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Demographic Correlates of Environmental Worry: An Explorative Investigation

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ABSTRACT:

This explorative study tried to identify whether environmental worry differs with age, gender and educational qualification among rural population in Kerala. The data was collected from 102 rural individuals in Ernakulam district. Out of which 50 are males and 52 females. 50 of them are below age group of 40 and 52 are in above the age of 40. The scale used was Environmental worry scale (EWS, 1996), a 17 item scale developed by Bowler and Schwarzer. The obtained results showed that women have significantly higher levels of worry when compared to men and People in the below 40 age group have significantly higher levels of worry compared to people above 40. The results imply that the government has to put in efforts at an early stage to promote environmental awareness among people and curriculum need to be redesigned in a way to promote environmental protection. At the same time laws enforcing environmental protection have to be implemented strictly at all levels of government to ensure environmentally healthy behavior.

Keywords: *Demographic Correlates, Environmental Worry*

INTRODUCTION

The human environment interaction dates back to ancient times of hunter gatherers where they lived on wild plants and animals. In contrast agricultural societies rely on settlement by invading the land of gatherers and establishing private properties. But the relationship with nature changed completely after industrialization where people started considering themselves above nature and had a utilitarian approach to nature. This was the beginning of environmental degradation. The specific characteristics of the social system affect human environment interaction. People's attitude to nature, their behavior and their impact on eco system is determined by the type of society in which they are in. Population size, value, technology, social organization, wealth, education etc. are some factors which determine people's view of life. Different forms of environmentally harmful behaviour leads to many kinds of diseases and destruction of many living things. This can cause anxiety in people about the environment.

"Environmental worry can be operationally defined as an emotional reaction and thoughts to unavoidable and continuous devastating events which damage the human animal and plant survival and safety." Now there is a global environmental movement, which seeks to consolidate individual efforts to improve upon the way human beings interact with the planet. There are also some laws for protecting the environment. Environmental worry means feeling uneasy about environment or concerns about environmental issues.

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A common mental response to risk is worry. Though generally associated with fear and anxiety, worry is primarily a cognitive activity that can, under some circumstances, be beneficial for developing coping strategies to deal with stressful events. As an emotion, it is experienced as anxiety or concern about a real or imagined issue, usually personal issues such as health or finances or broader ones such as environmental pollution and social or technological change. All people experience worry about anything in their whole life. Some studies say that an optimal level of worry has positive effects.

Steinheider & Hodapp, (1999) studied environmental worry and found that environmentally conscious behaviour was related to avoidance of creating waste, separation of waste, environmental protection activities, saving of resources and use of toxic substances. However, sex or age seemed to have no effects. A higher level of education correlated to less environmental worry in a significant way. A correlation between environmental worry and environmentally conscious behaviour could not be proven. However, the relationship between environmental worry, attitudes towards the environment, and social norms was significant. Our data suggest that for a modification of environmentally conscious behaviour, measures aimed at changing the social norm are more successful than those aimed at changing individual attitudes. Moreover, increased environmental worry does not seem to increase environmentally friendly behaviour.

Gould and Edelstein (2010) on "worry, emotion control and anxiety control in older and younger adults", found that young adults worry more than older adults. Young women worried more often than young men and older adults. They also found that young women have less control over their anxiety compared to young men and older adults. Matthies, Selge & Klockner (2012) investigated how parents influence pro-environmental behaviours of their children and found that norm activation model can be applied to pro-environmental behaviour of young children. Communication behaviour of parents had a different influence on the two respective behaviours. While parents seemed to influence their children's recycling behaviour via sanctions and their own behaviour, re-use of paper was mainly influenced via communication of problem knowledge.

Herr, Caroline, Rethage, Tobias, Eikmann and Thomas (2004) on "Assessment of environmental worry in epidemiological studies." showed that 97.5% showed extremely high worry. This group was characterized by a life quality below the average and high values regarding the complaint frequency. The subjective or health related component of the environmental worry index was associated with poorer sleep quality even when somatoform features were considered, whereas general environmental worry was not associated with poorer sleep quality.

Another study by Sarigollu (2009) on " A cross-country exploration of environmental attitude" , he found that there is significant differences in environmental attitudes between collectivistic versus individualistic , externally versus internally controlled , materialistic versus post materialistic , past oriented versus future oriented cultures , and across levels of modernity and pollution. A study was conducted by Ojala (2007) on " quantitative and qualitative analysis of household recycling among young adults" The result showed that a mix of negative emotion

(worry) and positive emotion(hope and joy) about the environmental problems related to recycling.

Study by Badr Hel-S (2003) on "Environmental awareness and worry among high school teachers in Kuwait" shows that about 60% of the teachers had high level of environmental awareness and almost half of them had high level of environmental worry. Both scores increased with increasing age and number of years of experience. The level of teacher's environmental worry was significantly positively related to their environmental awareness.

Kahn & Lourenco (2002) on "Developmental Study in Portugal of Environmental Moral Reasoning" found that participants thinking as polluting their water source as a violation of moral ethics. They justified this as both anthropocentric appeals (e.g. To personal interests, human welfare, and aesthetics) and bio centric appeals (e.g., that nature has intrinsic value or rights). Cross-cultural comparisons with studies conducted in the United States and the Brazilian Amazon support the proposition that there are substantial similarities in the environmental moral reasoning of young people across diverse cultures.

A study on "Worldly and work a day worries: Contemporary concerns of children and young adolescents" Hanker, Carol, Whale & O'Neil(1995) found that many students carry a substantial worry burden that includes not only personal matters such as grades and social relations, but also concerns about death and about global issues such as homelessness and environmental degradation. The gender and grade differences that emerged were consistent with a developmental extension from self to societal perspectives.

In "Explaining Gender Differences in Concern about Environmental Problems in the United States" by Xiao, Chenyang; McCright & Aaron (2012) showed that consistent support for the claim that risk perception mediates the direct effect of gender on environmental concern. Results offer no support for various arguments that men's and women's differential performance of key social roles in society account for gender differences in environmental concern. (Grattan et al., 2011) found subsequent to oil spillage among persons living in fishing communities along the Florida and adjacent Alabama coast a profound impact on their psy-chological adjustment and adaptation. There was also no sig-nificant difference between demographic groups on environ-mental worry.

Drottz-Sjoberg & Sjoberg (1990) after Chernobyl disaster, a nuclear plant accident found that there was relationship between sex and worry, female reported much more worry than male did. There is only a very small difference between male and female respondents in Sweden (Sjoberg, 1998) on worry. In Tallinn, Hokka et al. (1999) indicated that sex differences in environmental worry were small. Age co-varied with worry (Drottz-Sjoberg & Sjoberg, 1990) and there is a tendency for worry to increase with age. For (Hokka et al., 1999) in Tallinn, age differences in environ-mental worry were small. Herr et al. (2000) found that age did not show a significant influence on worry. Another demo-graphic variable which is level of education had influence on worry (Drottz-Sjoberg, 1990). Some researchers (Sjoberg & Drottz-Sjoberg, 1987; Sjoberg &

Drottz-Sjoberg, 1993) found that lower educational level is tied to higher environmental worry. Herr et al. (2000) also revealed that lower school educa-tion was associated with higher scores in environmental worry. Babalola (2010). Grattan et al. re-ported that participants with oil spill-related income loss and those with loss of job opportunities due to oil spill were less resilient and were more likely to use behavioural disengagement as a coping strategy. Eisenberger, Armeli, Fasolo, & Lynch found that length of unemployment has influence on the socio-emotional resources of individuals. Unemployment may produce feelings of frustration, loneliness, anger and emascula-tion. Employment status may influence environmental worry.

Tobler, Visschers & Siegrist (2012) intended to find a meaningful way to classify different ways of addressing climate change and examined which determinants influence people's willingness to engage in these behaviors. Results showed that perceived costs and perceived climate benefit turned out to be the strongest predictors for willingness to act or to support climate policy measures. The strong influence of perceived climate benefit might reflect a strategy of reducing cognitive dissonance. As high-cost behaviors are more difficult to adopt, consumers may reduce dissonance by dismissing high-cost behaviors as not effective in terms of climate mitigation. Political affiliation proved to be another strong determinant of willingness to act or support. Participants on the right wing were less willing to show indirect climate-friendly behaviors, change their mobility behaviors, and to support any type of climate mitigation policy measures. Climate-friendly low-cost behaviors, however, were not influenced by political affiliation.

In this modern world we all are less concerned about the environment. We just use the maximum of her resources and misuse the nature. So by understanding each person's worry or concern about the environment we get a clear route to the conservation of the environment. It is just an opening or a first step to the conservation of our nature.

Aim- This study aims to find out whether environmental worry differs with age, gender and educational qualification among rural population in Kerala.

METHODOLOGY

Sample

Random sampling method is used here. The sample consisting of 102 rural individual from Ernakulam district. The participants were 50 males and 52 females out of whom 50 of them below age group of 40 and 52 are in above the age of 40.

Tools

Environmental worry scale- Environmental worry scale (EWS, 1996) is a 17 item scale developed by Bowler and Schwarzer. The scale measures emotional distress from cataclysmic events. The response format is 4 point rating scale ranging from (1) no at all true (4) exactly true. The authors reported satisfactory psychometric properties for the scale.

Administration

Survey method was used to collect data for this study. Verbal concern was obtained for collecting information and the questionnaires were administered to the participants after establishing rapport with them.

RESULT & DISCUSSION

The collected data was analyzed using SPSS version 16 and the obtained results are discussed in the following sessions.

Table 1: the 't' value showing significant difference due to gender and age in the variable Environmental worry

Environmental Worry	Groups	N	Mean	Std. Deviation	't' value
Gender	Male	50	43.86	7.06	2.25*
	Female	52	47.44	8.86	
Age	Below 40	50	51.86	10.55	5.12**
	Above 40	52	39.76	13.10	

Results indicate that the 't' value obtained for gender difference in the variable environmental worry is 2.25 which is significant at 0.05 level. Women are found to have significantly higher levels of worry when compared to men which is in line with the finding of Drottz-Sjoberg & Sjoberg (1990) who have reported that females reported much more worry than male did. Women have a general pre disposition to be more prone to anxiety disorders which may be attributed to genetic, hormonal, environmental and cultural factors. Women also are more concerned about the health of the family and environmental degradation has a direct effect on the health of people. Men's and women's differential performance of key social roles in society also account for gender differences in environmental concern. Gould and Edelstein (2010) also support this view that young women have less control over their anxiety compared to young men and older adults. Study on "Gender and Environmental Risk Concerns" by Debra J. Davidson, he found that women tend to express higher levels of concern toward technology and the environment than do men, but that the tendency is not universal. Even though, research offer no support for various arguments that men's and women's differential performance of key social roles in society account for gender differences in environmental concern (Xiao, Chenyang; McCright & Aaron, 2012), this could be a factor which affect women.

If we think in detail about the finding of this study we can understand that women are more prone to worry. We know that anxiety disorder is twice as prevalent in women. They are the one who gave more importance and more valued their society and family. They care their children and loved ones more than anyone. We know whatever happens in our environment that affects the children first. Females are more likely to care the health and needs of their loved ones. So it

is clear that why females worry about the environmental issues more than anyone. Females are more emotional and more attached to everyone and they care their family so that they worry more. Moreover this study was conducted in rural area, where most of the females are house wives who spend their time within their family only.

The 't' value obtained for the different age groups is 5.12 which is significant at 0.01 level. People in the below 40 age group have significantly higher levels of worry compared to people above 40. Aggregated polling data shows that concern for the environment typically declines with age. But we know there will be exception in every rule. People below 40 age group are more energetic and have more contacts with the environment. This may be the reason for having more awareness on the effects of environmental problems. As the issue became more serious, governments have started giving awareness programmes on a large scale. People's concerns about environmental problems are likely to be affected by the quality, quantity and coverage of environmental information they receive. As the young people are more exposed to such issues, they have become more sensitive to it. A study on "worry, emotion control and anxiety control in older and younger adult" give a similar kind of result, they found that young adults worry more than older adults. Young women worried more often than young men and older adults. But contradictory to this (Drottz-Sjoberg & Sjoberg, 1990) found that there is a tendency for worry to increase with age.

Table 2: The F value obtained for the variable Environmental worry based on the different levels of education

	Sum of Squares	df	Mean Square	F
Between Groups	52.58	2	26.29	0.406
Within Groups	7053.33	109	64.71	
Total	7105.92	111		

No significant difference was found between different educational groups in the variable Environmental worry. From the result it is clear that many people have awoken to the reality that our earth is in danger. But education is not found to have a role in this. This is contrary to the findings by Drottz-Sjoberg, (1990) and Steinheider & Hodapp, (1999), which says that a higher level of education correlated to less environmental worry in a significant way. This may be because of the fact that in a place like Kerala the systems provided by the government for disposing waste are quite inadequate. This makes people feel very helpless. But some researchers (Sjoberg & Drottz-Sjoberg, 1987; Sjoberg & Drottz-Sjoberg, 1993) found results opposing the above that lower educational level is tied to higher environmental worry. Herr et al. (2000) also revealed that lower school education was associated with higher scores in environmental worry. These results clearly indicate the presence of some other mediating factor which could contribute to the role of education on environmental worry.

Matthies, Selge & Klockner (2012) found that norm activation model can be applied to pro-environmental behaviour of young children. Communication behaviour of parents had a different influence on the two respective behaviours. While parents seemed to influence their children's recycling behaviour via sanctions and their own behaviour, re-use of paper was mainly influenced via communication of problem knowledge. So such pro-environmental behaviours has their origin in educating children logically at a very young age and proper parental models.

CONCLUSION AND LIMITATION

Women have significantly higher levels of worry when compared to men. People in the below 40 age group have significantly higher levels of worry compared to people above 40. The sample size was small and hence the result obtained may not be representative of the all population. The data was collected only from one area in Ernakulum district.

IMPLICATIONS AND RECOMENDATIONS

People must have optimum level of worry about the environmental problems so that they conserve nature to some extent. Hence efforts underlining the importance of education in promoting environmental awareness and protection need to be incorporated in the curriculum and norms enforcing environmental protection has to be implemented legally at all levels of government to ensue environmentally healthy behavior.

REFERENCES

1. Akinbobola, O.I (2012). Environmental Worry as Correlate of Self-Esteem among Employed and Unemployed People in Oil Industry. *International Journal of Psychology and Behavioral Science*, Vol.2(5), Pp.167-172.
2. Babalola, S. S. (2010). The impact of length of unemployment and perceived organizational support on employee's emotional needs. *Ifepsychologia,* Vol.18, Pp. 119-136.
3. Badr Hel-S (2003). Environmental awareness and worry among high school teachers in Kuwait. *Journal of Public Health Association, Vol.78(3-4), Pp.319-39.*
4. Drottz-Sjoberg, B. M., & Stoberg, L. (1990). Risk Perception and wor-ries after the Chernobyl accident. *Journal of Environmental Psy-chology,* Vol. 10, Pp.135-149.
5. Eisenberger, R., Armeli, S., Fasolo, P., & Lynch, P. (1998). Perceived organisational support and police performance: The moderating in-fluence of socio-emotional needs. *Journal of Applied Psychology*, Vol.83, Pp.288-297.
6. Filipkowski, K. B., Smyth, J. M., Rutchick, A. M., Santuzzi, A. M., Adya, M., Petrie, K. J., & Kaptein, A. A. (2010). Do healthy people worry? Modern health worries, subjective health complaints, perceived health, and health care utilization. *International Journal of Behavioral Medicine,* Vol.17, Pp.182-188.
7. Gould, C.E., & Edelstein, B. A. (2010). Worry, emotion control, and anxiety control in older and young adults. *Journal of Anxiety Disorder*, Vol.24(7), Pp.759-66.
8. Grattan, L. M., Roberts, S., William, T., Mahan, W. T., Patrick, K., McLaughlin, P. K., Steven, W., Otwell, W. S., & Morris, J. G. (2011). The Early Psychological Impacts of the Deepwater Horizon Oil Spill on Florida and Alabama Communities. *Environment Health Perspective,* Vol.119, Pp.838-843.

9. Hanker, B., Whalen, C. K., & O'Neil, R. (1995). Worldly and workaday worries: Contemporary concerns of children and young adolescents. *Journal of Abnormal Child Psychology*, Vol. 23(6), Pp. 685-702
10. Herr, C., Rethage, T., Thomas, E. (2004). Assessment of environmental worry in epidemiological issues. *Epidemiology*, Vol.15 (4), Pp.S193
11. Herr, C. E. W., Rethage, T., Kopka, I., zur Nieden, I. A., Korner, I. E., Osadnik, I. R., Stilianakis, N., Hodapp, V., & Eikmann T. F. (2000). Comparing environmental worry in 1996 and 2000 in environmental related studies. *Epidemiology*, Vol.13, Pp.251.
12. Hokka, P., Palosuob, H., Zhuralevac, I., Parnad, K., Mussalo-Rauha- maab, H., & Lakomovac, N. (1999). Anxiety about environmental hazards among teenagers in Helsinki, Moscow and Tallinn. *The Sci-ence of the Total Environment*, Vol.234, Pp.95-107.
13. Kahn, P. H., & Louranco, O. (2002). Water, Air, Fire, and Earth: A Developmental Study in Portugal of Environmental Moral Reasoning *Environment and behavior*, vol. 34(4), 405-430.
14. Matthies, E., Selge, S., & Klockner, C. A. (2012). The role of parental behaviour for the development of behaviour specific environmental norms – The example of recycling and re-use behavior. *Journal of Environmental Psychology*, Vol. 32 (3), Pp. 277–284.
15. Neuhann, H. F., Hodapp, V., & Reinschmidt, U. (1996). Environmental concern of clients of an environmental medicine counseling center. *Gesundheitswesen* vol. 58 (9), 477-481.
16. Ojala, M. (2007). Hope and Worry: Exploring young people's values, emotions and behavior regarding global environmental problems. *BioCycle*, Vol. 48(12).
17. Sarigollu, E. (2009). A Cross-Country Exploration of Environmental Attitudes**.** *Environment and Behavior,Vol.* 41, Pp. 365.
18. Sjoberg, L. (1998). Worry and risk perception. *Risk Analysis*, Vol.18, Pp.85-93.
19. Sjoberg, L., & Drottz-Sjoberg, B. M. (1987). Psychological reactions to cancer risks after the Chernobyl accident. *Medical Oncology Tumor Pharmacother*, Vol.4, Pp.259-271.
20. Sjoberg, L., & Drottz-Sjoberg, B. M. (1993). The Perceived risk of nuclear waste. Proceedings of the SRA—Europe. In P. Vestrucci, & R. A. Cox (Eds.), *Fourth Conference: European Technology and Experience in Safety Analysis and Risk Management*, Rome.
21. Steinheider, B., & Hodapp, V. (1999). Environmental worry: a Concept to Explain Differences in Environmentally Conscious Behaviour?. *Zentralblatt für Hygiene und Umweltmedizin*. Vol. 2(4), Pp. 273–289.
22. Tobler, C., Vivianne H. M. Visschers, V. H. M., and Siegrist, M. (2012). Addressing climate change: Determinants of consumers' willingness to act and to support policy measures. *Journal of Environmental Psychology*, Volume 32, Issue 3, Pp. 197–207.
23. Xiao, Chenyang, X ., & Mc Cright, A. M. (2012). Explaining Gender Differences in. Concern about Environmental Problems in the United States. *Society and Natural Resources,* Vol. 25 (11).