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Research Article

EFFECTIVENESS OF STRUCTURAL TEACHING PROGRAM ON KNOWLEDGE ABOUT PREVENTION OF HAEMORRHOIDS AMONG BUS DRIVERS IN SELECTED BUS SERVICE AT SRI GANGANAGAR, RAJASTHAN

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ABSTRACT

Introduction: According to National Health Interview Survey, about 3million people in the United States have frequent constipation. Haemorrhoids is believed by right to be one of the most widely spread human sufferings ranking first among disease of the rectum. According to the data of numerous study devoted to this problem, from 2.9% to, 27.9% of population of different countries from haemorrhoids. Most authors agree that men suffer more than women and that it is frequently increased with aging. A men asked for more medical care 1.5 times more often.(Rogazina VA,2002).

Material and Methods: Quantitative evaluative research approach and pre-experimental one group pre-test and post-test design is considered to evaluate the effectiveness of Structural teaching program on prevention of haemorrhoids among sample. The study was conducted on 30 bus drivers. Data was collected from August 2018 to December 2018.A Self-administered structured questionnaire was used to evaluate the effectiveness of Structural teaching program on prevention of haemorrhoids among bus drivers.

Result: The data revealed that, out of 30 sample minority (23%) belonged 45-65 years,11 samples (37%) belonged 35-44 years and 12 samples(40) belonged to 25-34 years. Regarding education, minority (3%) were post graduate, and majority (43%) were high school. About driving hours per day minority (20 %) were 18-21 hours, and majority (30%) were more than 21 hours per day. Among total years of driving experience, minority (7%) belonged less than 3 years, and majority (67%) belonged more than 8 years of driving experience. Related to distance covered on driving per day (Km), minority (3%) were 251-350 km, and majority (63%) were more than 450 km covered. Regarding fluid intake litre per day, minority (3%) belonged more than 5 litre, and majority (50%) belonged 2-3 litre intake of fluids. Related to source of meal during driving hours, minority (37%) were taken meal from house, majority (63%)were taken meal from hotel, knowledge about pre test among 30 samples, majority,(73.3%) had poor knowledge and minority (3.3%) had adequate knowledge regarding prevention of haemorrhoids. In post-test among 30 samples, minority (6.6%) had poor knowledge and majority (56.6%) had moderate knowledge regarding prevention of haemorrhoids. The paired 't' values were found to be highly significant in all areas of knowledge at $p< 0.05$ level of significance. This indicates was significantly effective to improve the knowledge on prevention of haemorrhoids. Hence the research hypotheses H_1 was accepted and H_0 was rejected. Data also reveals that the calculated chi- square value was 22.5 , greater than the table value was 15.51, which indicates that there is a significant association between mean pre-test knowledge score and their education at $P < 0.05$ level of significance. Hence the alternative hypotheses H^3(a) was accepted and statistical hypotheses H^{03} (a) was rejected. The calculated chi- square value was 14.79 , greater than the table value was 12.59, which indicates that there is a significant association between mean pre-test knowledge score and their total years of driving experience at $P < 0.05$ level of significance. Hence the alternative hypotheses H^2 (b) was accepted and statistical hypotheses H^{02}(b) was rejected.

Conclusion: After the detailed analysis of this study it shows that after exposure to planned nursing intervention, the group showed, adequate knowledge and practice was increased. This reveals that Structural teaching program was effective in improving the knowledge of the prevention of haemorrhoids.

INTRODUCTION

"We must turn to nature itself, to the observation of the body in healthand in disease to learn the truth"

--Hippocrates

Haemorrhoids are an occupational hazard of long distance truck drivers and others who jobs require sitting for a long period of time, which leads to too much pressure in the veins of rectum and anus. When these veins are strained and interfere with the normal circulation of blood, they become swollen. These swollen blood vessels found either inside or outside of the muscular sphincter or ring that closes the anus.

Disease of the rectum and anus are common and the prevalence rate in the general population is probably much higher than that seen in clinical practice since most patients with symptoms referable to the anorectum do not seek medical attention.

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Drivers are the more likely to sit on a longer period of time for same position so that pressure is applied in rectal veins. The research study proved that men are mostly affected often and most of the bus drivers were men in India. The driving profession is one of the occupational risk for development of haemorrhoids, most of the long distance drivers working more than 8 hours. Many studies proved long distance driver may develop haemorrhoids. So the researcher felt that conduct a study on knowledge and practice about prevention of haemorrhoids among bus drivers.

Haemorrhoids are an extremely common condition that may embraced people throughout the world. According to National Centre of Health Statistics (1989) of haemorrhoid attacks was a recognized problem in the medical community. This study found that approximately 23 million people experienced haemorrhoids during 1989 alone; overall, 36millilon reported having haemorrhoids in their life time. From 1983 to 1987, the National Digestive Disease clearing house found that 52,000 people had haemorrhoid related disability. Annamma Jacob (2007).

Haemorrhoids are bulges veins that supply blood to the skin and membranes around the anus. A haemorrhoids may develop from various risk factors it includes, pregnancy, frequent diarrhoea, obesity, straining during defecation, 45 to 65 years of age, occupational risk such as, working in computers and call centre, office workers, surgeon, teacher, traffic police, and occupation involved in prolonged sitting like bus drivers , truck drivers, and tailors.

Sitting may be a relaxing way to do one's job but too much time on the chair may also encourage the growth of haemorrhoids. Haemorrhoids are frequently occurring disorders widely. The analysis was based on their 4 data sources from the United States, the National Health Interview survey, the National Hospital Survey, and the National Disease and Therapeutic Index; from England. The results showed that 10 million people in the United States complained of haemorrhoid, corresponding to a prevalence rate of 4.4%. A peak in prevalence was noted from 45 to 65 years. Cazalla Foncueva AM, Calero Perea and Luque R (2003)

Gillies (2005), Conducted a study in Japan to prove that working factors in truck drivers are shift work, working posture, long working time, limited time off, long driving distance, narrow working space, sleeping in the truck, and sitting posture may develop haemorrhoids in truck drivers.

Objectives of study

1. To prepare and validate the structural teaching program on prevention haemorrhoids for bus drivers. 2. To compare the mean pre-test and mean post- test knowledge score on prevention of haemorrhoids among samples.3. To find the association between mean pre-test knowledge score on prevention of haemorrhoids among samples with their selected demographic variables (education and total years of driving experience). 4. To evaluate the effectiveness of planned teaching programme.

MATERIAL AND METHODS

Quantitative evaluative research approach and pre-experimental one group pre-test and post-test design is considered to evaluate the effectiveness of Structural teaching program on prevention of haemorrhoids among sample. The study was conducted on 30 bus drivers. Samples were selected by simple random sampling by purposive technique. Data was collected from August 2018 to December 2018. A Self-administered structured questionnaire was used to evaluate the effectiveness of Structural teaching program on prevention of haemorrhoids among bus drivers.

In Phase I of the study, distribution of samples according to frequency and percentage. The selected variables are (i) age in years (ii) education (iii) driving hours per day (iv) Total years of driving experience (v) distance covered on driving per day (km), (vi) fluid intake litre per day, (vii) source of meal during driving hours.

In Phase II of the study an evaluative approach was used to measure the effectiveness of Structural teaching program on prevention of haemorrhoids among bus drivers. The research design used was pre-experimental one group pre-test and post-test design is considered to evaluate the effectiveness of Structural teaching program on prevention of haemorrhoids among sample A Self-administered structured questionnaire was used to evaluate effectiveness of Structural teaching program on prevention of haemorrhoids among bus drivers.

Part I – Baseline Performa It consisted of 7 items that included items such as (i) age in years (ii) education (iii) driving hours per day (iv) Total years of driving experience (v) distance covered on driving per day (km), (vi) fluid intake litre per day, (vii) source of meal during driving hours.

Part II –Self structured questionnaire related to knowledge on prevention of haemorrhoids. It consist of 25 multiple choice items in 6 areas of knowledge which is given below in detail. The first 4 items (1-4) are related to anatomy of rectum and anal canal, next 3 items (5-7) related to haemorrhoids, next 4 items (8-11) related to causes, next 4 items (12-15)related to signs and symptoms, next 2 items (16-17) related to diagnostic measures, and last session (18-25) related to prevention of haemorrhoids**.**

Part III – Structured Teaching Program

The content validity of questionnaire was established by experts. The experts were selected on the basis of their expertise, experience and interest in the problem being studied. They were from different specialties i.e. Medical Surgical Nursing, Education, Research, and Statistics. They were requested to give their opinions on the appropriateness and relevance of the items in the tool. Necessary modifications were made as per the expert's advice. The reliability of the questionnaire was established by Split Half method and was found to be r-0.84. A final study was carried out on 30 samples. Data was collected from August 2018 to December 2018. The sample for the study comprised of bus Drivers, who met the designated criteria were selected through simple random purposive sampling technique. Objectives of study was discussed and obtained consent for participation in study. Self-structured self-administered questionnaire was used to collect data. Based on the objective and the hypothesis the data was analyzed by using various statistical tests i.e. percentage, mean, and standard deviation and t test.

Statistical methods

Data was analysed by using the frequency distribution, standard deviation, Chi-square test was used to find association between the selected demographic variables with the mean pre-test knowledge score on prevention of haemorrhoids.

RESULTS

Section – I: Description of demographic variables of the sample

Findings of section I show that out of total 30 samples distribution in table 1 shows that minority (23%) belong to 45-65 years, and majority 12 samples (40%) belonged to 25-34 years. In concerned to education, minority (3%) were post graduate, majority (43%) were high school. About driving hours per day minority (20%) were 18-21 hours, and majority (30%) were more than 21 hours per day. Among total years of driving experience, minority (7%) belonged less than 3 years, and majority (67%) belonged more than 8 years of driving experience. With regard to distance covered on driving per day (Km), minority (3%) were 251-350 km, and majority (63%) were more than 450 km covered. Regarding fluid intake litre per day, minority (3%) belong more than 5 litre, and majority (50%) belong 2-3 litre intake of fluids. Related to source of meal during driving hours, minority (37%) were taken meal from house, and majority (63%)were taken meal from hotel.

N=30

Sr	Demographic variables	Freq	(%)
1	**Age in Years**		
	a) 25-34	12	40
	b) 35-44	11	37
	c) 45-65	07	23
2	**Education**		
	a.Primary school	10	33
	b.High school	13	43
	c.Higher secondary school	04	13
	d.Graduate	02	07
	e.Post graduate	01	03
3	**Driving hours per day**		
	8-12	08	27
	1-13-17	07	23
	2-18-21	06	20
	3-More than 21	09	30
4	**Total years of driving of driving experience**		
	1.Less than 3	02	07
	2.3-5	03	10
	3.6-8	05	17
	4.More than 8	20	67
5	**Distance covered on driving per day (km)**		
	a)150-250	02	07
	b)251-350	01	03
	c)351-450	08	27
	d)More than 450	19	63
6	**Fluid intake litre per day**		
	a.Less than 2	08	27
	b.2-3	15	50
	c.3-5	06	20
	d.More than 5	01	03
7	**Source of meal during driving hours**		
	a.House	11	37
	b.Hotel	19	63

Section-II (a): Total percentage distribution of samples by their mean pre-test and mean post-test knowledge score on prevention of haemorrhoids among the sample.

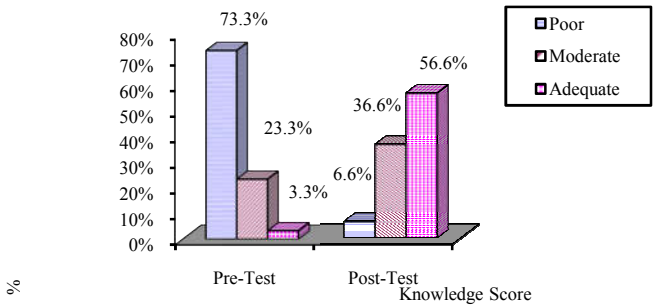

Fig.1. Figure 4.1 shows that knowledge of prevention of haemorrhoids in pre-test among samples(73.3%) had poor knowledge,(23.3%) had moderate knowledge, and (3.3%) had adequate knowledge regarding prevention of haemorrhoids. In post-test among samples (6.6%) had poor knowledge, (56.6%) had moderate knowledge, and (36.6%) had adequate knowledge regarding prevention of haemorrhoids.

Section II (b):Mean, standard deviation, range, paired mean difference, paired't' value, mean score percentage of area wise and overall mean pre -test and mean post -test knowledge scores on prevention of haemorrhoids among the sample.

The table 2 reveals that the maximum possible score for the anatomy was 4 haemorrhoid was3,causes was 4,clinical manifestation was 4, diagnostic evaluation was 2, preventive measures was 8, and for the overall score was 25. The statistical significance assessed by comparing the mean pre-test and mean post-test knowledge scores. The paired't' values were found to be highly significant in all areas of knowledge at $p< 0.05$ level of significance. This indicates was significantly effective to improve the knowledge on prevention of haemorrhoids. Hence the research hypotheses H_1 was accepted and H_0 was rejected.

Section –III: Association between the mean pre -test knowledge score on prevention of haemorrhoids among sample with their selected demographic variables,

This section deals with association between the mean pre-test knowledge score on prevention of haemorrhoids among samples with their selected demographic variables. It was associated by using chi- square test. The cross tabulation analysis was employed effectively and the result of chi- square analysis was observed.

Sr	Area of Knowledge	Max. score	Pre-test score			Mean score (%)	Posttest score			Mean score %	Paired mean difference	Paired 't' value
			Mean	SD	Range		Mean	SD	Range			
1	Anatomy	4	0.86	0.78	0-3	21.5	2.16	0.78	0-4	54	1.36	3.11*
2	r/t Haemorrhoids	3	1.46	0.60	0-3	48.6	2.26	0.63	1-3	75.3	0.86	6.81*
3	Causes	4	2.83	0.93	1-4	70.75	3.2	0.75	1-4	80	0.56	4.64*
4	S/S	4	1.6	1.04	0-3	40	2.63	0.85	1-4	65.7	1.1	5.8*
5	Diagnosis	2	0.53	0.68	0-2	26.5	0.67	0.61	1-2	33.5	0.8	7.0*
6	Prevention	8	3.2	1.64	0-7	40	6.03	1.3	2-	75.3	2.86	11.0*
	Overall	**25**	**10.48**	**5.67**	**1.22**	**41.92**	**16.95**	**4.94**	**6-25**	**67.8**	**7.54**	**38.36**

* Significant $p< 0.05$ level: Table value =2.045 df=29

Section II (b): Compare the mean pre - test and mean post - test knowledge score on prevention of heamorrhoids.

Data presented table 3 reveals that the calculated chi- square value was 22.5 , greater than the table value was 15.51, which indicates that there is a significant association between mean pre-test knowledge score and their education at $P < 0.05$ level

of significance. Hence the alternative hypotheses $H^{3(a)}$ was accepted and statistical hypotheses $H^{03(a)}$ was rejected. And calculated chi- square value was 14.79 , greater than the table value was 12.59, which indicates that there is a significant association between mean pre-test knowledge score and their total years of driving experience at $P < 0.05$ level of significance. Hence the alternative hypotheses $H^{2(b)}$ was accepted and statistical hypotheses $H^{02(b)}$ was rejected.

N=30

S. NO	Demographic variables	Chi-square value	df	Table value
1	Education	22.5	8	15.51 *
2	Total years of driving experience	14.79	6	12.59*

*** Significant p< 0.05 level**

DISCUSSION

The study is intended to evaluate the effectiveness of Structural teaching program on prevention of haemorrhoids among sample. The study was pre experimental in nature. The samples consisted of 30bus drivers.

Structural teaching program was prepared based on review of literature. The aim of the study to promote knowledge about prevention of haemorrhoids among bus drivers. After the structural teaching program, the post-test was conducted by using self-administered structured questionnaire for knowledge assessment. Jayanthi NV, Dabke HV (2006), conducted a study on effectiveness of self-instructional module on hepatitis among high school teachers in selected high schools of Bangalore. The results showed that knowledge of high school teachers regarding hepatitis was less than 50% before the administration of self-instructional module that had increased significantly.

In present study pre-test knowledge score was inadequate i.e. 73.3% were poor, 23.3% were moderate and 3.3% had adequate knowledge regarding prevention of haemorrhoids among bus drivers whereas in post-test score was 6.6% poor, 36.6% moderate knowledge and 56.6% of them had adequate knowledge regarding prevention of haemorrhoids among bus drivers. Iyer P.W. and Hand N.C. (1991), conducted a study to determine the knowledge and practice of risk factors regarding coronary artery disease among 150 patients in Christian Medical College. The study findings showed the majority of patients were found to be adequate knowledge in relation to smoking and alcoholism (95%) , medication regularity (57%) and those who came for follow up (82%) only,(57%) of patients were adequately following the dietary restriction, majority of patients (77.53%) did not practice exercise, and (20%) of patients had habit of sharing their emotional problem with others.

Here association was analysed by using chi-square between the mean pre- test knowledge score on prevention of haemorrhoids among the samples with their selected demographic variables. The statistical findings of association pre-test knowledge score among the sample and their education was found to be statistically significant. (x^2 value – 22.5 and df – 8 at $p < 0.05$ level).It is evidenced that there is a significant association between the pre-test knowledge and their education and their total years of driving experience was found to be statistically significant. (x^2 value – 14.79 and df –6 at $p < 0.05$ level).it is evidenced that there is a significant association between the pre-test knowledge and their total years of driving experience. Kaban J. and Best J. (1995), questionnaire study was conducted 72 patients with thrombosed external haemorrhoids and 76 patients without thrombosed external haemorrhoids with other diagnoses, the study to determine the relationship between thrombosed external haemorrhoids and demographic variables. Result of the study was significant association between the development of haemorrhoids with their age group and excessive physical effort. Ingram P, Lavery I (2007), conducted a case control study to determine which diagnose with the occurrence of haemorrhoid. Researcher analysed 96,314 individual patients with haemorrhoid and the same number of control were identified. The result of the study of haemorrhoids were confirmed. Study concluded that 95% associated with diarrhoea, 95% associated with constipation and 95% associated with anorectal disease with haemorrhoids suggest that on increased tone of anal sphincter constitutes a common pathologic mechanism for the development of haemorrhoids.

CONCLUSIONS

The present study was to evaluate the effectiveness of structural teaching programme on prevention of haemorrhoids among bus drivers, A pre-experimental one group pre-test and post-test research design was used to assess the knowledge about prevention of haemorrhoids. A non-probability convenient technique was used. The total sample size of the study was 30. The Callista Roy's Adaptation model was chosen for conceptual frame work for the study. The tools used in this study was self-administered structured questionnaire used to assess the knowledge on prevention of haemorrhoids. The tool was validated by 5 experts. The reliability of the tool was established by Split Half method and was found to be r-0.84. After the pilot study, followed by the actual data collection done. On the Day-1 the pre-test was done by using self-administered structured questionnaire to assess the knowledge on prevention of haemorrhoids. On the same Day the structural teaching program done to the samples. After the structural teaching program all the samples were informed to come for review on 8th Day and post test was conducted. The data were analysed by the use of descriptive and inferential statistical and interpreted in the terms of objectives and hypothesis of the study. The analysis shows that majority 40% were in the age group of 25-34 years, majority 43% of samples was completed High school education, majority 30% of samples had more than 21 hours of driving per day, majority 67% of samples had more than 8 years of driving experience, majority 63% of samples covered more than 450 Km per day, majority 50% of samples drunk 2-3 litre of fluid per day, majority 63% of samples taking food from the source of hotel during driving hours, majority The mean pre-test score percentage of knowledge was 41.92% and it is increased up to 67.8% in post-test. In post-test with $t_{29} = 38.36$, which is more than the table value of $P<0.05$ level of significance, There was significance association between the mean pre-test score and their education and the Chi-Square value ($\chi 2 = 22.5$) and significance association also found between the mean pre-test score and their total years of driving experience and the Chi-Square value ($\chi 2 = 14.79$).

Implication & Recommendation

The findings of the study have implications related to nursing administration, nursing practice, nursing education and nursing research which provides the better way towards the structural teaching programme on prevention of haemorrhoids among bus drivers,

- Nursing administration should take initiation in creating policies and plans in providing education to the staff nurses. Hence the nursing administrators should assure the patients about the need to receive the care effectively by providing education to nursing personnel and also conduct awareness programme to the staff nurses regarding structural teaching programme on prevention of haemorrhoids.
- The important function of the nurse to promote health, to prevent illness, to restore health and to alleviate sufferings. The most important role of the nurse is to provide awareness to the patient regarding the prevention of haemorrhoids. The health personnel have the added responsibility in educating the public in regard to preventive measures of haemorrhoid. Showing this kind of structural teaching program of prevention of haemorrhoid can be helpful to the patients regarding awareness about the risk factors, causes, signs and symptoms and preventive measures of haemorrhoid, thus it may avoid complication in future. Nurses are personnel who are spending most of the duty time with the patient. This shows better opportunity for them to teach about disease and its preventive measures using this king of teaching will promote the knowledge and practice level of the patients.
- The nursing curriculum should emphasis on imparting health education program on preventive measures of haemorrhoids by using structural teaching program. Nursing students should be encouraged to prepare structural teaching program. The effectiveness of structural teaching program is much useful to enhance the knowledge level of patients with haemorrhoids disease and can be used by the students in practice. Every students should be encouraged in providing information the clients and the community for which they have to be prepared properly.
- Nursing administration should take initiation in creating policies and plans in providing education to the staff nurses. Hence a nursing administrator should assure the patients about the needs to receive the care effectively by providing education to the nursing personnel and conduct awareness program to public at hospital and at community settings by distributing planned nursing intervention patients with haemorrhoids which enable the people to prevent further occurrence of haemorrhoids.
- Research is a strong foundation for on evidence based nursing practice. Hence nursing staff and students should be encouraged to conduct research studies need to be conducted in change in attitude and promote good practice in prevention of haemorrhoids. Also new research methods of education like preventive measures on its quality, simplicity and cost effectiveness is needed.

Keeping in view the findings of the study, the following recommendations are made:

- A similar study can be conducted on large samples in different settings
- A comparative study can be conducted on large samples in different settings
- A similar study can conducted in different occupational risk for haemorrhoids
- A similar study can be conducted to evaluate the practice on prevention of haemorrhoids.

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