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Research Paper

A Study to Assess the Knowledge of Adults Regarding Global Warming in A Selected Community at Mangalore

Medical Science

KEYWORDS : Knowledge, global warming, adults

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ABSTRACT

Global warming is the increase of the average temperature on earth. As the earth is getting warmer, disasters like hurricanes, droughts and floods are getting more frequent.[2]. Saving the earth and sustain healthy life on the earth is the ultimate responsibility of each and every citizens for controlling the global warming. The aim of the study was to assess the knowledge of adults regarding global warming in a selected community at Mangalore. Descriptive survey approach with non experimental descriptive research design was adopted. Purposive sampling technique was used to select the sample. A structured knowledge questionnaire was used to collect data from 50 adults of selected community. The results of the study revealed that majority 54% had average knowledge, 38% had good knowledge and 8% had poor knowledge regarding global warming. And also shows that there was a significant association of knowledge score with education of the adults $\chi 2$ (1) = 3.977 at p <0.005.

Introduction:

Environment is our surrounding, which includes the living and non living things around us. All plants and animals adjust to the environment in which they are born and live. A change in any component of the environment many cause discomfort and affect normal life. Any unfavorable change or degeneration in the environment results in environmental pollution. Human greed exploits the nature. Excessive exploitation and pollution due to deforestation, increased use of automobiles, increased use of pesticides and chemical fertilizers etc. will lead to the most threatening phenomena of the earth-" Global Warming"[1].

Global warming is the increase of the average temperature on earth. As the earth is getting warmer, disasters like hurricanes, droughts and floods are getting more frequent. A group of scientists from United States found out that over the last 100 years, the average temperature of the air near the earth's surface has risen a little less than 1˚C which has been responsible for the conspicuous increase in storms, floods and raging forest fires that we have seen in the last ten years. Out of the 20 warmest years on record, 19 have occurred since 1980. The three hottest years even observed have all occurred in the last ten years[2].

There is an increasing trend in record of hot days versus record cold temperatures with currently twice as many records of hot days than recorded cold temperatures. Humans are emitting CO_2 at such rates that atmospheric CO_2 is at its highest level over the past 800,000 years. The rate of increase is the fastest in 22,000 years. Antarctic ice loss is accelerating even from East Antarctica which was previously thought to be too stable to lose ice mass and thus global sea level is at a rise[3].

The destruction of ozone layer in the atmosphere, increasing population, increasing use of refrigerators and other machineries which emits radiations and greenhouse gasses are major causes of global warming. Based on these reasons it is noteworthy that March 2008 saw the warmest global land temperature of any march ever recorded in the past 130 years. June and August 2009 saw the warmest land and ocean temperatures in the southern hemisphere ever recorded. The global ocean surface temperatures in 2009 broke all previous records ever recorded. The years 2007, 2008, 2009 had the lowest summer sea ice cover ever recorded. Seeing this steady increase in temperature especially during the last decade, we can expect a continuous increase in the temperature over the coming year's too[3].

The future is not somewhere we are going. It is something we are creating. Global warming already has disrupted millions of lives daily in the forms of destructive weather patterns and loss of habitat. What is already happening is only the tip of the melting iceberg, for it is our children and grandchildren who may suffer most from the effects of global warming.

We have a short period of a few years to make a real difference in cutting our CO_2 emissions. It is the responsibility of every individual to take all actions available to them and more in the fight against climate change. We have only one planet, and every one of us can help to save it, but we must drive the change, no one else is going to do it for us. We simply cannot wait until it really is too late. Even in India, we are experiencing this steady increase of temperature and if we are not addressing to this devastating need it is sure that life on earth will vanish within few decades. Thus, it is important to start with creating awareness and making the people conscious of their environment, to improve their environmental knowledge and thus make the necessary modifications to prevent global warming[3]. So the investigators are interested to identify the knowledge of adults about the global warming and its prevention and to have safe environment.

Review of the Literature

A study was conducted on knowledge of Americans adults about global warming in 2009. The sample consists of 1500 adults. The study was conducted by survey method .The result showed that 57% respondents thoughts that there is solid evidence that average temperature on earth has been getting warmer than the past few decades[4].

A cross-sectional survey was conducted to assess the awareness regarding climate change among general population residing in pune city, India. A total of 733 adults were interviewed face to face with the help of pre-tested questionnaire which has both closed ended and open ended questions. The study results revealed that most(91.98%) respondents commented that global climate is changing, about 81.40% of them said human activity contribute for global climate change and 85.71% respondents said it is because of personal experience. The study concludes that urban general population is aware of global climate change[5].

A study was conducted on knowledge about climate change in American mind in 2008.The sample composed of 2129 adults and it was conducted by using the questionnaire method .The study showed that 18% alarmed, 33% concerned, 19% cautious and 11% doubtful .The result revealed that very large proportion of alarmed were currently intend to begin rewarding or punishing companies that are either enacting or opposing steps to reduce global warming[6].

Objectives:

1 To determine the knowledge of adults regarding global warming
2 To find the association of level of knowledge of adults on global warming with selected variables.

Methodology:
Setting: The study was conducted in urban community at Benjanapadavu, Mangalore

Population: Adults within the age group of 18-40 years, who are residing in Benjanapadavu area at Mangalore

Sample size: 50
Sampling technique: purposive sampling technique

Research design: Descriptive research design

Tools:
- Demographic proforma consisted of 06 items
- The structured knowledge questionnaire on global warming
- The questionnaire had a total of 30 items. All the items were multiple-choice questions. A score value of one (1) was allotted to each correct response and (0) score for incorrect response. Knowledge scores were arbitrarily divided as good (21-30), average (11-20) and poor (0-10).

Data collection method:
- Prior to data collection permission was obtained from the concerned authority and written consent was taken from adults.
- Subjects were selected based on the set criteria
- The structured knowledge questionnaire on global warming was administered to adults.

Result of the study:
The demographic data showed that highest (22%) of the adults were in the age group of 18 -25 years and least (12%) were in the age group of 26-32 years. Majority (58%) of them were females. Highest (40%) of them were graduates and least (24%) of subjects were studied PUC. Maximum (32%) of the adults' were unemployed and least (28%) of each of them were professionals and self employed. More than half (36%) of adults were having monthly income of Rs ≤ 5000 and about26% of them were having the monthly income range from Rs 5001-10,000. Majority (86%) of them received information regarding global warming from mass media and about 14% of them received information from other sources.

Figure 1 shows that majority (54%) had average knowledge, 38% had good knowledge and 8% had poor knowledge regarding global warming.

Data in table 1 shows that there was a significant association of knowledge score with education of the adults $\chi 2_{(1)} = 3.977$ at p <0.005.

Conclusion:
The present study proved that generally the adults of the selected community area were having lacked knowledge on global warming since that majority (54%) had average knowledge. Global warming has emerged as one of the most devastating environmental threats. Global climate change impacts on human and natural systems are predicted to be severe. As evidence of climate change and its impact continues to be amassed, it has become clear that many of the causes of climate change are anthropogenic in nature through lifestyles, consumption and choices that pollute and exploit resources in an unsustainable manner. It is also predicted that climate change will have detrimental effects upon agriculture and fisheries, and may even result in collapsing ecosystems. There is an urgent need to sensitize the general population regarding global warming and climate change to have healthy life on the healthy environment.

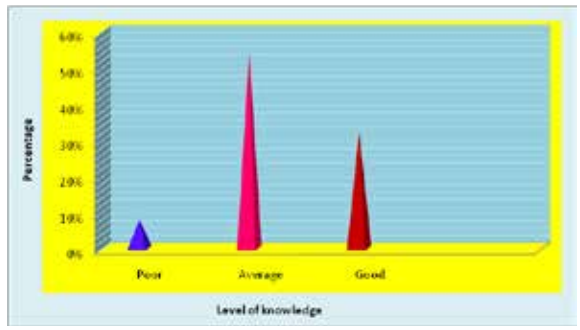

Figure 1: Cone diagram showing distribution of samples according to the level of knowledge scores.

Table 5: Chi-square test showing the association of knowledge of adults with selected demographic variables

Sl.No	Variables	x^2	df	Level of significance
1.	Age in years	0.363	2	Not significant
2.	Gender	1.42	1	Not significant
3.	Education	3.977	1	Significant
4.	Occupation	2.060	2	Not significant
5.	Income	0.140	2	Not significant
6.	Source of information	0.086	1	Not significant

df (1) = 3.84, P<0.05 , df (2) = 5.99, P<0.05

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