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Effectiveness of Structured Teaching Programme on Knowledge Regarding Universal Precautions and the Prevention of Blood Borne Infections among The Final Year B.Sc. Nursing Students of Selected Nursing Colleges

Gopi D[1*] Savitha G.R[2]

Gopi D. M.Sc.(N), Ph.D., Principal, Abhishek Nursing and Paramedical Institute, Ward No.5, Lokmanya Tilak, Chandauli, Uttar Pradesh. 232104, [2]Savitha G.R. M.Sc.(N), Associate Professor, Abhishek Nursing and Paramedical Institute, Ward No.5, Lokmanya Tilak, Chandauli, Uttar Pradesh - 232104

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ABSTRACT

A Quasi experimental approach was used for this study. Objectives are to assess the level of knowledge regarding universal precautions & the prevention of blood borne infections, effectiveness of structured teaching programme, association between the pretest level of knowledge among final year B.Sc.Nursing students with selected demographic variables. The study was carried out Rajeev College of Nursing, Hassan. The samples comprised of 60 final year B.Sc.Nursing students. Sample was selected by using random sampling techniques. A total of 60 final year B.Sc.Nursing students selected for the study by using structured knowledge questionnaire, the selected samples were given pre test questionnaire followed by Structured teaching programme was given to all students for 45 minutes. Post test was conducted by using knowledge questionnaire after 15 days of Structured Teaching programme for same students. The result of study shows that the post test mean score 20.94 (SD=8.17) was more than the pre test mean score 15.42 (SD=3.35), the obtained mean difference between pre and post test score is 5.52 (SD=4.82), the obtained 't' value is 13.3. So it is significant at the level of 0.05. It was inferred that final year B.Sc.Nursing students knowledge was increased regarding universal precautions and prevention of blood borne infections after structured teaching programme increase in post test score. Therefore structured teaching programme is effective in improving knowledge regarding universal precautions and prevention of blood borne infections among final years B.Sc.Nursing students, also there was significant in income and occupation of parents with the level of knowledge and selected demographic variables.

Keywords: Final year B.Sc.Nursing students, structured teaching programme, Universal precautions, preventions of blood borne infections.

INTRODUCTION

"Prevention is better than cure"

Health is a state of dynamic equilibrium between man and his environment. It is not something that one possesses as a commodity, but rather a way of functioning within one's environment. When this equilibrium is disturbed, it results in illness.[1] Illness can affect many systems of our body and one

Corresponding author: Gopi D. M.Sc.(N), Ph.D., Principal, Abhishek Nursing and Paramedical Institute, Ward No.5, Lokmanya Tilak, Chandauli, Uttar Pradesh. 232104.

E-mail: kavigo1980@gmail.com, savithagr1986@gmail.com

among this is the immune system. It provides protection from invasion of pathogenic agents. Any disturbance to the immune results in infection. It is a painful fact of life and the chief cause to death.[2]

Infection is one of the most important problems in health care services worldwide. It constitutes an important cause of morbidity and mortality associated with clinical, diagnostic and therapeutic procedures. Health care workers are at a high risk of needle stick injuries and blood – borne infections as they perform their clinical activities in the hospital.[3]

Blood – borne infections are the infections that are transmitted through contact with blood and other body fluids. Among these blood – borne infections, Hepatitis B, Hepatitis C and Acquired Immune Deficiency Syndrome are the most important. Transmission of these infections can occur through occupational exposure due to percutaneous injury (needle stick or other sharp injury), mucocutaneous exposure (splash of blood or other body fluids into the eye, mouth and nose), or blood contact with non-intact skin.[4] Individuals at special risk for these infections include intravenous injection drug users, sexually active people with multiple partners, frequent blood transfusions, health care personnel and perinatal transmission during pregnancy, delivery or through breast feeding. These blood borne infections can be prevented by different ways. Among these, universal precautions are regarded as an effective method.[5]

Universal precautions are a set of guidelines that aim to protect Health Care Workers from blood – borne infections.[6] In 1987, the Centre for Disease Control and Prevention proposed the concept of "universal precautions". These precautions apply to all body fluids including blood, secretions, and excretions (except sweat) regardless of whether or not they contain visible blood.[7] They are designed to prevent health care workers from being exposed to potentially infected blood and body fluids through hand washing, utilization of appropriate protective barriers such as gloves, mask, gown, eye wear and safe injection practices.[8]

Worldwide, about three million health care workers receive percutaneous exposure to blood-borne pathogens each year. Further, about 40% of HBV and HCV infections and 2.5% of HIV infections in health care workers are attributable to occupational sharps exposures, which are mainly preventable.[9]

Statement of the problem

"A study to assess the effectiveness of structured teaching programme on knowledge regarding universal precautions and the prevention of blood borne infections among the final year B.Sc. Nursing students of selected nursing colleges at Hassan, Karnataka."

Objectives

1. To assess the level of knowledge regarding universal precautions and the prevention of blood borne infections among the final year B.Sc. Nursing students before and after structured teaching programme.
2. To develop and administer structured teaching programme on the knowledge regarding universal precautions and the prevention of blood borne infections among the final year B.Sc. Nursing students.
3. To evaluate the effectiveness of structured teaching programme on the knowledge regarding universal precautions and the prevention of blood borne infections by comparing pre and post test knowledge scores.
4. To find out the association between pre test level of knowledge with selected socio-demographic variables.

Hypotheses

H_1: There will be a significant difference between the mean pre-test and post-test level of knowledge regarding universal precautions and the prevention of blood borne infections among the final year B.Sc. Nursing students.

H_2: There will be a significant association between the pre-test knowledge scores of the final year B.Sc. Nursing students with their selected socio-demographic variables.

MATERIALS AND METHODS:

(a) Research approach: Experimental approach.

(b) Research design: One group pretest-posttest.

(c) Sample size: 60 samples

(d) Sampling technique: Simple random sampling technique

(e) Tools: Demographic variables, knowledge questionnaire, structured teaching programme

Inclusion criteria

1. Students who are studying in final year B.Sc. Nursing.
2. Students who are present at the time of data collection.
3. Students who are willing to participate in the study.

Exclusion criteria

1. Students who are absent at the time of data collection.
2. Students not willing to participate.

FINDINGS

Table 1 shows that the level of knowledge regarding universal precaution and blood borne infections among final year B.Sc. Nursing students in pretest frequency percentage no one was adequate knowledge, 95% were having moderate knowledge and 5% were having inadequate knowledge, whereas posttest frequency percentage no one was inadequate knowledge, 48.33% were having adequate knowledge and 51.67% were having adequate knowledge regarding universal precautions and blood borne infections.

Table 2 shows that the knowledge scores on universal precautions and the prevention of blood borne infections before and after structured teaching programme. In all aspects the final year B.Sc. Nursing students had improved after intervention. The difference between pre test and post test knowledge score is large and it is significant.

Table 3 shows that the level of knowledge scores on universal precautions and the prevention of blood borne infections among final year B.Sc. Nursing students mean in pre test was 15.42 whereas in posttest was 20.94 and mean difference was 5.52. with standard deviation of 3.35 in pretest, 8.17 in post test, and obtained 't' value was 13.3 it is significant at the level of 0.05 The difference between pre

Table 1: Frequency and Percentage Distribution of Samples according to pre test & Post-Test level of knowledge (n = 60)

Sl. No	*Level of Knowledge*	*Pretest Frequency percentage*	*Posttest frequency Percentage (%)*
1	Inadequate (0 -10)	5.00	0.00
2	Moderate (11 -20)	95.00	48.33
3	Adequate (21 – 30)	00	51.67

Table 2: Comparison of pre test and post test knowledge scores of final year B.Sc. Nursing students in area wise regarding universal precautions and the prevention of blood borne infections. (n=60)

Sl.No	*Knowledge aspects*	*Pre test*		*Post test*		*Mean difference*	*Student 't' test*
		Mean	*SD*	*Mean*	*SD*		
1.	Blood borne infections	5.12	1.43	8.37	2.86	3.25	8.870*
2.	Universal precautions	10.3	1.92	12.57	5.31	2.27	4.432*

*Significant at the level of 0.05

Table 3: Comparison of pre test and post test knowledge scores of final year B.Sc. Nursing students regarding universal precautions and the prevention of blood borne infections. (n = 60)

Test	*Mean*	*Mean Difference*	*Standard Deviation*	*'t' - value*
Pre - Test	15.42	5.52	3.35	13.3*
Post - Test	20.94		8.17	

*Significant at the level of 0.05

test and post test knowledge score is large and it is significant. So it indicates that structured teaching programme is effective in final year B.Sc.Nursing students.

CONCLUSION

The final year B.Sc. Nursing students had gained knowledge about universal precautions and the prevention of blood borne infections. In this study the investigator selected 60 samples according to the inclusion and exclusion criteria and gave structured teaching program on universal precaution and prevention of blood borne infections. They gave free and frank responses regarding universal precautions and the prevention of blood borne infections. From the data analysis and findings of the present study is concluded that there was significant differences between the pre test and post test knowledge scores.

Conflicts of Interest:

Nil

Source of funding:

Self

Ethical clearance:

Study was approved by N.D.R.K. College of Nursing research committee and ethical committee. Permission sought from the concern authorities of the nursing colleges before conducting the research.

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