Effect of Structured Teaching Programme on Levels of Knowledge regarding Narcotic Policy among Staff Nurses in Selected Hospitals of Bangalore

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Abstract

This study aims to determine the level of knowledge among staff nurses on Narcotic policy and ascertain their knowledge by structured teaching programme with pre-test, post-test method. The study attempted to assess the knowledge on Narcotic policy among staff nurses before and after structured teaching programme; evaluate the effectiveness of structured teaching programme on narcotic policy among staff nurses; and to find out the association between post level of knowledge among staff nurses on narcotic policy and selected demographic variables. A quasi-experimental study was carried out with 60 staff nurses from BGS & Jeevani Sarvodaya Hospital, Bangalore. A structured knowledge questionnaire was used to evaluate the knowledge level on narcotic policy before & after an STP. Data were analysed with chi-square and t test. The result showed that there was a significant difference between pre-test and post-test knowledge scores as assessed by the paired t-test value at 36.766 (HS p=0.001). There was significant association between knowledge and the selected demographic variables (age, area of experience and years of experience ($p \leq 0.05$). Thus for this study one can conclude that STP could be an effective strategy to improve the knowledge of staff nurses on narcotic policy.

Pain is the most common reason for seeking frequent medical care. Narcotic analgesics are the most promising drug for pain relief since ancient times. Narcotics were used therapeutically in ancient cultures to induce calm, relieve pain, and recreationally to induce euphoric dream states. Today, physicians prescribe narcotics drugs for pain relief, but treating the patients with narcotics special caution has to be taken. There are many rising incidences of narcotic abuse and addiction among patients as well as with the health care professionals. The main cause for narcotic abuse and addiction is the lack of strict adherence of narcotic policy in the hospital settings. Therefore, it was decided to study the knowledge of narcotic policy among staff nurses and make them aware with the importance, use, and administration of narcotic policy in hospitals.

The knowledge of staff nurses regarding narcotic policy and the effectiveness of STP (Structured Teaching Programme) was identified and categorised under the following heads:

1. Nurses' knowledge on narcotics
2. Incidence & prevalence of narcotic addiction
3. Narcotic policy
4. Effectiveness of STP

Nurses' knowledge on narcotics

A study was conducted in NIMHANS India, to determine the extent to which nurses are able to correctly identify drugs as narcotics and to ascertain their perception of the addiction potential of opiates when used for pain management. A questionnaire was administered to 86 nurses who attended palliative care workshops in India. Only morphine (95%), heroin (71%) and codeine (75%) were correctly identified as narcotics by the majority of participants. Imipramine (34%), diazepam (20%) and phenobarbitone (39%) were wrongly classified as narcotics by many nurses. Dextropropoxyphene (11%) pentazocine (21%), buprenorphine (15%) were correctly classified as narcotics by fewer than half the participants. Only 14 percent knew that that the frequency of psychological dependence due to use of morphine for cancer pain was less than 1 percent.

The review indicates that the prevalence of addiction varied from 0 upto 50 percent in chronic non-malignant pain patients, and from 0 to 7.7 percent in cancer patients. The risk of addiction has to be con-

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sidered when initiating long-term opioid treatment as addiction may result in poor pain control.

A study conducted among 50 nurses and as many paramedical staff working in the Rajendra Hospital and Medical College, Patiala, was studied for the prevalence of drug addiction by means of a structured, self-report questionnaire. The life-time prevalence of drug use among nurses was comparatively low – 55 percent, compared to 81 percent among the paramedical staff. But there were a few dependent users of opium and narcotics in this group

A study was conducted to explore the effects of an education intervention on nurses' knowledge, attitudes, and practice in pain assessment and management over 3 months. The education intervention programme was designed to change knowledge and influence the attitudes of registered nurses through a values clarification process using a conceptual framework based on a theory of reeducation.

Objectives

The study had the following objectives:

1. To assess the knowledge on narcotic policy among staff nurses before and after structured teaching programme.
2. To evaluate the effectiveness of structured teaching programme on narcotic policy among staff nurses.
3. To find out the association between post level of knowledge among staff nurses on narcotic policy and selected demographic variables.

Methodology

The research design used in the study was quasi experimental design. The settings were BGS & Sarvodaya Hospitals, Bangalore. The study sample consisted of 60 staff nurses: GNM 43, BSc (N) 15, PcBSc (N) 2. Out of these 44 participants were females and the remaining 16 were males. In the study, simple random sampling technique was adopted for selection of samples.

Inclusion criteria: Staff nurses who were:

1. Availability at the time of data collection
2. Willingness to participate in the study

Exclusion criteria: Staff nurses who have already attended classes or workshops on narcotic policy.

Data collection tools: A self-administered questionnaire used to assess the knowledge level of staff nurses.

Description of the tool

The tool was organised in to 2 parts.

1. Part 1 dealt with demographic data of the samples. The demographic variables had a total of 7 items. It included age, gender, educational qualification, area of experience, years of experience any drug addiction cases, and any problem with handling drugs, etc.
2. Part 2 consisted of 40 items on knowledge questionnaire. It had 40 items on narcotic policy. The aspects covered in the knowledge questionnaire were:

   General aspects of narcotics-15 items

   Narcotic addiction-8 items

   Narcotic policy-17 items

The reliability of the whole test was then estimated by Spearman's brown prophecy formula. The reliability of the knowledge questionnaire was found to be 0.910, hence the tool was found to be highly reliable.

Ethical Implications

The proposed study was conducted after the approval of Dissertation Committee of the college. Permission was obtained from the Head of the Institution of BGS & Sarvodaya Hospital. An informed consent was obtained from staff nurses before data collection. Assurance was given to the participants regarding the confidentiality of collected data.

Results

Demographic variables of staff nurses:

Table 1 describes the demographic characteristics of the samples. Regarding age of the respondents, 46 (76.7%) were in the age group of 21-25 years and 14 (23.3%) participants were in the age group of 26-30 years. It also reveals that 16 participants (26.7%) were males and remaining participants 44 (73.3%) were females. Regarding the educational qualification 43 (71.7%) participants were GNM, 15 (25%) participants were BSc (N) and 2 participants (3.3%) PcBSc (N). Most of the participants 46 (76.7%) were having 1-3 years of experience and remaining 14 (23.3%) of them were having 4-7 years of experience. In the area of experience majority of the participants, 21 (35%) were working in medical ward, 11 (18.3%) from MICU, 10 (16.7%) from surgical ward, 9 (15%) from OT, 7 (11.7%) from emergency and 2 (3.3%) were working in SICU. All 60 participants (100%) specified nothing regarding problems with drug addiction cases and any difficulties with handling drugs.

Table 2 shows that during pre-test out of 60 participants 48 (80%) had inadequate knowledge and only 12 (20%) had moderately adequate knowledge. Whereas in post-test 55 of the participants (91.7%)

Table 1: Classification of demographic characteristics of respondents (n=60)

Parameters	Category	Respondents	
		Number	Percent
Age Group (years)	21-25	46	76.7
	26-30	14	23.3
Gender	Male	16	26.7
	Female	44	73.3
Educational Qualification	GNM	43	71.7
	BSc (N)	15	25.0
	Pc BSc (N)	2	3.3
Years of experience	1-3	46	76.7
	4-7	14	23.3
Area of experience	Medical ward	21	35.0
	Surgical ward	10	16.7
	Operation Theatre	9	15.0
	Emergency	7	11.7
	MICU	11	18.3
	SICU	2	3.3
Difficulty with handling drugs	No	60	100
Any drug addiction cases	No	60	100

Table 2: Overall level of knowledge scores in pre-test & post-test (n=60)

Categories	Pre-test		Post-test	
	Scores	Percent	Scores	Percent
Inadequate	48	80	-	-
Moderately adequate	12	20	5	8.3
Adequate	-	-	55	91.7
Combined knowledge score	60	100	60	100

had adequate knowledge scores and only 5 (8.3%) had moderately adequate knowledge scores.

It is observed from this study (Table 3) that in the general aspect of narcotics Mean ± SD during pre-test was found to be 5.18 ± 1.74 with a mean percentage of 34.56 whereas with a mean percentage of during post-test it was 12.05 ± 0.91 and the mean difference was 6.87 with a mean percentage of 80.33. In the aspect of narcotic addiction Mean ± SD during pre-test was found to be 2.77 ± 0.96 with a mean percentage of 34.58 whereas during post-test it was 6.25 ± 0.54 and the mean difference was 3.48 with a mean percentage of 78.13. In the aspect of narcotic policy, Mean ± SD during pre-test it is found to be 5.80 ± 2.00 with a mean percentage of 34.12, whereas during post-test it was 14.55 ± 0.81 and the mean difference was 8.75 with a mean percentage of 85.59. The total mean knowledge scores in pre-test were 13.75 with a mean percentage of 34.38 and increased to a mean of 32.85 with a mean difference of 19.1 and mean percentage of 82.13. So it was evident that mean post-test knowledge scores of participants are significantly higher than their mean pre-test knowledge scores. The paired t-test value was 36.766 which was highly significant at 0.001 level ($p \leq 0.001$). Hence the research hypothesis was accepted.

It is evident from the Table 4 that chi-square value computed for the gender and educational qualification with the level of knowledge is statistically not significant which indicates that there is no association between the knowledge scores with these demographic variables. Whereas the chi-square value computed for the age, years of experience and area of experience was with the level of knowledge and statistically significant at 0.005 level of significance ($p \leq 0.05$). This indicates that there was an association between the knowledge scores and these demographic variables.

Discussion

The provision of standardised care is rendered by internationally accepted policies. Narcotic policy regulates and controls use of narcotic drugs. In every hospital settings narcotic policy is vital to safeguard patients and health professionals from narcotic misuse and addiction.

In the present study the pre-test out of 60 participants 48 (80%) had inadequate knowledge and only 12 (20%) had moderately adequate knowledge. Whereas in post-test 55 of the participants (91.7%) had adequate knowledge scores and only 5 (8.3%) had moderately adequate knowledge scores. It is evident that the chi-square value computed for the Gender and educational qualification with level of knowledge is statistically not significant which indicates that

Table 3: Mean, mean percentage, SD and t-value of pre-test and post-test scores (n=60)

Area wise knowledge scores of staff nurses	Pre-test			Post-test			Mean difference	t-value	Inference
	Mean	Mean (%)	SD	Mean	Mean (%)	SD			
General aspects of Narcotics	5.18	34.56	1.74	12.05	80.33	0.91	6.87	28.130	HS**
Narcotic addiction	2.77	34.58	0.96	6.25	78.13	0.54	3.48	25.710	HS**
Narcotic policy	5.80	34.12	2.00	14.55	85.59	0.81	8.75	34.088	HS**
Combined knowledge score	13.75	34.38	4.12	32.85	82.13	1.51	19.1	36.766	HS**

HS: highly significant; p≤0.01%

Table 4: Association between selected demographic variables and the overall post-knowledge scores on narcotic policy (n=60)

Demographic variables	Categories	Combined post-test knowledge score		Chi-square value	df	Table value	Inference
		Below median	Above median				
Age (years)	21-25	38	8	Fisher's exact probabilities = 0.001			HS
	26-30	2	12				
Gender	Male	9	7	1.065	1	3.841	NS
	Female	31	13				
Educational qualification	GNM	29	14	0.041	1	3.841	NS
	PC BSc / BSc (N)	11	6				
Years of experience	1-3	38	8	Fisher's exact probabilities = 0.001			HS
	4-7	2	12				
Area of experience	Medical ward	17	4	9.618	2	5.991	HS
	Surgical ward/ OT	15	4				
	Emergency/ MICU/ SICU	8	12				

Note:

1. The responses of some of the demographic variables have been merged as the expected frequencies was less than or equal to 5.
2. NS: Not significant (p>0.05); S: significant (pd" 0.05);
3. Critical value for 1 degree of freedom at 5% level of significance = 3.841
4. Critical value for 2 degree of freedom at 5% level of significance = 5.991

there is no association between these variables with knowledge. Whereas the age, area of experience and years of experience have got association with knowledge level at level of significance $p \leq 0.001$ and $p \leq 0.05$.

A descriptive, exploratory study was conducted to explore the effects of an education intervention on nurses' knowledge, attitudes, and practice in pain assessment and management over 3 months. The education intervention programme was designed to change knowledge and influence the attitudes of registered nurses through a values clarification process using a conceptual framework based on a theory of reeducation. Participants in this study were 53 nurses from six oncology units. Data were collected on their knowledge, attitudes, documentation practices, and analgesic choices in defined patient situations. The intervention was effective in changing the knowledge, attitudes, and behaviour of nurses in the study.

The results of this study indicate that there was significant difference between pre-test and post-test knowledge level. The structured teaching programme improved the knowledge level of participants. Age, area of experience and years of experience are the other factors that contributed to higher knowledge scores.

Nursing Implications:

This study showed that staff nurses need to be more aware in the knowledge aspect of narcotic policy and its administration.

Recommendations

- ❒ Comparative studies can be done in Government and private hospital settings
- ❒ A follow up study can be conducted to evaluate the skills after administering the teaching programme
- ❒ A study can be conducted to explore the different hospital policies on narcotics.

Conclusion

The knowledge of staff nurses regarding narcotic policy was inadequate as assessed during the pre-test (the score was 48 and moderately adequate score was 12). The knowledge considerably improved during post-test and there were 55 adequate scores and only 5 moderately adequate scores with structured teaching programme regarding narcotic policy for staff nurses; thus it was effective in improving the knowledge. There was significant association between the pre-test knowledge scores and selected demographic variables such as area of experience and years of experience whereas there was no significant association between the gender and educational qualification. It is suggested that the practice of narcotic policy can be assessed with larger samples in different settings.

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