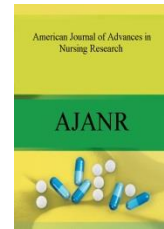




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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE OF OCCUPATIONAL HEALTH HAZARDS AMONG STAFF NURSES AT RAJARAJESWARI MEDICAL COLLEGE AND HOSPITAL BANGALORE

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ABSTRACT

Introduction: - Health care workers define to be all people engaged in actions whose primary intent is to enhance health. They make important contributions and are critical to the functioning of most health systems. Health care workers face a wide range of hazards on the job; including needle stick injuries, back injuries, latex allergy, violence, and stress. Health-care workers (HCWs) need protection from these workplace hazards just as much as do mining or construction workers. Yet, because their job is to care for the sick and injured, HCWs are often viewed as "immune" to injury or illness. Their patients come first. They are often expected to sacrifice their own well-being for the sake of their patients. Indeed health protecting health-care workers has the added benefit to contribute to quality patient care and health system strengthening. **Objectives:** - 1. To assess the pre-test knowledge regarding the occupational health hazard among the staff nurses in RRMCH, Bengaluru. 2. To assess the post-test knowledge regarding the occupational health hazard among the staff nurses in RRMCH, Bengaluru. 3. To assess effectiveness of structured teaching programme on knowledge regarding health hazard among the staff nurses in RRMCH, Bengaluru. 4. To find association between pre-test and post-test knowledge score of staff nurses and selected demographic variables. **Design:** - Evaluative research approach was used for the study. Forty staff nurses were recruited by non-probability convenience sampling method. Necessary administrative permission was obtained from concerned authority. Written informed consent was obtained from all subjects. Then the investigator collected the data pertaining to the demographic variables by using structured interview schedule. Ethical clearance was obtained from Institutional ethical committee. Content validity of the tool was established by split of method. The obtained score was 0.90 & it was found to be reliable. Pre-testing of the tools was done. **Setting:** - The study was conducted in RajaRajeswari Medical College & hospital, Bangalore, Karnataka. **Result:** - The result of the study showed that the mean level of knowledge regarding occupational health hazards on pre-test was 12.37 and post-test was 22.95 respectively. The standard deviation for the study was 2.17 and 4.01 respectively. The calculated "t" value was 14.56. This shows that there is an effectiveness of structured teaching programme on knowledge regarding occupational health hazards among staff nurses at RRMCH, Bangalore. **Conclusion:** - The study revealed that the objective for assessing knowledge towards the occupational health hazards among staff nurses has achieved and structured teaching programme was effective in improving the



knowledge of staff nurses.

INTRODUCTION

Health care workers face a wide range of hazards on the job; including needle stick injuries, back injuries, latex allergy, violence, and stress. Health-care workers (HCWs) need protection from these workplace hazards just as much as do mining or construction workers. Yet, because their job is to care for the sick and injured, HCWs are often viewed as "immune" to injury or illness. Their patients come first. They are often expected to sacrifice their own well-being for the sake of their patients. Indeed health protecting health-care workers has the added benefit to contribute to quality patient care and health system strengthening.

The World Health Organization (WHO 2018) estimated the global burden of diseases from occupational exposure to be 40% worldwide. Each year, there are thousands of non-fatal occupational injuries, which are estimated to affect 374 million workers every year (Hämäläinen, Takala&Kait 2017:20). It is estimated that yearly, over two million people worldwide die of occupational injuries and work-related diseases. The magnitude of these hazards necessitates the need to explore perceptions of nurses on occupational health hazards and safety measures in North West province.

According to International Labour Organization (2016), the most common accidents prevailing in health settings include blood spillage, falling, needle pricks, infections and psychosocial hazards. In Nigeria, Ghahremani et al. (2018) introduced four main reasons regarding hospital incidents. These incidents included the lack of access to appropriate protective equipment, behaviour of staff, inadequacy of tools and excessive tendency towards high-speed performance. Hundreds of millions of people throughout the world are working under circumstances that foster ill health and are unsafe.

Nurses are exposed to physical hazards such as needle stick injuries in their workplace leading to the risk of infections (Nui 2020). This is supported by Nophale (2019), who conducted a study on needle stick injuries amongst healthcare workers (HCWs) in regional hospitals in the Free State province of South Africa. The results revealed that 90% of professional nurses and 55 (6%) of doctors sustained needle stick injuries. Owie and Apanga (2018) found that the increase in occupational health hazards in developing countries is mostly blamed on healthcare professionals who do not practice universal safety measures such as hand washing, wearing gloves and using personal protective equipment. This unsafe practice increases the risk of injuries and transmission of infections to HCWs.

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Moreover, nursing students are also exposed to occupational hazards and injuries in the course of their clinical training activities because of inexperienced, unskilled and lack of professional knowledge of protective measures than senior nurses. Exposure to infectious materials can be minimized by adherence to standard precautions, which are designed to reduce the risk of acquiring occupational infection in the health-care settings.

The occupational health nurse plays a multi-faceted role in influencing, improving or maintaining a worker's daily workplace health using prevention, protection and health intervention and creating productive healthy workers in a healthy workplace (Tudor et al. 2019). The Occupational Health and Safety Act (Act 85 of 1993) requires medical surveillance to be conducted and to manage the risks identified (Tudor et al. 2018). Based on data available on health hazards and occupational health and safety on health professions, there is a dearth of literature in North West province because there is no study conducted on occupational health hazards and safety practices.

Objectives: - 1. To assess the pre-test knowledge regarding the occupational health hazard among the staff nurses in RRMCH, Bengaluru.

2. To assess the post-test knowledge regarding the occupational health hazard among the staff nurses in RRMCH, Bengaluru.

3. To assess effectiveness of structured teaching programme on knowledge regarding health hazard among the staff nurses in RRMCH, Bengaluru.

4. To find association between pre-test and post-test knowledge score of staff nurses and selected demographic variables.

HYPOTHESIS: -

H₁: There will be significant difference between pre-test and post-test knowledge score regarding occupational health hazards among staff nurses.

H₂: There will be significant association between post-test knowledge scores regarding occupational health hazards for staff nurses and selected demographic variables.

MATERIAL AND METHODS

Evaluative research approach was used for the study. Forty samples were recruited by non-probability convince sampling method. Necessary administrative permission was obtained from concerned authority. Written informed consent was obtained from all subjects. Then the investigator collected the data pertaining to the demographic variables by using structured interview schedule. The instrument used for the data collection was



structured knowledge questionnaire for assessing the knowledge score.

Phase I: Assess the pre-test knowledge regarding occupational health hazards among staff nurses by using structured questionnaire.

Phase II: A STP was administered on knowledge regarding occupational health hazards among staff nurses.

Phase II: Assess the post-test knowledge after a period of week within the group followed by same procedure.

Ethical clearance was obtained from Institutional ethical committee. Content validity of the tool was established by split of method. The obtained score was 0.90 & it was found to reliable. Pre-testing of the tools was done. The obtained data were analyzed based on the objectives and hypothesis by using descriptive and inferential statistics.

Table 1 reveals that:

- Out of 40 staff nurses 28 (70%) belong to the age group of 23 - 33 years, 10 (25%) to the age group of 33 – 43 years, 2 (5%) belong to 43 – 53 years old.
- With regard to the educational qualifications 11 (27.5%) staff nurses had Diploma and 29 (72.5%) had a B.sc nursing degree.
- With regard to years of experience 13 (32.5%) had 1-2 years of experience, 17(42.5%) had 2-5 years of experience, 8 (20%) had 5-10 years of experience and 2(5%) had 10+ years of experience.
- Most of the staff nurses 21(52.5%) had 6 hours of work and 19(47.5%) had 8 hours of work.
- Out of 40 staff nurses 16 (40%) have a monthly income of Rs.13000-Rs.18000, 11(27.5%) have a monthly income of Rs.19000-Rs.25000, 7(17.5%) have a monthly income of a Rs.26000 -Rs.30000 and 6 (15%) have a monthly income of Rs.30000 and above
- Majority of the staff nurses 25(62.5%) works as emergency room nurse, 13(32.5%) works as OT nurse, 1(2.5%) works as ICU nurse and 1(2.5%) works as Ward nurse.

SECTION 2

Comparison of pre-test and post-test knowledge scores regarding occupational health hazards to find out the effectiveness of teaching program.

Table 2 shows that from the pre-test 15% of them belong to inadequate, 85% are moderately adequate. From the post-test 2.5% are inadequate, 10% are moderately adequate and 87.5% are adequate.

The mark is classified as:

Inadequate = 0-10 marks

Moderately adequate = 10-20 marks

Adequate = 20-30 marks.

Table 3 represents the mean, SD, means percentage and paired't' test of pre-test and post-test of knowledge regarding occupational health hazards among staff nurses.

The results revealed that obtained [t] value was 14.56, which were found with statistically significant at 0.05 levels.

IMPLICATION OF THE STUDY:-

The result of the study proceed that staff nurses had inadequate knowledge regarding occupational health hazards. The findings of the study have scope in the following areas,

Nursing Practice:

1. Nurses working in the community field and hospital should have enough knowledge about occupational health hazards & able to find an opportunity to teach & improve knowledge regarding occupational health hazards.

2. Nursing professionals can play a key role in the enhancement of knowledge of staff nurses regarding occupational health hazards, which could improve the knowledge of staff nurses.

Nursing Education:

1. Nursing curriculum can be modified with increased emphasis on occupational health hazards.

Nursing Administration:

1. Administrators can organize the educational programs staff nurses and community areas to provide knowledge regarding occupational health hazards.

2. The nurse administrator in the higher-level authority must hold discussions and meetings on occupational health hazards. Based on that, the knowledge of the staff nurses can be assessed and the program can be planned and implemented in school & community at various levels.

Nursing Research:

Management & administration authorities give encouragement, motivation & also provide financial support to do research.

ASSUMPTIONS:-

- ✓ Staff nurses will have some knowledge regarding selected aspects occupational health hazards.
- ✓ Structured teaching programme may enhance the knowledge of staff nurses regarding selected aspects of occupational health hazards.



LIMITATIONS:-

1. The study was conducted in selected hospital, Bangalore.
2. Sample was selected only from one hospital hence generalization can only be made for the selected sample.
3. The study did not use control group. The investigator had no control over the events that took place between pre-test and post-test.

1. Similar study can be carried out on larger samples for broader generalization.
2. A comparative study could be conducted in different settings to find out the effectiveness of structured teaching programme.
3. An experimental study could be replicated with a control group.
4. A comparative study could be undertaken to evaluate different teaching strategies, self-instructional module (SIM), peer evaluation and education by students.

RECOMMENDATIONS:-

Based on the study findings the following recommendations have been made for further study:

Table 1: Frequency and percentage distribution of demographic variables of staff nurses regarding occupational health hazards. n=40

Sl.No	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1	Age in years		
	a) 23-33	28	70%
	b) 33-43	10	25%
	c) 43-53	2	5%
2	Educational qualification		
	a) Diploma	11	27.5%
	b) B.sc	29	72.5%
3	Years of experience		
	a) 1 - 2 years	13	32.5%
	b) 2 -5 years	17	42.5%
	c) 5 - 10 years	8	20%
	d) 10+ years	2	5%
4	Monthly income		
	a) Rs.13000 - Rs.18000	16	40%
	b) Rs.19000 - Rs.25000	11	27.5%
	c) Rs.26000 - Rs.30000	7	17.5%
	d) Rs.30000 and above	6	15%
5	Hours of work		
	a) 6	21	52.5%
	b) 8	19	47.5%
	c) 10	0	0%
	d) 12	0	0%
6	Current position		
	a) Emergency room nurse	25	62.5%
	b) Operating room nurse	13	32.5%
	c) ICU nurse	1	2.5%
	d) Ward nurse	1	2.5%

Table 2: Frequency and percentage wise distribution regarding knowledge on occupational health hazard n=40

Level of knowledge	Pre-Test		Post-Test	
	Frequency	Percentage	Frequency	Percentage
Inadequate	6	15%	1	2.5%
Moderately adequate	34	85%	4	10%
Adequate	0	0%	35	87.5%
Total	40	100	40	100



Table 3: Mean, standard deviation and paired 't' test regarding occupational health hazards among staff nurses before and after test.

	Mean	SD	Mean %	Mean difference	t value
Pre-test	12.37	2.17	30.93	10.58	14.56*
Post-test	22.95	4.01	57.37		df = 39

Figure 1: Percentage and frequency distribution of staff nurses according to age.

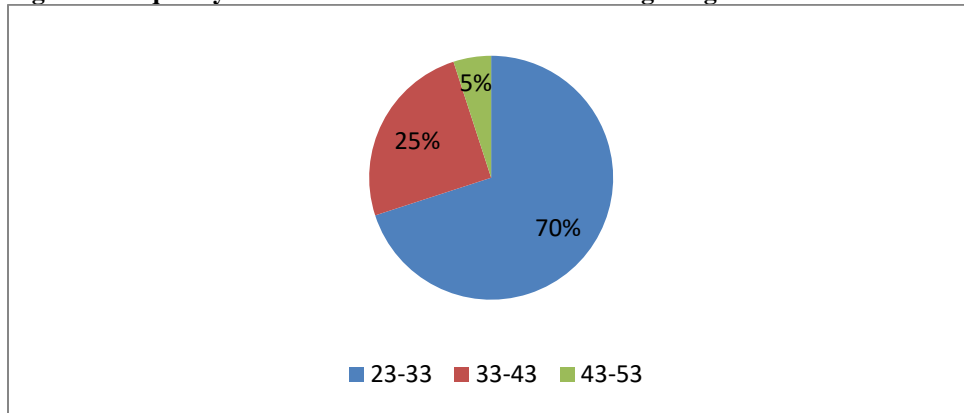


Figure 2: Percentage and frequency distribution of staff nurses according to educational qualifications.

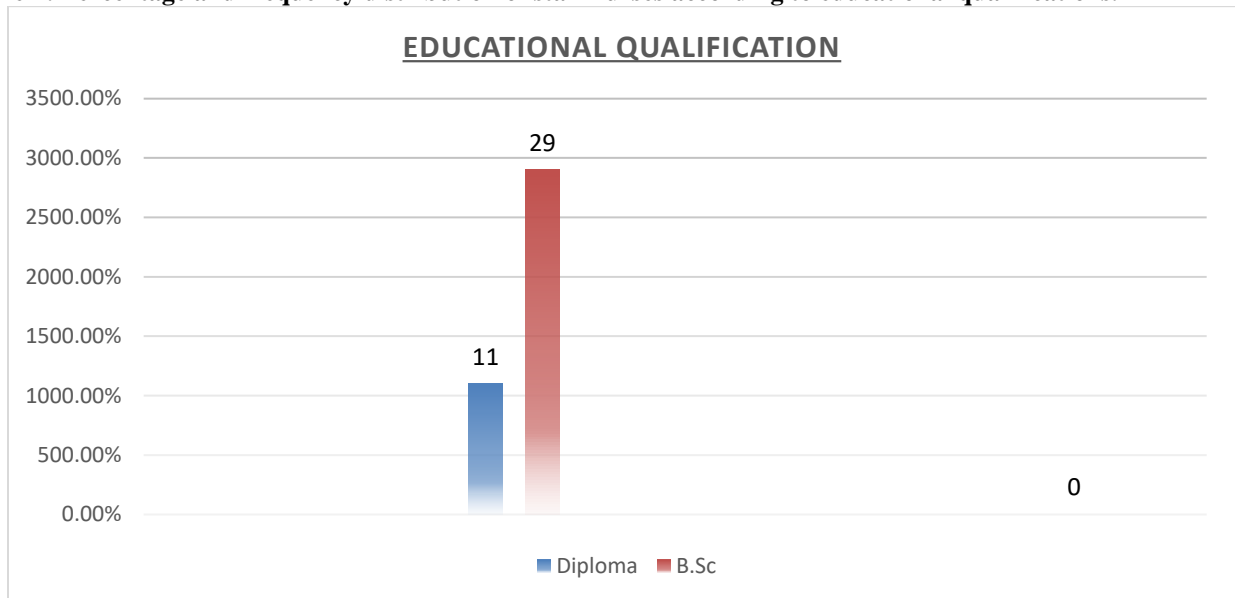
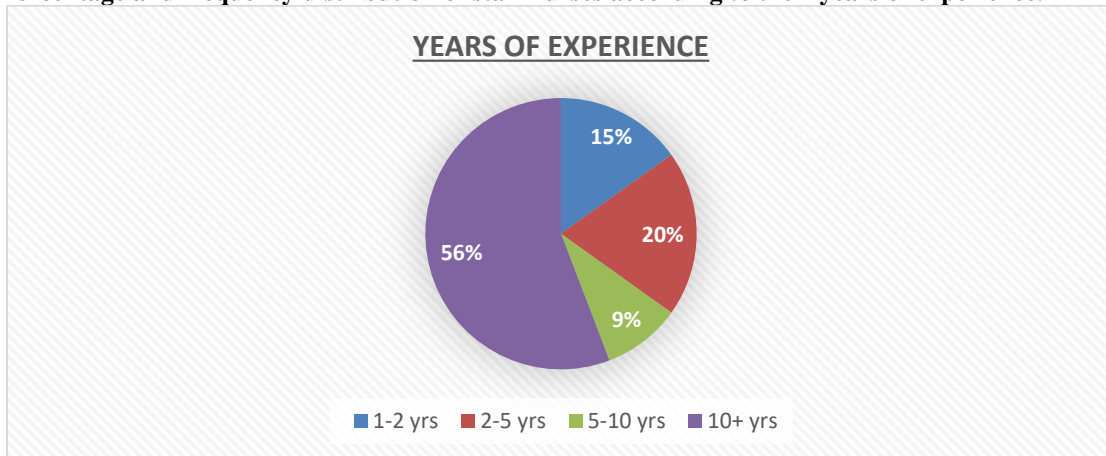
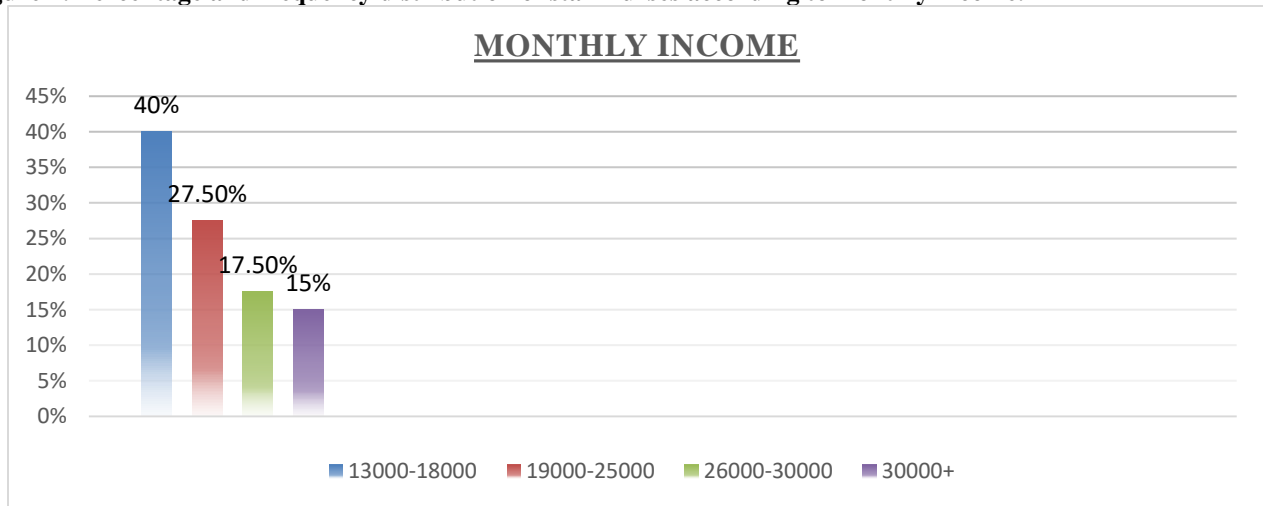
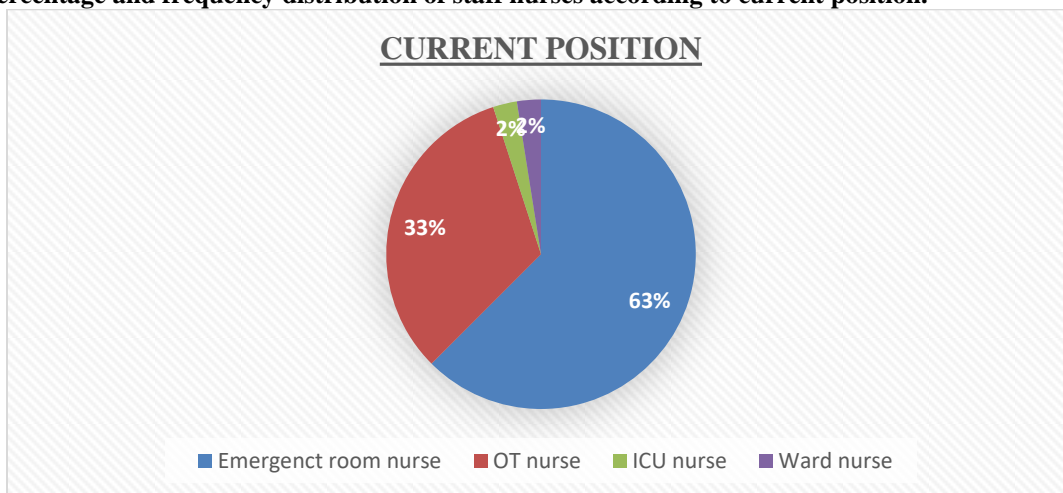


Figure 3: Percentage and frequency distribution of staff nurses according to their years of experience.**Figure 4: Percentage and frequency distribution of staff nurses according to monthly income.****Figure 5: Percentage and frequency distribution of staff nurses according to current position.**

DISCUSSION

Structured teaching programme was found to be an effective educative method for improving the knowledge of staff nurses in the selected hospital regarding occupational health hazards. The findings were similar to other studies, which shown that staff nurses having good knowledge occupational health hazards. In the present study results revealed that obtained [t] value was 14.56, which were found with statistically significant at 0.05 levels.

CONCLUSION

The study concluded that the structured teaching programme on knowledge regarding occupational health hazards among staff nurses in selected hospital carried out was effective in improving the knowledge of staff nurses as evidenced by the significant change between pre-test and post-test knowledge score.

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ETHICAL CLEARANCE:

Obtained from Institutional ethical committee.

