

Comparative Study on Male and Female Personal Ecological Footprint

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Abstract. Personal Ecological Footprint (PEF) is a measure that gives an idea, whether a person is living within the means of what is available in nature. The study identifies which gender, male or female, consumes more of the natural resource. The research was conducted year 2010 in internet computer laboratories through online QUIZ Ecological Footprint Calculator via Global Footprint Network. Considering all the statistical results, t- test showed that there was no significant PEF difference between male and female, therefore, it proved that male and female have similar demands of natural resource. However, it was found out that female's PEF rate was more varied than males, thus, it suggests that females have uncontrolled use on natural resource that may possibly lead to increase global ecological footprint. The ecological merit of this study is to push the academic institutions to include environment accounting in the curriculum in order to intensify environment management on the individual lifestyle of the students particularly in females.

Keywords: PEF, ecological footprint calculator, BioCapacity, environment accounting, natural resources

1. Introduction

The idea of an ecological footprint emerged in the late 1980s in British Columbia through the research of Mathis Wackernagel and William Rees. Their objective was to estimate the area of land and compare it to the amount of natural resource needed to support an individual, or a community in any society to further measure the relative impact of environmental demands and consumption.

In the recent study of National Footprint Edition conducted by Global Footprint Network as of November 25, 2009, the world has 0.8 Ecological Deficit based from the computed Ecological Footprint and BioCapacity of the world's total population. Today, current researches mostly focus on the Ecological Footprint for Business, Cities and Agricultural Setting, and Economics (Lenzen and Murray 2003). However, studies projection on the Personal Ecological Footprint on people's individual lifestyle is low. To elevate PEF research studies and to conduct it in a different approach, the researcher had intentionally compared the PEF between male and female and identified whether age and PEF have significant correlation on the individual's Ecological Footprint.

To calculate the individual's PEF rate, the researcher used a technology-based Personal Ecological Footprint Calculator sponsored by the Global Footprint Network. The Personal Footprint Calculator is based on National Footprint Accounts data that measures the national per person footprint derived from the amount of land and sea area needed to provide the resources a person needs (food, shelter, mobility, goods and services) and land types.

The pursuit to conduct the Personal Ecological Footprint between male and female is aimed to enhance PEF reality check awareness among male and female students. Investigating which gender contributes more in the extraction of natural resources can lead in setting out clear solutions, correct promotions and proper establishment of policies that can address another possible root cause of ecological degradation.

Male and female college students were the principal respondents because any future plans of action to solve environmental degradation can easily be addressed through classroom learning integration and enrichment outreach programs imposed by the institution. The research setting was done in an academic institution in order to closely monitor, trace, follow up future related researches, and to determine any change of patterns of development for long-term experimental related PEF research studies.

The researcher challenges the idea that the increase in natural resource consumption is due to different lifestyles of male and female attributed by different age levels. The perspective of the study can promote a higher level of awareness and long-term consciousness and cognizant about the current situation of our natural resource.

Changing the individual's lifestyle of neither male and female, through proper education instilled in the academe, from the ecological theoretical learning point of view to actual application of ecological principles in homes and by practicing self-sufficient city living can contribute in lessening the demand of consumption to our natural resources and therefore beneficial to the environment.

2. Methodology

2.1. Data Instrumentation and Collection Technique

The PEF quiz was done through internet computer online free Ecological Footprint Calculator via Global Footprint Network: 2009 that can be downloaded at www.myfootprint.org. or at www.footprintnetwork.org. The online Quiz Ecological Footprint Calculator was used to obtain a fast, convenient and precise survey results. Quiz results were sent through email, then printed and compiled.

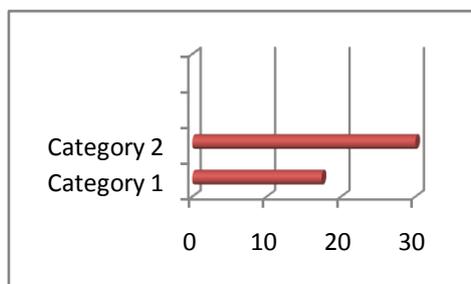
2.2. Statistical Treatment

T-test was used to identify the significant difference between male and female PEF. Pearson's r was used to determine the degree of correlation between age and PEF. To determine the PEF range of variation in both genders, Coefficient Variation was used.

3. Results and Discussion

Conventional wisdom suggests that because of technology and trade, global ecological footprint increases. However, the researcher challenges the idea that the increase in global ecological footprint can be traced its root from the individual's PEF gender difference. Though the idea was too wide to grasp, still it is substantial to have a pinch of knowledge to somehow understand that gender difference can result to the unbalanced use of natural resource that possibly lead to increase global ecological footprint.

Based from the statistical results, though females have higher PEF mean, t-test showed that there was no significant difference in PEF between genders. In terms of Age and PEF relationship, Pearson's r proved that there was also no significant correlation in both genders, however, in females, PEF variation was higher than in males (figure 1), it was suggested therefore, that females have uncontrolled use on the natural resources, thus, may possibly result to increase global ecological footprint rate.



Legend: Category 1 – Male, Category 2 – Female

Figure 1: Male and Female PEF Coefficient Variation

There were research studies and scientific principles that can analogically support the result and concept of the study. In the study of Yuchisun and Johnson (2004), it was found out that majority of compulsive buyers are females and that compulsive consumption causes economic consequences such as debt or even bankruptcy (O'Guinn & Faber, 1992). On a technical point of view, a fluctuating (uncontrolled use of natural resource) voltage results to a faster flow of kWhr meter of electricity that registers higher energy consumption (increase global ecological footprint rate), whereas, on the ecological point of view, fluctuations in an environment conditions directly reduces the intensity of interactions between organisms, thus, also reduces population growth rates.

The ecological merit of this study is to give a point-blank ecological awareness reality check in terms of student and gender individual lifestyle. However, the research is limited only for the purpose of identifying and determining the natural resource consumption correlation between male and female through their PEF, therefore, it is recommended for further studies to categories and identify what particular lifestyle should be monitored, balanced and controlled to lessen the PEF rate.

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