

Study on awareness of “Go Green Hospital Initiative” among healthcare personnel with a view to prepare an informational leaflet.

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Abstract

Introduction: The “Go Green Initiative” was supported in 2002 in Pleasanton, California by Jill Buck, that is currently the biggest quickest growing comprehensive environmental education program in the world. Going green means being friendly to the environment; saving our environment. It is all about making a campus wide culture of conservation, learning to save local energy, water, and waste and food systems. It can raise quality care, the quality of life and promote cost effective care. The aim of the study was to assess the awareness of healthcare personnel on “Go Green Hospital Initiative” and to find the association of awareness of “Go Green Hospital Initiative” with baseline variables.

Methodology: A descriptive survey design was carried out in multispecialty hospital tertiary hospital, Mangaluru. Convenient sampling technique was used to select 180 healthcare personnel with more than one month experience in their respective field. The instruments used were baseline proforma and semi structured questionnaire on Go Green Hospital Initiative. Reliability of the tool was 0.9 checked by spilt half method.

Results: Upon testing the knowledge of the participants, it was found that most of the subjects (54%) secured an average score; 32% had a good score; 13% had poor score and only 0.5% scored had an excellent mark. There was no association between awareness on Go-Green Hospital Initiative and baseline variables

Conclusion: The findings emphasize an extensive need to evaluate the awareness of Go Green hospital Initiative in the respective hospital.

Keywords: Go green hospital Initiatives, Awareness, Health care personnel.

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Introduction

Green, the color of nature, has become the latest and emerging trend. Everywhere we look, people are finding ways to go green and create an eco-friendly environment. The definition of going green involves waste reduction, energy and resource conservation. Hospitals generate one of the most diverse solid and biohazard waste products in large quantities, comparing to any other commercial office buildings [1,2]. The factors such as culture, social aspects, personality traits, psychological state and economic aspect influence the purchasing of any customer [3-11].

Presently in India, about 960 million tons of solid waste is being generated annually as by-products during industrial, mining, municipal, agricultural and other processes. Of this 350 million tons are organic wastes from agricultural sources; 290 million tons are an inorganic waste of industrial and mining sectors and 4.5 million tons are hazardous in nature [7].

Modern healthcare system requires costly and energy-intensive processes -in terms of the use of water, lighting, heating, cooling and ventilation, as well as waste disposal [4]. By embracing the green concepts, hospitals mainly benefit in terms of energy saving, leading to monetary savings. As per estimates, 15 to 30% of energy and around 30% of water could

be saved, under general lighting, CFLs over tube lights save energy up to 30%, and with LED lamps as high as 45-50% if a hospital is shifted to the green concepts.

The Indian Green Building Council (IGBC) and Green Rating for Integrated Habitat Assessment (GRIHA) are the green building rating systems help to review the requirements and aid in setting up goals for green projects by targeting elements of sustainability.

The five green recommendations for surgical practices are operating room waste reduction and segregation, reprocessing of single-use medical devices, environmentally preferable purchasing, energy consumption management, and pharmaceutical waste management [5]. The medical community has a large opportunity to implement green practices in surgical units [12].

The functioning of green teams should be beyond the hospital setting; that could be for long-term care, outpatient clinics. Even home care agencies could establish green teams to consider more environmentally conscious ways to deliver care [2,5]. A green perspective curriculum regarding environmental health practice, clinical experience, standards towards clinical laboratory, simulation laboratories must be incorporated. This prepares the fresher’s of health care firms to meet the

environmental health expectations and particularly managing the proper receptacles for waste, use non-toxic products for sanitation, and consideration towards the energy use in practice [7,8]

Nurses are the largest workforce ever found in health care settings. Nursing as a health care profession and environmental health as a public health discipline share many of the same roots [9] At the very beginning, Florence Nightingale had stressed the necessity of putting the patient in the healthiest environment for healing the patient [2]. Certainly, nurses own responsibilities of creating a healthier workplace in the hospital and community setting.

Further being a member of the green team, nurses can contribute support and inform other staff on environmentally sustainable; institutional practices in various aspects like, recycling, appropriate product selection and disposal according to hospital policy.

Climate-friendly and energy efficient healthcare facilities may yield a double benefit in terms of patients, healthcare workers, and the communities served. For health-promoting activities and health care leaders, health policy decision makers lug a responsibility to assess such evidence systematically, also assume a role in leading initiatives that address global environmental health for the future and present-day generations [4].

The International Council of Nurses stated that the healthy lives of people depend ultimately on all of the elements which constitute people’s natural environment. In addition to this, the ANA’s Principles of Environmental Health for Nursing Practice with Implementation Strategies advocate for public policy focusing prevention of hazards to people and to the natural environment, thickened the precautionary approach in occupational and environmental health [9]. ANA code of ethics directs nurses both to collaborate to meet societal health needs and not to treat their own health needs as less than anyone else’s needs. It is need of the hour, every health care personnel to recognize and address the environmental hazards (biological, chemical, radiological, and physical) that might affect themselves, their patients, and the community at large [9]. The central aspect of the researchers is to investigate the knowledge of health care personnel and provided them an informational material. This may help to enlighten the minds of the healthcare providers to take a step forward by taking initiative in formulating the policies to reduce pollution to our mother earth by adopting green practices.

Statement of the problem

A study to assess the awareness of “Go Green Hospital Initiative” among healthcare personnel in a selected hospital at Mangaluru with a view to prepare an informational leaflet.

Objectives of the study

1. To assess the awareness of healthcare personnel on “Go Green Hospital Initiative” using semi-structured questionnaire.
2. To find the association of awareness of “Go Green

Hospital Initiative” with baseline variables.

3. To prepare an informational leaflet on “Go Green Hospital Initiative”.

Methodology

This quantitative research was conducted at tertiary Hospital, Mangaluru, healthcare set up with 1250 beds catering to the needs of all alignment including community extension services. A descriptive survey design was chosen for the study [7]. Convenient sampling technique was used to select 180 health care personnel, comprising of doctors, MIT, MLT, Laboratory technician, Interns, Staff nurses and BHMS. The inclusion criteria were healthcare personnel with more than a month of experience in their respective field. Those attended awareness program related to “Go Green”, students, Housekeeping staff, hospital nursing aids and clerical staff were excluded from the study.

Data collection process

Ethical clearance was obtained from the Father Muller Medical College Institutional ethics committee. Permission was obtained from the concerned authorities of the hospital to conduct the study. After explaining the study objectives and confidentiality of the data, informed consent from the participants was taken. A baseline proforma with 7 items and a semi-structured questionnaire on awareness on Go Green Hospital Initiative consisting of 31 items, out of which 20 items of the ‘yes/no’ and 10 items of fill in the blanks and one item was open- ended question. Each correct answer carried 1 score and the wrong answer carried 0 scores. The total maximum score would be 30. Awareness score was graded as Excellent (25-30), Very good (20-25), Good (15-2), Average (10-15) and Poor (<10). The validity of the tool was done by 11 experts and reliability checked by using spilt half method and tool found reliable (0.9). Each participant took 8 to 10 minutes to answer. The participants were thanked for their wholehearted support and cooperation towards the data collection. The data collected data was compiled and analyzed by using Descriptive (frequency, percentage, mean and standard deviation) and inferential statistics (chi-square).

Results

The data in Tables 1-3 shows that 58% percent of the subjects were between the age group of 21 to 25 years. The larger group of participants was females (54%). More than half of the subjects (54.4%) did not have any information regarding Go Green Hospital Initiative. Around 42.7 percentages of subjects were within the one to three years of experience, and most of the participants were nurses. In Table 2, depicts that most of the subjects (54%) had average scores; 32% had a good score; 13% had poor score and only 0.5% scored had an excellent mark.

Association

Computed Chi-square test values showed no significant association of awareness on Go-Green Hospital Initiative and baseline variables at 0.05 levels. Therefore the null hypothesis was accepted and the research hypothesis is rejected (Figure 1).

Table 1. Distribution of subjects according to the baseline characteristics N=180.

	Variables	f	%
1	Age in years		
	21-25	104	58
	26-30	41	22
	31-35	14	7.7
	36-40	10	5.5
	41-45	10	5.5
	>46	1	1.1
2	Gender		
	Male	16	9
	Female	164	91
3	Qualification		
	G.N.M	24	13.3
	B.Sc (N)	28	15.5
	P.B.BSc (N)	22	12.2
	M.B.B.S	8	4.4
	B.P.T	18	10
	B.H.M.S	6	3.3
	M.L.T	23	12.7
	M.I.T	31	17.2
	B.S.A. L.P	10	5.5
4	Designation		
	Doctors	14	7.7
	Interns	18	10
	Imaging Technician	31	17.2
	Post Graduate	10	5.5
	Staff Nurse	84	46.6
	Laboratory Technician	23	12.7
5	Years of experience		
	<11 months	45	25
	1-3 yrs	77	42.7
	4-6 yrs	31	17.2
	7-9 yrs	10	5.5
	10-12 yrs	8	4.4
	>12 yrs	9	5
6	Previous information on Go Green Hospital Initiative		
	Yes	82	46
	No	98	54
6.	Source of information		
	Internet	28	15.5
	Magazines	13	7.2
	Newspaper	15	8.3
	Television	26	14.4
	No information	98	54.4

The data in Table 1 shows that 58% percent of the subjects were between the age group of 21 to 25 years. The larger group of participants was females (54%). More than half of the subjects (54.4%) did not have any information regarding Go Green Hospital Initiative. Around 42.7 percentages of subjects were within the one to three years of experience, and most of the participants were nurses.

Table 2. Frequency and percentage distribution of subjects according to the Grading of Awareness score N=180.

Awareness Score	Grading	Frequency	Percentage (%)
15-Oct	Poor	24	13
16-20	Average	97	54
21-25	Good	58	32
26-30	Excellent	1	0.5

Maximum score=30; Table 2 depicts that most of the subjects (54%) had average scores; 32% had a good score; 13% had poor score and only 0.5% scored had an excellent mark.

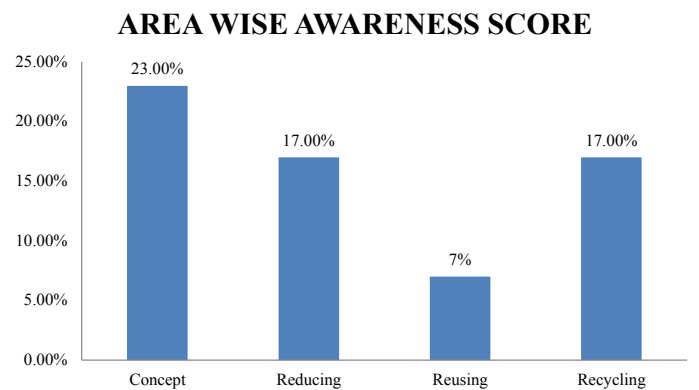
Discussion

Based on the result of the present study, we observed that the majority of respondents (55%) fall in the category of the average

Table 3. Mean, Percentage and Standard Deviation of subjects Awareness on Go Green Hospital Initiative N=180.

Awareness on Go Green Hospital	Mean \pm SD	Mean percentage	Level of awareness
	17.9 \pm 1.3	54%	Average

Maximum score=30.

**Figure 1.** Area wise distribution of Awareness score. Association: Computed Chi-square test values showed no significant association of awareness on Go-Green Hospital Initiative and baseline variables at 0.05 levels. Therefore the null hypothesis was accepted and the research hypothesis is rejected.

level of awareness on Go Green Hospital Initiative. On the other hand, the findings of awareness and perception of Malaysian youth towards green advertising among three hundred and twenty Malaysian youth indicated that the Malaysian youth had some awareness on 'green living' and there was no association between awareness score of subjects and baseline variables. Also, these findings correspond with the finding of Junaid et al. showed that overall knowledge of health care staff was satisfactory [10].

Indeed the article on the perceptions of businesses regarding the impact of green practice implementation on the business functions have repeatedly shown the contradictory findings between the roles played by demographic influences (type of industry, functional area employed, years' years' involvement with green practices; ethnic group and age) involvement with green practices; ethnic group and age and green business practice implementation [8]. These findings co-related with the present study where 58% of health personnel within the age group of 21-25 years, 54 percent were females, 46.6% were staff nurses, 45.4% of subjects had previous information regarding "Go Green Hospital Initiative" from different sources like television (14.4%), internet (15.5%), newspaper (8.3%) and magazines (7.2%). Undoubtedly these studies clearly portray the enhancement of consumer environmental awareness on green products for healthy living [8].

The present study has depicted average knowledge among the subjects; this could be possible because few of the subjects had previous information on Go green initiatives through various mass media. Definitely, the average knowledge has to be transformed into good or excellent so that the health care personnel protect the customers, environment and themselves. Faculty need a sound understanding of environmental health issues in order to include appropriate course-specific content

across the learning continuum [5] Absolutely the informational booklet has supplied the basic and necessary information to the subjects of all the areas of going green [2].

The integration of environmental health policy into education, practice, research, advocacy, and public policy is essential. Major pieces of legislation and regulations related to environmental health should be a part of the policies and practices applicable by all health care personnel" It's the health care providers right to know about the potentially harmful chemicals, pollutants, and hazards in their workplace. Timely training programs keep health care personnel up-to-date.

Conclusion

The central concept of the present study would help the health care personnel to be more aware of what Go Green Hospital Initiative is all about, what measures would help to initiate it. Nurse administrator can promote various programs regarding Go Green Hospital Initiative like paper recycling, using the Management Information System, planting more trees, using re-usable items. Eco- friendly environment help the healthcare personnel to have more information and to practice it in their day to day activities. The nursing leaders should plan and conduct programs in the nursing leaders should plan and conduct programs in the hospital and community to improve the awareness regarding on "Go Green Hospital Initiative"

Limitations of the Study

- The study included only healthcare personnel.
- Data was collected only from one Hospital.
- Limited questions were included in the questionnaire.
- The study was conducted only on qualified experienced staff.

Further studies can be conducted in the areas of recycling water, Re-using materials, Eco-friendly practices and hospital waste management.

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