SUSTAINABLE FUTURE ENVIRONMENT IN NEW ZEALAND

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ABSTRACT

Sustainability refers to utilising the earth’s natural resources wisely to meet the necessities of lives but also to save the resources for future generations to survive. This research investigated perceptions of international students towards conservation and sustainable living at an international tertiary institution, UUNZ, in Auckland New Zealand. A quantitative method was applied; 92 questionnaires were distributed. The research aims to establish what international students’ attitudes and perception towards sustainability and the environment are; a correlation between age, nationality, religion and their perceptions towards sustainable living. The results revealed a negative correlation between students’ concern and perception towards sustainability and an increase in age (age 40 and older); a decrease in sustainable living. Recommendations form the last section.

Key words: Sustainability, Perceptions, Age

INTRODUCTION

International education has the potential for economic growth in New Zealand but it could be to the benefit of the country if this growth is also successfully enhancing sustainability. Peoples’ awareness and perception about sustainability and understanding of the complexity of issues presented by modern lifestyles has grown since the 1980’s. This awareness allows people to respond positively towards the ecological and environmental problems the world is currently experiencing (Ryan, Tilbury, Corcoran, Abe & Nomura, 2010).

Projections for international student enrolments to 2025 for the public tertiary education institutions (universities and polytechnics) 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 could well be asked whether the international students will stay in New Zealand after they have completed their studies and what value will they add towards the clean green image of New Zealand. 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 (Ni, Sun, Li, Huang, & Borthwick, 2010).

A survey was executed to explore and understand the students’ perceptions and attitudes towards environmental sustainability and other issues related to the subject. The first study was executed at Unitec New Zealand in March 2007 in the then Unitec Business School and repeated in 2010 and will be executed in 2015 again. With permission from the researchers the questionnaire was adopted and revised to its current form to suit UUNZ. This is the follow-up study of this nature at UUNZ, New Zealand (NZ). The objective therefore is to identify trends in student perceptions among various age groups, nationality and religion towards sustainability issues. The next section discusses a literature review, the problem statement, aims of the study and the methodology section. A discussion follows on the comparative t-Test analysis of the data collected and correlations identified. Recommendations follow and conclusions before the reference list.

**LITERATURE REVIEW**

All countries market themselves as the best place for tourists to visit. NZ is doing the same with 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). 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 schools of thought saying that it 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 the USA experienced the coldest winter in a hundred years and NZ since 1903.

The NZ 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. 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 to eco-friendly, others tend to learn by their examples and start following. Therefore this research project was undertaken at UUNZ as students are from different backgrounds, cultures, ethnicities and communities. Tertiary institutions could assist in the effort to create awareness by outlining policies regarding the sustainable issues at a global level in their programmes they present to students of various age groups.

**Attitudes and Perceptions**

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

**Emergence of sustainable living**

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 was 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 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 (Brida et al. 2011).

**Generations and sustainable living**

The concept of sustainable living has been visualised differently by different generations over the decades. Baby 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 the initiative to impart education to their children and grandchildren by making them socially conscious towards their living habits. Generation X witnessed environmental concerns through a lens that aligns social, educational and political issues. Generation Y were found to be strong supporters of buying green products. After the Baby Boomers, Generation Y is the new leaders of the modern day green movement. Generation Z is the only generation that is entirely brought up in an environmentally conscious world. They are taught the relevance of 3R (Reduce, Reuse and Recycle) concepts in their schools (Ottman 2011). It can therefore be deduced that the later generations are much more educated regarding sustainability as they grow up with the idea. 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.

The introduction of sustainable living into a person’s life at various age stages may also play an essential role toward sustainability. Some of these key points are derived from the literature and various sources include the introduction of sustainability to children and youth. Therefore the question was whether the more mature generations have a different perspective on sustainability. Due to limitations to the length of the paper it is not possible to use more and wider literature and to discuss all the questions in the analysis section.

**PROBLEM STATEMENT**

The need was identified that international tertiary students who get permanent residency or citizenship in NZ could be some of the future leaders of NZ 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 paper is part of a bigger study done on sustainability at UUNZ during May 2015. The problem investigated was whether age has a significant influence on the students’ concern for conservation of the natural resources. This study could shed some light on perceptions and behaviours so that curricula could be altered or upgraded to include sustainability papers to be taught. The curricula of a tertiary institution could include sustainable development programmes with the objective of changing individual attitudes and approaches towards sustainability and conservation of natural resources.

**Hypotheses**

**Research hypothesis 1 (H1):** An increase in age among students does have an effect on personal concern for conservation of natural resources.

**Null hypothesis 1 (H01):** An increase in age among students does not have an effect on personal concern for conservation of natural resources.
The alternative hypothesis 2 (H2): The average scale of each religion and nationality level of the respondents differs regarding the seven questions. Therefore the researchers wanted to determine whether there were any differences between these averages.

Null hypothesis 2 (H02): The average scale of each religion and nationality level of the respondents was equal regarding the seven questions. Therefore the researchers wanted to determine whether there were any differences between these averages.

AIMS OF THE STUDY

The aims of this study are to determine whether age has a significant influence on the students’ concern for conservation of natural resources; secondly to reveal whether the difference of religion and nationality has a statistically significant influence on the mean scores of the seven questions used in this study. Thirdly to investigate the factors that affect their ‘green’ behaviour, and how perceptions and behaviours are formed, with specific correlation to age specific differences.

METHODOLOGY

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: students aged between 20 and 39 years, and 40 years and older. The group included different nationalities and religions.

The target population were international tertiary students of UUNZ Institute of Business, Auckland, NZ. A total of 107 questionnaires were distributed to under- and postgraduate students studying business at the institute; 94 usable questionnaires returned resulting in a 87.9% response rate. Sample method included the combination of Quota and Convenience Sampling. 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 that 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. There was no conflict of interest and the intellectual and cultural property ownership was respected.

**Questionnaire Design**

A questionnaire was designed with 52 questions (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. Including in these 52 questions, seven closely related questions and demographic information were used for the current paper.

**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.

**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. All demographic questions and a total of seven questions are discussed in this paper (Q10, Q12, Q13, Q17, Q18, Q24, and Q 25, all questions relevant to specifically pollution, conservation of energy and the influence to future generations). Demographic information included: Gender, Age, Qualification, Occupation, Nationality and Religion. It must be noted that these questions were part of a bigger study conducted at UUNZ on sustainability.

The seven questions included:
Q 10: Pollution is not a crucial issue

Q 12: I am concerned about the pollution caused by power stations

Q 13: Pollution does not affect me

Q 17: I do what I can to conserve natural resources

Q 18: I must save resources for the future

Q 24: The choices I make today influence what happens to future generations

Q 25: The future is more important than the past to me

**Demographic information**

The demographic characteristics of the sample are summarised in Table 1.

Insert Table 1 here

According to the demographic characteristics of the sample (Table 1) 58% was female and 42% was male. 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 postgraduate degree, 43% had a College/University degree; it is an 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.

Insert Table 2 here

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

Insert Figure 1 here
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).

**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.

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. In 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 \((r=-0.207, 4\%, p<0.05)\). This indicates 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).

Insert Table 5 here

When considering the sum of the mean scores in Figure 2, it is clear that the postgraduate degree group obtained a higher overall mean score.

Insert Table 6 here

Observing the p-value in Table 6, the differences in the mean scores of the seven questions did not differ significantly regarding their educational levels. The result is that all the respondents with different education responded the same towards the seven questions.

Insert Table 7 here
The relations among the variables (education 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. In Table 7, there is no significant correlation between education and the various seven questions (p<0,05).

**Differences among the averages of the seven question scores and nationality and religion**

Insert Table 8 here

Table 8 illustrate the mean scores of different Nationalities with some of the seven questions.

Insert Table 9 here

The purpose of applying an ANOVA (Table 10 and Table 11 is to test Hypothesis 2.

Insert Table 10 here

Table 10 illustrate the mean scores of different Religions with some of the seven questions.

Insert Table 11 here

The purpose of applying an ANOVA (Table 10 and Table 11) is to test the following hypothesis:

**Null hypothesis 2 (H0):** The average scale of each religion and nationality level of the respondents was equal regarding the seven questions. (Therefore the researchers wanted to determine whether there were any differences between these averages regarding religion and nationality.)

**The alternative hypothesis 2 (H2):** The average scale of each religion and nationality level of the respondents differs regarding the seven questions. (Therefore the researchers wanted to determine whether there were any differences between these averages. It showed that there were at least two averages which were implying that they were not equal (there are therefore differences between the averages). However, observing the p-value, the null hypothesis was not rejected. The result is that all the respondents with different nationality and religions responded the same towards the seven questions.
RECOMMENDATIONS TO TERTIARY INSTITUTIONS

This research project revealed important information and a few recommendations are:

- UUNZ Institute of Business as well as other tertiary institutions should take cognisance of this study and “re-develop” their curricula to include at least one session in every paper presented in their programmes about sustainability.

- For international tertiary students, special attention should be paid to NZ’s “clean green image” so that it could be valued and looked after by internationals visiting NZ.

- International tertiary students might get permanent residency in NZ or become citizens and then they would have a good background to NZ’s clean green image.

CONCLUSION

The sample 97 international UUNZ students were studying a postgraduate degree. It was concluded that there was no significant difference between younger students and older students’ perceptions of conservation of natural resources. 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. Regarding education the post-graduate degree group obtained a higher overall mean score than the University/ College degree students.

The second hypothesis result is that all the respondents with different nationality and religion responded the same towards the seven questions. It was found that one must protect natural resources, all religions, and even the non-religious respondents strongly agreed that mankind is responsible for the resources (nature) and they have to protect natural resources for future generations. International tertiary students with different cultures, backgrounds (origin) and religion have different perceptions towards environmental sustainability; to some extent they feel different about the environment and behave differently when it comes to ‘green’ behaviours. The study puts together some recommendations that could be used to develop and formulate future strategies (in curricula) to encourage sustainable consumptions for tertiary institutions in New Zealand and globally.
REFERENCE LIST


Table 1: Demographic characteristics of the sample.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>39</td>
<td>41.9</td>
</tr>
<tr>
<td>Female</td>
<td>54</td>
<td>58.1</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 20 and 39 years</td>
<td>73</td>
<td>78.5</td>
</tr>
<tr>
<td>40 and older</td>
<td>20</td>
<td>21.5</td>
</tr>
<tr>
<td><strong>Education</strong></td>
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<td></td>
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<tr>
<td>College/ University degree</td>
<td>40</td>
<td>43.0</td>
</tr>
<tr>
<td>Post graduate degree</td>
<td>53</td>
<td>57.0</td>
</tr>
<tr>
<td>Occupation: Work and Study</td>
<td>31</td>
<td>33.3</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----</td>
<td>------</td>
</tr>
<tr>
<td>Full time student</td>
<td>62</td>
<td>66.7</td>
</tr>
<tr>
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<td>38</td>
<td>40.9</td>
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<td>Korean</td>
<td>17</td>
<td>18.3</td>
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<td>19.4</td>
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<td>1.1</td>
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<td>9.7</td>
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<td>9.7</td>
</tr>
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<td>5.4</td>
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<td>24.7</td>
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<td>Hindu</td>
<td>29</td>
<td>31.2</td>
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<tr>
<td>Muslim</td>
<td>5</td>
<td>5.4</td>
</tr>
<tr>
<td>Non-religious</td>
<td>19</td>
<td>20.4</td>
</tr>
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<td>Other</td>
<td>12</td>
<td>12.9</td>
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</table>

Table 2: Comparing perception towards conservation means regarding age

<table>
<thead>
<tr>
<th>Group Statistics</th>
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<tbody>
<tr>
<td>Age Group</td>
</tr>
<tr>
<td>Pollution is crucial</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Concern pol power stations</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Pollution affects me</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Conserve natural resources</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Save for future generations</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>My choices influence future gen</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Future more important than</td>
</tr>
</tbody>
</table>
Figure 1: Sum of Mean Scores by Age Group

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

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>t-test for Equality of Means</th>
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<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Pollution is crucial</td>
<td>.236</td>
<td>.628</td>
<td>-.424</td>
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<tr>
<td></td>
<td>Equal variances assumed</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>-456</td>
<td></td>
<td>33.689</td>
</tr>
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<td>Concern pol power stations</td>
<td>1.185</td>
<td>.279</td>
<td>.941</td>
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<td></td>
<td>.850</td>
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<td>26.738</td>
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<td>Pollution affects me</td>
<td>1.593</td>
<td>.210</td>
<td>.432</td>
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<td></td>
<td>.392</td>
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<td>26.890</td>
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<td>Conserve natural resources</td>
<td>5.550</td>
<td>.021</td>
<td>2.259</td>
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<td></td>
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<td></td>
<td>1.838</td>
<td></td>
<td>24.202</td>
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<td>Save for future generations</td>
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<td>.828</td>
<td>-.520</td>
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<td></td>
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<td>30.763</td>
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<tr>
<td>------------------------------</td>
<td>-------------------------</td>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td>My choices influence future gen</td>
<td>.010 .919 .051 .91 .960 .0199</td>
<td>.048 28.222 .962 .0199</td>
<td></td>
</tr>
<tr>
<td>Future more important than past</td>
<td>1.870 .175 2.017 .91 .047 .5589</td>
<td>1.759 25.789 .090 .5589</td>
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**Table 4: Correlations of all the variables with age**

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<th>Age_Group</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
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<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
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<td>POLLUTION IS CRUCIAL</td>
<td>.044</td>
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<td>93</td>
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<td></td>
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<td>POLLUTION AFFECTS ME</td>
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<td>.604</td>
<td>93</td>
<td>-.005</td>
<td>.960</td>
<td>93</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>FUTURE MORE IMPORTANT THAN PAST</td>
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**Note:** Pearson Correlation values are italicized.
Table 5: Comparing means regarding education

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<th>N</th>
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<th>Std. Deviation</th>
</tr>
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<tr>
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<td>1.1368</td>
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<td>1.6219</td>
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<td>0.9554</td>
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<td>1.2304</td>
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<td></td>
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Figure 2: Sum of Mean Scores by Education
Table 6: Anova with education

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<th>Sig.</th>
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<td></td>
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</tr>
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<td>1</td>
<td>5.872</td>
<td>2.180</td>
<td>.143</td>
</tr>
<tr>
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<td>245.117</td>
<td>91</td>
<td>2.694</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>250.989</td>
<td>92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Concern pol power stations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Between Groups</td>
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<td>1</td>
<td>2.039</td>
<td>.906</td>
<td>.344</td>
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<td>Within Groups</td>
<td>204.692</td>
<td>91</td>
<td>2.249</td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>206.731</td>
<td>92</td>
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<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Between Groups</td>
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<td>1</td>
<td>.639</td>
<td>.745</td>
<td>.390</td>
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<td>91</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
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<td>92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conserve natural resources</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
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<td>1</td>
<td>.264</td>
<td>.210</td>
<td>.648</td>
</tr>
<tr>
<td>Within Groups</td>
<td>114.317</td>
<td>91</td>
<td>1.256</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114.581</td>
<td>92</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Save for future generations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Between Groups</td>
<td>.032</td>
<td>1</td>
<td>.032</td>
<td>.021</td>
<td>.886</td>
</tr>
</tbody>
</table>
Within Groups | 141.925 | 91 | 1.560 |
---|---|---|---|
Total | 141.957 | 92 |
Between Groups | .576 | 1 | .576 |
\[ \text{DF} = 1 \] | .242 | .624 |
Within Groups | 216.994 | 91 | 2.385 |
Total | 217.570 | 92 |
Between Groups | .523 | 1 | .523 |
\[ \text{DF} = 1 \] | .417 | .520 |
Within Groups | 114.058 | 91 | 1.253 |
Total | 114.581 | 92 |

My choices influence future gen

Future more important than past

Table 7: Correlation with education

<table>
<thead>
<tr>
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<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
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</thead>
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<td>.143</td>
<td>93</td>
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<tr>
<td>Concern pol power stations</td>
<td>-.099</td>
<td>.344</td>
<td>93</td>
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<td>Pollution affects me</td>
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<td>.390</td>
<td>93</td>
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<tr>
<td>Conserve natural resources</td>
<td>-.048**</td>
<td>.648</td>
<td>93</td>
</tr>
<tr>
<td>Save for future generations</td>
<td>.015</td>
<td>.886</td>
<td>93</td>
</tr>
<tr>
<td>My choices influence future gen</td>
<td>-.068</td>
<td>.520</td>
<td>93</td>
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<tr>
<td>Future more important than past</td>
<td>1</td>
<td></td>
<td>93</td>
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<tr>
<td>Education</td>
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<td></td>
<td>93</td>
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</table>

*: Correlation is significant at the 0.05 level (2-tailed).
Table 8: Comparing means of seven questions scores with Nationality

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<th>Concern pol power stations</th>
<th>Pollution affects me</th>
<th>Conserve natural resources</th>
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<tr>
<td></td>
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<td>Std. Deviation</td>
<td>Mean</td>
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<td>1.6517</td>
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**. Correlation is significant at the 0.01 level (2-tailed).
Table 9: ANOVA of seven questions scores with Nationality

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<tr>
<td>Between Groups</td>
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<td>1</td>
<td>5.872</td>
<td>2.180</td>
<td>.143</td>
</tr>
<tr>
<td>Within Groups</td>
<td>245.117</td>
<td>91</td>
<td>2.694</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>250.989</td>
<td>92</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.039</td>
<td>1</td>
<td>2.039</td>
<td>.906</td>
<td>.344</td>
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<tr>
<td>Between Groups</td>
<td>204.692</td>
<td>91</td>
<td>2.249</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>206.731</td>
<td>92</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.639</td>
<td>1</td>
<td>.639</td>
<td>.745</td>
<td>.390</td>
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<td><strong>Pollution affects me</strong></td>
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<td></td>
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<tr>
<td>Between Groups</td>
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<td>91</td>
<td>.858</td>
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<tr>
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<td>92</td>
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<td></td>
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<tr>
<td>Between Groups</td>
<td>.264</td>
<td>1</td>
<td>.264</td>
<td>.210</td>
<td>.648</td>
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<tr>
<td><strong>Conserve natural resources</strong></td>
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<td></td>
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</tr>
<tr>
<td>Between Groups</td>
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<td>91</td>
<td>1.256</td>
<td></td>
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<tr>
<td>Within Groups</td>
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<td>92</td>
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<td>.032</td>
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<td>.523</td>
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</table>

Table 10: Comparing means of questions scores with Religion
<table>
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<th>Concern pol power stations</th>
<th>Pollution affects me</th>
<th>Conserve natural resources</th>
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<td>1.0207</td>
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<td>5</td>
<td>5</td>
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Table 11: ANOVA of seven questions scores with Religion

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<th>Mean Square</th>
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<th>Sig.</th>
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<td>6</td>
<td>3.180</td>
<td>1.179</td>
</tr>
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<td>231.912</td>
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<td>2.697</td>
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<tr>
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<td>---------------</td>
<td>---------</td>
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</tr>
<tr>
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<td></td>
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