Does Education Enhance Employee Green Behaviour? A Study on University Faculty Members

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Received: 10 May Revised: 18 May Accepted: 26 May

Abstract

Every country is facing significant decline in natural resources and severe increase in environmental degradation. Ever-growing population, pollution, unabated weather events, deforestation on a massive scale are the major issues faced by the current generation. To tackle this, the pivotal role of teachers cannot be overlooked. Teachers can bridge the gap between knowing and doing. Teachers are capable of presenting the latest scientific information with regard to protection of environment and how to materialise the strategies for its protection. Teachers have a significant role in developing and altering values and attitudes of students (Kumar, 2015). The organised effort from teachers does help to create change in the prevailing mindset of the students. Education facilitates individuals to reflect on the repercussions of their actions. Therefore, educated minds are prompted to inquire about the extreme weather events and environmental degradation occurring around them. Employee Green behaviour is any measurable individual behaviour that contributes to environmental sustainability goals in the work context (Ones and Dichert, 2012). The present study aimed to understand the green behaviour of faculty members of a State University in Tamil Nadu. Employee Green Behaviour Scale by McConnaughy (2014) was used and the results revealed that there is no significant difference in employee green behaviour with regard to gender, marital status, area of residence, discipline.

Keywords: Area of Residence, Discipline, Employee Green Behaviour, Gender, Marital status.

Introduction

Education imparts knowledge and it can transcend an individual. Environmental education can bring about changes in the lifestyle of individuals. According to a report by UNESCO (1997), education will shape the world of tomorrow and education is the most effective means for confronting the challenges of the future. Further, the report stated that education should play a major role in bringing attitudinal change towards sustainability. Rather than as a subdivision of science based study, UNESCO recognized environmental education as a tool of environment protection. Cortese (2003) stated that “Higher education institutions bear a profound, moral responsibility to increase the awareness, knowledge, skills, and values needed to create a just and sustainable future”. Environmental education is considered as a lifelong educational process.
Higher education system is increasingly becoming a major consumer of resources like electricity, paper etc. (Altan, 2010; Amutenya, Shackeldon&Whittington-Jones, 2009). One sector where global environmental challenges are linked to human behaviour is within higher education institutions where individual practices on resource use can lead to collective challenges (Altan, 2010). The over consumption of resources can deteriorate the environment. This questions the survival of many species in the ecosystem. So, the issue of environmental degradation has to be addressed by the education system as the rate of usage by the education system is increasing. Acquisition of knowledge, skills and attitude towards environment and imparting it to the students help to maintain a control over it.

Ones and Dilchert (2012) defined Employee Green Behaviour (EGB) as “scalable actions and behaviors that employees engage in that are linked with and contribute to or detract from environmental sustainability”. Further they argued that EGBs are an essential component of organizational environmental sustainability. A study from the University of California by Delmas and Pekovic (2010) found a 16 percent increase in the productivity of the employees in the companies that voluntarily adopt international “green” practices and standards as they get better training, are more motivated and derive benefit from better interpersonal relationship.

As higher education largely contributes to environmental degradation, it is highly essential for the employees in the higher education system to engage in pro environmental behaviour which leads to the sustainability of their institution as well as the environment.

**Need and scope**

With the world population estimated to reach nearly nine billion by 2050(Weeks, 2005), it is imperative that effective measures to shift towards a more sustainable way of life for all human beings is adopted (United Nations Environment Programme, 2007). Ministry of Human Resource Development (MHRD) reported that Gross Enrolment Ratio (GER) for higher education increased in India by 24.5% during 2015-2016 (Singh, 2017). As the number of students, faculty members and infrastructure is expanding, there is an increased demand in the resources like energy and paper in educational institution. The rise in the consumption of these resources create financial burden to the educational setup. Promoting green behaviour among the faculty members and students would mitigate the negative consequences to the environment to some extent.

Teachers can inspire students. So, when a student's mentor engages in sustainable behaviour, it motivates him/her to do the same. It is always better to act rather than preach. They lead by example. Schools and teachers have an impact on the students as they interact with the society and the environment continuously, and this opportunity must be seized and utilized in order to effectively promote sustainable behavior change (Frisk & Larson, 2011).
Methodology

Aim

The aim of the study is to understand the green behaviour of faculty members of a State University in Tamil Nadu.

Objectives

- To assess the green behaviour among the faculty members.
- To study the green behaviour in association with demographic details

Hypotheses

H₁: There will be a significant difference in green behaviour of faculty members based on gender

H₂: Marital status will differentiate the green behaviour of the employees

H₃: Green behaviour of the employees will differ based on their area of residence

H₄: There will be a significant difference in the green behaviour with regard to discipline of the faculty members

Tools

To assess the green behaviour, a 27 items scale by McConnaughy (2014) was used. The faculty members were approached to volunteer for the study. After getting the consent to participate in the survey, they were asked to fill up the socio-demographic details before responding to the questionnaire.

Sample

The sample consisted of 52 faculty members of a State University in Tamil Nadu with mean age of 39.5 years (SD= 6.9). Purposive sampling was followed to collect the data. The participants were asked to fill the questionnaire with their genuine responses without omitting any statements.

Statistical Tests

Descriptive statistics Mean Rank and inferential statistics were employed in the present study i.e. Mann-Whitney U test and Kruskal-Wallis H test.
Results and Discussion

Table-1 showing the demographic details of the sample

<table>
<thead>
<tr>
<th>Gender</th>
<th>Marital Status</th>
<th>N</th>
<th>Area of Living</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male=36</td>
<td>Single=7</td>
<td>52</td>
<td>Rural=16</td>
<td>Science=27</td>
</tr>
<tr>
<td>Female=16</td>
<td>Married=45</td>
<td></td>
<td>Semi-urban=17</td>
<td>Commerce and Management =6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban=19</td>
<td>Social Science=19</td>
</tr>
</tbody>
</table>

As seen in table no.1, out of 52 participants, 36 are males and 16 are females. There are 7 single and 45 married participants in the sample. Based on the area of residence, out of 52 participants, 16, 17 and 19 participants are from rural, semi-urban and urban areas respectively. Academic discipline wise, there are 27, 6 and 19 participants from science, commerce/management and social science respectively.

Table 2 shows the gender difference in Employee Green Behaviour

<table>
<thead>
<tr>
<th>Categories</th>
<th>N</th>
<th>Mean Rank</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>36</td>
<td>26.99</td>
<td>$270.5^{\text{NS}}$</td>
</tr>
<tr>
<td>Females</td>
<td>16</td>
<td>25.41</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis No.1 tested: There will be a significant difference in green behaviour of faculty members based on gender is not confirmed. Gender difference is not observed in the green behaviour of faculty members.

From the table 2, it is found that there is no significant gender difference in employee green behaviour. The mean rank for employee green behaviour of males is 26.99 and females is 25.41. In the present study, there is no statistically significant gender difference for EGB ($U=270.5$, p= 0.72). The participants in the present study are faculty members of reputed State University who hold a high position. Gender difference in EGB is not pronounced as teachers are conscious about the damage that occurred to the nature and how the nature retaliated to it. As they are in an educational setting, they upgrade their knowledge and skill time to time. They keep abreast with the changing world so that they can impart knowledge to their students. Irrespective of the gender, they are highly educated and hence aware of the environmental degradation happening around them and the ways to tackle it. Since they are aware of the detrimental effect of environmental degradation, they can deliberately take necessary measures to mitigate it. One
method to reduce it is by engaging in green behaviour in the workplace. This enlightenment gained through education would have pushed them to be environmental conscious. Therefore, gender did not differentiate EGB. A similar study conducted by Behera and Samal (2013) revealed that there was no significant difference between secondary school boys and girls in relation to their pro-environmental behaviour which is similar to the present study. There are studies that revealed no statistically significant gender differences in environmentally responsible behaviors (Berenguer, Corraliza, & Martin, 2005; Blankenau et al., 2008).

Table 3 shows the difference in Employee Green Behaviour of married and single faculty members

<table>
<thead>
<tr>
<th>Categories</th>
<th>N</th>
<th>Mean Rank</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>45</td>
<td>25.86</td>
<td>153.0NS</td>
</tr>
<tr>
<td>Single</td>
<td>7</td>
<td>26.14</td>
<td>-</td>
</tr>
</tbody>
</table>

Hypothesis No.2 tested: Marital status will differentiate the green behaviour of the employees. Hypothesis is not confirmed. No significant difference is found in employee green behaviour among the faculty members based on marital status

From table 3, it is observed that there is no significant difference in employee green behaviour with regard to their marital status (U=153, p= 0.90). The mean rank for EGB of married and single participants is 25.86 and 26.14 respectively. Both the groups showed high EGB. Studies showed a positive link between education and green behaviours like use of energy efficient products, proper waste disposal and opting for eco-friendly transportation (Ortega-Egea et al., 2014). Education enhances pro-environmental behaviours like environmental reading, recycling, becoming a part of environmental group etc (Johnson, et al., 2004). Education not only enhances one’s understanding of environment’s health but also instill a sense of responsibility for the environment. The realisation would have prompted them to go green. Without education one loses his/her drive to bring change in one’s own lifestyle, to switch from consumption to conservation and to teach others (Spady, 2009). Even though both the groups exhibited high pro-environmental behaviour, single participants showed higher EGB than married participants. According to Klinenberg (2012), people who live alone are more socially active than those who live with others. Singles tend to spend more time on overall leisure activities than married people. As faculty members of a state university, they are very well aware of the adverse effects the environmental degradation caused to the nature. This awareness would have made them to utilize their leisure time in engaging productive activities like pro-environmental behaviour. This would serve as a relaxation for the employees as well. According to Chen, Peterson, Chuntian, Lee, Hong and Liu (2010) singles were more likely to participate in pro-environmental behaviour when compared to married people.
Table 4 shows the EGB scores based on the area of residence

<table>
<thead>
<tr>
<th>Categories</th>
<th>N</th>
<th>Mean Rank</th>
<th>(\chi^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>16</td>
<td>22.09</td>
<td>2.53\text{NS}</td>
</tr>
<tr>
<td>Semi-urban</td>
<td>17</td>
<td>26.44</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>19</td>
<td>30.26</td>
<td></td>
</tr>
</tbody>
</table>

\textit{Hypothesis No.3 tested:} Green behaviour of the employees will differ based on their area of residence is not confirmed. Based on the area of residence of the faculty members, the green behaviour do not significantly vary.

From the table 4, it is found that there is no significant difference in employee green behaviour with regard to area of residence (\(\chi^2=2.53, p=0.28\)). The mean rank for EGB of rural, semi-urban and urban is 22.09, 26.44 and 30.26 respectively. Even though all the participants are well-informed and educated about the environment, the participants from urban area showed higher pro environmental behaviour when compared to rural ones. Communities that comprise of closely attached people are more likely to work together to achieve a desired outcome, such as protecting the environment (Brown, Reed and Haris, 2002). Contrary to the present finding, a previous study by Anton and Lawrence (2014) found that rural people reported higher place identity and place dependence than urbanites. Rural people have a regular contact with the nature. This may develop a natural attachment and concern towards the nature. This helps them to easily relate to their physical environment. The participants from semi-urban and urban areas might have suffered from physical ailments like asthma, cardiovascular diseases, malaria, and diarrhoea and also psychological disorders like anxiety disorders, stress, depression etc. due to pollution and environmental degradation which might have made them to realize the importance of protecting the environment. The study by Lutz, Simpson-Houseley and De Man (1999) showed a similar result. It was mentioned that British Columbia residents reported relatively high levels of environmental concern among both rural and urban dwellers. Researches in western contexts suggested that urban dwellers exhibited greater pro-environmental attitudes and behaviour than rural residents because urban dwellers are often exposed to greater environmental degradation (Arcury & Christianson 1990; Mohai & Twight 1987).

Table 5 shows the difference in EGB scores based on the academic discipline

<table>
<thead>
<tr>
<th>Categories</th>
<th>N</th>
<th>Mean Rank</th>
<th>(\chi^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>27</td>
<td>24.69</td>
<td>2.28\text{NS}</td>
</tr>
<tr>
<td>Commerce/Management</td>
<td>6</td>
<td>21.92</td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis No.4 tested: There will be a significant difference in the green behaviour with regard to the academic discipline of the faculty members is not confirmed. Hence, no significant difference is found in the green behaviour based on the academic discipline among faculty members.

From table 6, it is found that there is no significant difference in employee green behaviour with regard to their academic discipline ($\chi^2 = 2.28, p = 0.31$). The mean rank for Science, Commerce/Management and Social Science are 24.69, 21.92 and 30.53 respectively. Regardless of non-significant difference, participants from social sciences showed higher EGB. This may be due to the fact teachers from social sciences subjects deals more on topics like values, morality, pro social behaviour, intrinsic motivation societal problems and so on than other discipline faculty members. This would have motivated them to engage in green behaviour when compared to other discipline faculty members. The World Values Survey conducted from 2005 to 2008, described that higher a person’s education, greater the individual’s concern for the environment. The Global Education Monitoring (2015) report mentioned that by increasing the concern and awareness, education can motivate people to reduce the adverse impact caused by them on the environment through more efficient use of energy and water supplies, especially in areas of resource scarcity. Due to the educational qualification, the participants might have learned from different sources the negative consequences of destruction the environment. This would have made them conscious about reducing the damage they cause to the environment and thereby prompt them to engage in green behaviour. People who are educated are more likely to engage in pro-environmental behaviour because they are exposed to more information about environmental harm through schooling (Scott & Willits, 1994). More research reveals that, individuals with high education in general are more concerned about the environment (Arcury & Christianson, 1993; Chanda, 1999; Hsu & Rothe, 1996; Klineberg, McKeever & Rothenbach, 1998; Ostman & Parker, 1987).

Another reason for the non-significant results and high scores is that the faculty members might have provided socially desirable response as those answers make the respondent look or feel good in the eyes of others.

**Conclusion**

Teachers serve as the role models for the students and can influence them. Being aware of the detrimental effects of exploiting the environment and making students to understand it helps to diminish the damage it to some extent. When the teachers themselves engage in pro environmental behaviour, students follow it automatically. As the environmental degradation is on the rise, developing and engaging in pro-environmental behaviours is essential for all the teachers and students, as it benefits them, their society and their environment.
Limitations

- Sample size used in the study is limited to one university.
- Generalisations cannot be made.

Implications

- Educational awareness to faculty members on the various ways to engage in green behaviour can be provided.
- Taking initiatives to establish nature club for students and encouraging them to maintain it.
- Provide awareness classes, workshops, seminars that highlight the relevance of green behaviour are useful.

References

8. Hoffmann, R., & Muttarak, R. Explaining the Link between Education and Green Behavior in the Philippines: The Role of Knowledge and Climate Change Perception.

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