

A Study to Assess the Effectiveness of Information Education Communication Package on Knowledge and Attitude Regarding Testicular Cancer and Testicular Self Examination among Students in a Selected College at Nagercoil

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Abstract: A study to assess the effectiveness of information education communication (IEC) package on knowledge and attitude regarding testicular cancer (TC) and testicular Self examination (TSE) among students in a selected college at Nagercoil, Tamilnadu, India. The objectives of the study was to assess the knowledge, attitude level regarding TC and TSE before and after IEC package, To find out the effectiveness of IEC package on knowledge and attitude regarding TC and TSE, To find the relationship between knowledge and attitude regarding TC and TSE pre test in post test and to associate the knowledge and attitude towards TC and TSE with the demographic variables in the pre and post test. An evaluative approach with pre experimental design was chosen. Hundred male students studying final year engineering in a selected college at Nagercoil were chosen by using convenience sampling. The conceptual frame work applied for this study was modified from Health Promotion Model of Nola J Pender (1982). In order to collect data a tool was prepared with three parts namely demographic variable, self-administered multiple choice questionnaire to assess the knowledge level, and a 5point Likert scale to assess the attitude. The content validity was obtained, the tool was found to be reliable ($r = 0.8$). After conducting the pilot study on 10 selected samples. The main study was conducted for a period of one month. The collected data were analyzed using the descriptive statistics and inferential statistics. The results showed that in pre test 80 (80%) of the samples had inadequate knowledge regarding testicular cancer and 96 (96%) of the samples had inadequate knowledge regarding testicular self examination. None of them had adequate knowledge regarding TC and TSE. Whereas in post test 48(48%) of the samples had adequate knowledge regarding testicular cancer and 67(67%) of the samples had adequate knowledge regarding testicular self examination. There was a significant increase in the level of knowledge regarding TC and TSE after the IEC package ('P' value < 0.05) and similarly there was a significant change in the level of attitude from unfavorable to favorable attitude regarding TC and TSE ('P' value < 0.05) after IEC package. On association with the demographic variables there was a significant association with basic education of the samples and level of knowledge regarding testicular cancer at $p < 0.05$ level in pre and post test. The findings of the study showed that none of the samples had adequate level of knowledge and favorable attitude towards TC and TSE prior to the IEC package. After the IEC package, majority of them had adequate level of knowledge and favorable attitude. Hence, the teaching programme was effective in imparting knowledge and attitude to college students towards TC and TSE.

Keywords: IEC- information education communication, TC-testicular cancer, TSE- testicular self examination.

I. Introduction

Cancer begins when normal cells begin to change and grows uncontrollably, forming a mass called tumor. A tumor can be benign or malignant. Cancer is one of a major health problem in all over the world. Most of the cancers are treatable if it is detected at an early stage. Testicular cancer remains commonly occurring cancer in young men (aged between 20-45 years) and recent trends suggest an increase throughout the world. Testicular cancer is highly treatable, whereas the late diagnosis can lead to poor outcome. Testicular self examination is a procedure whereby young men can routinely perform and examine their testicles to find any abnormalities thereby TSE enabling them to seek medical advice at an early stage. In the United States, 8400 new cases of testicular cancer predicted to occur in 2009, with 380 deaths attributable to this disease (American Cancer Society 2010). In India, the incidence rate was 20,398 in total population (American Cancer Society 2009). In Chennai, the incident rate was 0.5 in 100000 population. Totally 579 cases reported in Adayar Regional Cancer Centre and 49 deaths occurred. The statistics rate in kanyakumari and Trivandrum is also 0.5 in 100000 populations. 67 cases were reported in Regional Cancer Centre Trivandrum. India (Trivandrum Regional Cancer Centre) Testicular cancer is common form of cancer among young men aged 20-40 years. Approximately 3500 men are diagnosed with testicular cancer each year in worldwide and almost half of the cases are in men <30 years of age. Seminoma and nonseminoma are the two types of testicular cancer. Generally, testicular cancers found early are the most easily treated, and, while it is not universally agreed that

testicular self-examination (TSE) should be encouraged among asymptomatic adolescents and adult males. It is recommended once a month as a strategy for the early detection of testicular cancer. Testicular cancer awareness among the male individuals who are at risk is low, and their knowledge regarding Testicular self examination is poor. To detect the testicular cancer at an early stage, it is important that young men know about the prevalence of Testicular cancer, can identify the most common early symptoms, and are familiar with the performance of Testicular cancer. It has been pointed out that nurses are in an ideal position to promote awareness of TC and TSE to adolescent men. The investigator wanted to assess the college student's knowledge and attitude regarding testicular cancer and testicular self examination as the investigator felt that this was an unknown area to the students, which they need to know. Only fewer studies were reported in the Indian scenario. So the investigator being a male nurse was very keen in taking up this study to educate the college students regarding testicular cancer and testicular self examination to explore this unaware area and thereby creating awareness and motivation to perform TSE which could enable the students to detect abnormalities and seek medical advice at an early stage.

Objectives of the Study

1. To assess the knowledge level and attitude regarding testicular cancer and testicular self examination before and after IEC package.
2. To find out the effectiveness of IEC package on knowledge and attitude regarding testicular cancer and testicular self examination.
3. To associate the knowledge and attitude towards testicular cancer and testicular self examination with the demographic variables in the pre and post test.

II. Methods

An evaluative approach was chosen for the study. The research design selected for the present study is a pre experimental design. More specifically with one group pre test post test design. This study was conducted in St. Xavier's Catholic College of Engineering Nagercoil, Tamilnadu, India. By using Convenience sampling technique 100 male students who fulfilled the inclusion criteria were selected as samples.

Demographic variable consisted of age, basic education, engineering group, religion, area of living, incidence of testicular cancer in the family, source of information about Testicular Cancer.

Data Collection Procedure

The data collection period was 4 weeks. Prior Permission was obtained from the Principal of St.Xavier's Catholic College of Engineering to conduct the study. After a brief introduction, the investigator explained the purpose of the study to the students. The students were assembled in the auditorium on 22.02.2015 and the pre test was conducted at 10.00-11.30am for all the 100 students. The students completed the questionnaire in the presence of the investigator. It took half an hour to finish the tool. The investigator clarified the doubts where asked by the students. A room was arranged with adequate lighting and ventilation, L.C.D projector with projecting facility for using all AV-aids. During IEC package the investigator explained about anatomy and physiology of male reproductive system, incidence, etiology, signs and symptoms, early detection, treatment, prognosis and complication of testicular cancer. At the end of the IEC package doubts of the students were clarified. After the teaching handouts were given to the students, Snacks, Juice were provided to the students. The reinforcement program conducted on the 14th day after the pre test by clarifying the student's doubts. On 15.03.2015 post test was conducted after the duration of twenty one days of pre test.

Data Analysis

Data analysis is the systematic organization of research data and the findings of the results using these data the data obtained were analyzed by using both descriptive and inferential statistics on the basis of the objectives and hypothesis of the study. Demographic data containing sample characteristics were analyzed using frequency and percentage. Descriptive statistical methods such as frequency, percentage, mean, standard deviation were used to assess the level of knowledge and attitude regarding TC and TSE. Inferential statistical methods such as paired' test, was used to assess the effectiveness of IEC package on knowledge and attitude regarding TC and TSE and chi-square test was used to find out the association of knowledge and attitude regarding testicular cancer and testicular self examination with the selected demographic variables.

Ethical Consideration

The research proposal was approved by the Institutional Human Ethics Committee of Meenakshi College of Nursing Chennai, tamilnadu. A written permission was obtained from the principal and ethical committee. The investigator explained about the study to the students and obtained written consent prior to the data collection.

III. Results and Discussion.

The majority of the sample, 83(83%) were in the age group of 20-23 years, 48(48%) were from maths-biology group, In current educational status, 30(30%) belonged to civil branch, Many of the sample 63(63%) followed Christian religion, According to area of living 73(73%) were from urban area, About previous knowledge most of them 79(79%) had no idea about testicular cancer. The findings showed that most of the samples 80(80%), had inadequate knowledge and none of them had adequate knowledge regarding testicular cancer in pre test but in post test 48(48%) had adequate knowledge, 52(52%) had moderate knowledge regarding testicular cancer. About testicular self examination most of the samples 96(96%), had inadequate knowledge and none of them had adequate knowledge regarding testicular self examination in pre test but in post test 67(67%) had adequate knowledge, 33(33%) had moderate knowledge regarding testicular cancer. The findings showed that most of the samples 85(85%), 87 (87%) had unfavourable attitude and none of them had favourable attitude regarding testicular cancer and testicular self examination in pre test but in post test attitude level was improved. Most of the samples 90(90%), 93(93%) had moderately favourable attitude regarding testicular cancer and testicular self examination.

Effectiveness of Information Education Communication Package on knowledge of testicular cancer and testicular self examination was measured. In pre test mean, SD values on knowledge on testicular cancer and testicular self examination are 4.58, 1.52 and 1.90, 0.948 in post test 10.50, 1.749 and 6.86, 0.975 respectively and the 't' value is highly significant at the level of $p < 0.05$ which shows that the IEC package was helped to improve the knowledge on testicular cancer and testicular self examination. Effectiveness of Information Education Communication Package on level of attitude of testicular cancer and testicular self examination was found out. In pre test mean, SD values on knowledge on testicular cancer and testicular self examination are 20.53, 3.109 and 20.86, 2.885 respectively. In post test mean, SD values are 31.31, 2.99 and 31.21, 3.346. The 't' value is highly significant at the level of $p < 0.05$ which shows that the IEC package was helped to improve the attitude on testicular cancer and testicular self examination among study participants.

IV. Figures and Tables

Table: I Frequency and Percentage Distribution of Samples According to the Level of Knowledge Regarding N=100

Knowledge On Testicular Cancer	Pre Test		Post Test	
	n	%	n	%
Inadequate	80	80	-	-
Moderate	20	20	52	52
Adequate	-	-	48	48

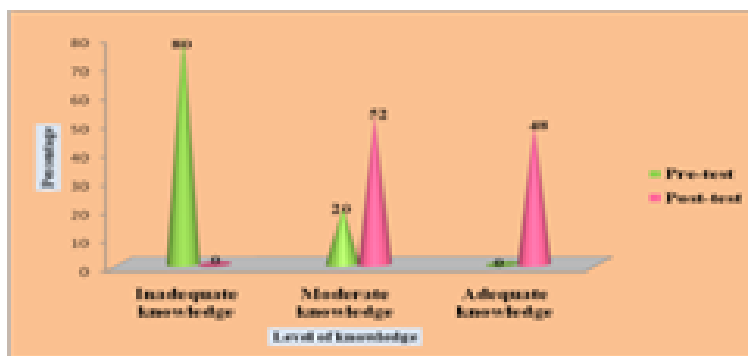


Table I, Figure I showed the frequency and percentage distribution on knowledge regarding testicular cancer in pre and post test. The data revealed that in pre test 80(80%) samples had inadequate knowledge, 20(20%) samples had moderate knowledge and in post test 52 (52%) samples had moderate knowledge 48 (48%) samples had good knowledge regarding testicular cancer.

Table: II Mean, Standard Deviation of Level of Knowledge Regarding Testicular Cancer And Testicular Self Examination And Its Significance N=100

S.No	Aspects	Pretest		Post test		't' value	'p' value
		Mean Score	S.D	Mean Score	S.D		
1.	Knowledge on testicular cancer	4.58	1.52	10.50	1.74	9.237	0.000(S)*
2.	Knowledge on testicular self examination	1.90	0.94	6.86	0.97	0.866	0.000(S)*

*'p' < 0.05(S-significant)

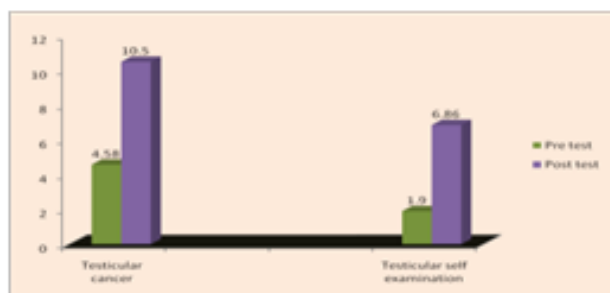


Table II, Figure II represents that mean score and standard deviation on level of knowledge regarding testicular cancer and testicular self examination among college students before and after IEC package and the significance. The mean scores in post test are 10.50, 6.86 respectively SD vales are 1.749, 0.975, and the ‘t’ values are highly significant at $p < 0.05$ level. This data revealed that there was significance difference in the level of knowledge on testicular cancer and testicular self examination in pre and post test. Hence the research hypothesis (H_1) was accepted.

Table: III Mean, Standard Deviation of Level of Attitude Regarding Testicular Cancer and Testicular Self Examination and its Significance **N =100**

S.No	Aspects	Pre test		Post test		‘t’ value	‘p’ value
		Mean Score	S.D	Mean Score	S.D		
1.	Level of attitude on testicular cancer	20.53	3.109	31.31	2.99	2.177	0.000(S)*
2.	Level of attitude on testicular self examination	20.40	2.885	31.21	3.346	0.929	0.000(S)*

*‘p’<0.05(S-significant)

Table III represents that mean score and standard deviation of attitude regarding testicular cancer and testicular self examination among college students before and after information education and communication package and the significance. The mean scores in post test are 31.31, 31.21, SD values are 2.99, 3.346 respectively and t values are highly significant at $p < 0.05$ level. This data revealed that there was significance difference in the level of attitude on testicular cancer and testicular self examination before and after IEC package. Hence the research hypothesis (H_2) was accepted.

V. Conclusion

The study findings revealed that the knowledge and attitude level was very low among the college students. Most of them newly heard about testicular cancer and testicular self examination before the education. After the teaching program, their knowledge level was improved and they had a favourable attitude towards testicular self examination. Most of the students were willing to perform testicular self examination monthly in order to identify abnormalities in testicles. These findings aids the education about testicular cancer and testicular self examination is very useful to the risky age group, as it is a cancer that can be treated if detected at an early stage.

Implications for nursing education

The nurse educator has to encourage the students to conduct a programme for young men regarding testicular cancer and testicular self examination.

1. As a result of increasing number of males in nursing profession these findings can be more helpful to educate reproductive problems to male population.
2. Nurses should have adequate knowledge regarding testicular cancer and testicular self examination.

Implications for nursing practice

1. The finding of the study will help nurses to plan for education to male patients between the age of 15-35 about testicular cancer and testicular self examination.
2. Nurses can easily communicate with the patients admitted in hospital so that they can educate the patients about testicular cancer and testicular self examination.

Implications for nursing research

1. This is an unexplored area in health care. Very less nursing researches have been reported in India. So nursing research works can be conducted on the various aspects of testicular cancer.
2. Nursing research can be done in the areas of public education with more emphasis on identifying testicular cancer.

Recommendations for further research

In the view of the findings and limitations of the present study following recommendations are offered for further research.

1. A study can be conducted to assess the practice of testicular self examination among college students.
2. A study can be done to assess the mass media education on knowledge and attitude regarding testicular cancer and testicular self examination.

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