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Effectiveness of training program on Individualized Communication Protocol regarding communication with comatose patient on knowledge and practice of nurses working in selected Intensive Care Unit at a tertiary care hospital

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***Abstract*---**Introduction: Effective communication is a keystone of the nurse patient relationship. Communicating with comatose patients is always challenging for healthcare professionals. In order to provide quality nursing care, we need to communicate with patients whether conscious or unconscious. This study was aimed to evaluate the effectiveness of training program on knowledge and practice of nurses working in ICUs regarding Individualized Communication Protocol with comatose patients. Methods: A quantitative pre-experimental research approach was used with one group Pre-Test- Post-Test-only Design. Total enumeration sampling technique was used to select 171 Staff Nurses from the selected ICUs. A structured questionnaire containing knowledge and skill items were used to assess knowledge and practice related to communication. Result revealed that there was significant improvement in knowledge post test score (20.09±3.21) after intervention as compared to pretest scores (13.23±2.96 with p-value of 0.0001. Data also represented significant improvement in practice posttest score (30.96±4.46) as compared to pretest score

(6.75±1.57) with p-value of 0.0001. Discussion: Study revealed that teaching programme was effective in improving nurse's knowledge and practice regarding Individualized Communication Protocol. Results strongly recommend for regular training sessions for health care professionals which help them to improve communication by enabling them to enhance their practice.

***Keywords*---**Communication, knowledge, Practice, Comatose patient, Individualised communication Protocol.

Introduction

Intensive Care Unit (ICU) is a specialized area where the critical ill patients are received or cared. Most patients in the intensive care unit are unconscious, sensory deprived, then hold restricted activity as a result of disease or any other disability1

Effective communication is a keystone of the nurse patient relationship. Communicating with unconscious patients or comatose patients is always challenging for healthcare professionals. However, effective communication is considered as an integral part of health care practice2. "Unconsciousness spans a broad spectrum, from momentary loss of consciousness as seen with fainting, to prolonged coma that may last weeks, months or even years (Hickey, 2003)." High-quality nursing care is crucial if the patient is to relearn to perceive self and others, to communicate, to control their body and environment and to become independent. The nurse must have a good understanding of the mechanisms that can contribute to unconsciousness, as well as a sound knowledge of the potential and actual physiological, psychological and social problems that these patients may face in the future3. The emergence of communication skills as a core component of undergraduate nursing courses led to a new emphasis on communication skills in .nursing education 4.

Patients in the intensive care unit rely heavily on nurses because they are unconscious and do not have the ability to take care of themselves. Nurses skills acquired can promote trust in caring for patients, these skills provided to care of unconscious adult patients are not restricted to only care principle, However, the knowledge principle to begin assessment, planning and intervention of care[5]. Communication with comatose patients is an important aspect of nursing care so that individualized care can be achieved. However, communication considers as an integral part of health care practice.

The foundation of nursing lies in the communicative attitude. In order to provide quality nursing care, we need to communicate with all patients whether sick or well conscious or unconscious [6]. According to literature, it was found that, communicating with unconscious patients is very essential.

It requires skills and continuous interaction with clients to produce a strong verbal response. It is the right of every client to be informed about their condition at all times. Therefore, it is important to educate healthcare professionals about

the benefits of verbal communication with comatose patients The investigator during her clinical experience also found that the nurses working in ICUs were following varied practice on communication .Taking care of comatose or unconscious patient is a greater challenge for nurses who are working in ICUs. Evidence based practice is the best way to provide better quality care to those patients

Materials and Methods

A quantitative pre-experimental research approach was used with one group Pre-test- post- test-only design. Population were all registered nurses working in Intensive Care Units, Uttarakhand. Total enumeration sampling technique was used to select Staff Nurses from the selected ICUs there were total of 183 nurses in the Intensive care unit out of which 171 nurses were available for enrollment and execution of intervention. Twelve Nurses could not be enrolled because of their floating duties to other settings. A structured questionnaire containing knowledge and skill items were used to assess knowledge and practice related to communication with comatose patients. The tools were prepared with extensive literature review and validated by experts .Research tool mainly consist of three section .Section I consist of socio-demographic variable sheet , section II consists of knowledge questions .The questionnaire consisted of 24 multiple –choice items, section III includes practice checklist . Practice checklist consists of the following domains: Verbal communication and non verbal communication. The minimum and maximum score was 1-43. Every successful communication event carry one mark and unsuccessful event carry 0 mark.

After obtaining ethical clearance and formal permission from the concerned authority, the purpose of the study was explained to the subjects and a written informed consent obtained from each study participants. Data were collected from 171 staff nurses from 06-03-2021 to 4-04-2021.The investigator conducted study in three phases – First Phase: The personal profile data of the Staff Nurses was collected. The knowledge of the staff nurse is tested by administering the structured knowledge questionnaire. It took 30 minutes for collecting data from all the participants. The practice of the staff nurses was observed with the help of observational checklist. Second Phase: Implementation of training programme in different sessions and different shift were conducted in selected ICUs. Third Phase: On seventh day after training session again knowledge and practice were assessed with the structured knowledge questionnaire and structured observational check list.

Data analysis was done by using Statistical Package for Social Science Program (IBM SPSS) version 22.0.Study participants responses to Knowledge and practice were scored and graded .knowledge score were graded Good knowledge if score(16-24),average knowledge if score (9-15),below average if score less than 8 .Practice score were checked by using checklist consist of 43 items practice score were grade good practice if score more than 28, Average practice if score between (15-27),below average if score less than 14.

Results and Discussion

Participants mean age was (29.22±5.945) years. The analysis of findings in table (1) showed that the mean age of staff Nurses were (29.22±5.94) it might be associated with interest of young generation to joining in the profession. These findings are supported by Abbas, Mohammed [5]who found that the majority of nurses (48%) of the study sample were in the age group (26-29) years old. Also, this finding of the present study supportive evidence is available in the study by Gaffar[7], Vyas[8] Bagherian[9]that showed the age of the study sample is within the age group of (23-26) years of age and within 25.1 ± 3.8 mean of age. In the area of gender both male 78 (46%) and females 93 (54%) were more or less equally participated in the study. These results were not along with the findings of the study by Abba, Mohammed [5]in which higher percentages (75%) of nurses were males. In the area of education a large proportion of staff nurses were degree holders 82(48%.) followed by 79(46 %) were diploma holder ,5 (3%) of the staff nurses were having post basic B. Sc degree and only 5 (3%) staff Nurses have completed their masters, it might be associated with in last decade the most of the staff nurses were had degree in Nursing education .These findings are supported by the study who found that half of them (55 %) were nursing bachelor's degree(9), whereas these results were contradictory by Josuva[10]there were 82% of diploma holders and 18% are degree holder working in the hospital.
In duration of clinical experience majority of the staff nurses were having more or less similar experience with mean score 5.52±4.25. This finding is supported by the study done which shows that (76.7%) of nurses have (1 to 5) years of experiences in the hospital. These findings are contradictory to study conducted by Thomas (2006)[11]where 18 % fell under the category of 1 month -1year of the experience, 32 % having experience between 1 to 2 years, 12 % having experience between 2 year-3 year and 38% were having experience more than three years. Among all staff nurses majority147 (86%) had experience in critical care areas and only19 (11%) had experience of non- critical areas and 5(3%) had experience of both the areas. It might be associated with nurses would like to continue the same area of experience. With regards nurse patient ratio in Intensive care unit majority 144(84%) of nurses were following 1:2 ratio.

Table No: 2 revealed that there was significant improvement in knowledge post test score (20.09±3.21) after intervention as compared to pretest scores (13.23±2.96) with a p-value of 0.0001. similar kind of finding were found where knowledge score was treated as an categorical variable figure no.1 represent pretest and posttest categories of knowledge regarding communication among ICU nurses. This figure depicts that there were only 14 Staff nurses who had good knowledge regarding communication with comatose patient before administering intervention which drastically improve with a number if 141 subjects having good knowledge after intervention .Data also revealed that there were 11 participants who had below average knowledge before intervention which was reduced to zero after the intervention . The mean post test knowledge score (20.09±3.21) of the present study was higher than mean pre test knowledge score (13.23±2.96)) with the mean difference of (6. 86). Difference between pre test and post test knowledge was statistically tested and it was found significant. The results were consistent with the findings of Binju et.al[12]which showed that the mean post-test knowledge score is 26.71 (89.03 %) is greater than the mean pre-

test knowledge scores 17.91 (59.70 %). It was observed that the staff nurses were rarely communicating with comatose patients.

Table no-3 revealed that there was significant improvement in practice posttest score (30.96±4.46) as compared to pretest score (6.75±1.57) with a p-value of 0.0001.Figure no 2 represents that all subjects were having unsatisfactory practices with respect to the communication required while providing nursing care to the comatose patients after the intervention 125 nurses were able to communicate satisfactorily with comatose patients. The mean post test practice score (30.96±4.461) of the present study was higher than mean pre test practice score (6.75±1.57)) with the mean difference of (24.21). Difference between pre test and post test practice was statistically tested and it was found significant. These findings are supported by Helen Sheela Wilson[13]who stated that only 11.9 % staff nurses had practice on communication with unconscious patients. Also supported by the study where the overall mean of posttest practice score (24.4) is significantly higher than overall mean of pretest score (9.9). Baker C, Melby [6] also mentioned that most communication process activities involves informing the patient of immediate procedural matters or providing reassuring statements. Weich M[14] reported that the Communication, both verbal and non-verbal, is a greatly neglected skill at present scenario. Two reasons given for this state of affairs were lack of time and lack of interest in others. Elliot Rosalind[15] highlighted in his study that nurses communicate to unconscious patient is very minimal another study by K. Robin Ogle[16] also indicates that nurses communicate extremely poor with patients, despite a high level of knowledge and skill with respect to communication. Tentative explanations of high stress levels, a preoccupation with physical care and technology, and the attraction to critical care areas of nurses with specific personality types are discussed as possible reasons for this findings.

Table: 4 shows there was no significant correlation found between Knowledge and Practice scores these results were contradictory with the results of Daya[11]where correlation between the pretest knowledge score (10.1) and practice score (9.9) were found significant and the score was 0.39. Table No 5 Shows that the knowledge scores of the staff Nurses was not significantly associated with any of their personal Profile variables i.e professional qualification, gender, area of experience and nurse patient ratio in ICU. Table no 6 shows a weak negative correlation was found between age and knowledge score of the staff nurses and also between years of experience and Knowledge score of the staff nurses and came to be statistical significant with p value of 0.01.This represents that as the age and year of the staff nurses increases knowledge regarding communication with comatose patients decreases. data in table no.7 indicated that no significant relationships between nurses' practice with any of their personal profile variables i. e .professional qualification, area of Experience and nurse patient ratio in ICU except gender , It was also found there was a significant association found between practice score and gender . data represented in table no.8 that females were having better practices regarding communication with comatose patients and it was significantly better as compare to males and the difference of practice score was statistically significant with p value of 0.004 the results were agreed with the findings of Daya [11]where shown that no association between nurses'

knowledge and ICU experience qualification, area of experience, nurse patient ratio in ICU and gender.

Limitations

The sample size is only 171 staff nurses; hence, this limits the generalization of findings beyond the study samples.

- Randomization could not be done to avoid contamination of study subjects.
- Method of Observation (Non –Participatory observation).

Conclusion

Study revealed that teaching programme was effective in improving nurse's knowledge and practice regarding Individualized Communication Protocol with comatose patients. Communication with comatose patients is an important aspect of nursing care so that individualized care can be achieved. Results strongly recommend for regular training sessions for health care professionals which help them to improve communication process by enabling them to evaluate and enhance their practice thereby helping them to render the quality services to the comatose patients

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Table No.1 : Personal Profile of Staff Nurses

(N=171)			
S. No	Personal Characteristics	Frequency (f)	Percentage (%)
1.	Age (Years)	29.22±5.945	
2.	Gender Female Male	 93 78	 54 46
3.	Professional Qualification GNM B.Sc (Nursing) Post Basic B.Sc (Nursing) M.Sc (Nursing)	 79 82 5 5	 46 48 3 3
4.	Total year of Experience in Nursing Practice	5.52±4.25	
5.	Area of Experience Critical Noncritical Critical/noncritical	 147 5 19	 86 3 11
6	Nurse Patient ratio in ICU 1:1 1:2	 27 144	 16 84

Table No- : 2 Mean, mean difference, SD difference, and paired 't' test of pretest and post-test knowledge scores of staff nurses regarding communication with comatose patients.

(N=171)

S. no	Knowledge Score	Max. score	Mean and Standard Deviation	Mean Difference	Range of Score	t Value	p-Value
1.	Pretest	24	13.23±2.96	6.86	1-19	58.27	0.0001**
2.	Posttest		20.09±3.21		10-24		

Note: Paired t -test; P value < 0.05 ,**statistically significant

Table No-: 3 Mean, mean difference, SD difference, and paired 't' test of pretest and post-test Practice scores of staff nurses regarding communication with comatose patients

(N=171)

S. No	Practice score	Max Score	Mean and Standard Deviation	Mean Difference	Range Of Score	t Value	p-Value
1.	Pretest	42	6.75±1.576	24.21	4-11	55.99	0.0001**
2	Posttest		30.96±4.461		14-40		

Note: Paired t –test; P value < 0.05,**statistically significant

Table No.4 Correlation between knowledge and practice score of staff nurses on communication with comatose patients.
(N=171)

S. No	Characteristics	Pearson Correlation (r) Value	Significance P value
1.	Knowledge score	0.027	0.722
2.	Practice score		

Note: Pearson Correlation, Not significant

Table No: 5 Association between Knowledge of the Staff Nurses on communication with comatose patients and personal profile of Staff Nurses.
(N=171)

S.No	Sample Characteristics		N	Mean ±Standard Deviation	t//F Value	P-value
1.	Gender	Male	78	13.01±3.16	0.868 ɑ	0.387
		Female	93	13.41±3.16		
		Knowledge		13.23±2.96		
2.	Professional Qualification	GNM(Nursing)	79	12.65±3.150	2.320 µ	0.077
		B.Sc (Nursing)	82	13.62±2.774		
		Post Basic B.Sc (Nursing)	5	15.00±1.225		
		M.Sc (Nursing)	5	14.20±2.950		
3.	Area of Experience	Critical	147	13.31±2.744	0.467 µ	0.627
		Non Critical	5	12.20±2.490		
		Critical/ Non Critical	19	12.89±4.508		
4.	Nurse patient ratio	1:1	27	13.41±3.682	0.341 ɑ	0.733

Note: (ɑ Independent t test. µ ANOVA)

Table No: 6 Correlation between Knowledge of the Staff Nurses on communication with comatose patients and personal profile of Staff Nurses.
(N=171)

S.No	Sample Characteristics		N	Mean ± Standard Deviation	r Value	P-value
1.	Age in Years	Age	171	29.22±5.945	-0.196∞	0.010*
		Knowledge		13.23±2.96		
2.	Year of Experience	Year of Experience	171	5.520±4.257	-0.162∞	0.034*
		Knowledge		13.23±2.96		

Note :(∞ Pearson correlation; P value < 0.05,*statistically significant)

Table No 7 Association between practice of the Staff Nurses on communication with comatose patients and personal profile of Staff Nurses.
(N=171)

S.No	Sample Characteristic		N	Mean ±Standard Deviation	t//F Value	P-value
1	Gender	Male	78	6.37±1.44	2.926 α	0.004
		Female	93	7.06±1.62		
2.	Professional Qualification	GNM	79	6.56±1.375	0.842 μ	0.473
		B.Sc (Nursing)	82	6.91±1.687		
		Post Basic B. Sc (Nursing)	5	6.60±2.074		
		M. Sc (Nursing)	5	2.280±2.28		
3	Area of Experience	Critical	147	6.76±1.560	2.217 μ	0.112
		Non Critical	5	5.40±0.894		
		Critical/ Non Critical	19	7.05±1.715		
4	Nurse patient ratio	1:1	27	6.22±1.826	-1.906 α	0.058
		1:2	144	6.85±1.511		

Note(. α Independent t test. μ ANOVA)

Table No 8 Correlation between practice of the Staff Nurses on communication with comatose patients and personal profile of Staff Nurses. (N=171)

S.No	Sample Characteristic		N	Mean ±Standard Deviation	r Value	P-value
1.	Age	Age	171	29.22±5.94	-0.196∞	0.010*
		Practice		6.75±1.57		
2.	Year of Experience	Year of Experience	171	5.5208±4.257	-0.085∞	0.267
		Practice		6.75±1.576		

Note: (∞ Pearson correlation; P value < 0.05 ,*statistically significant)

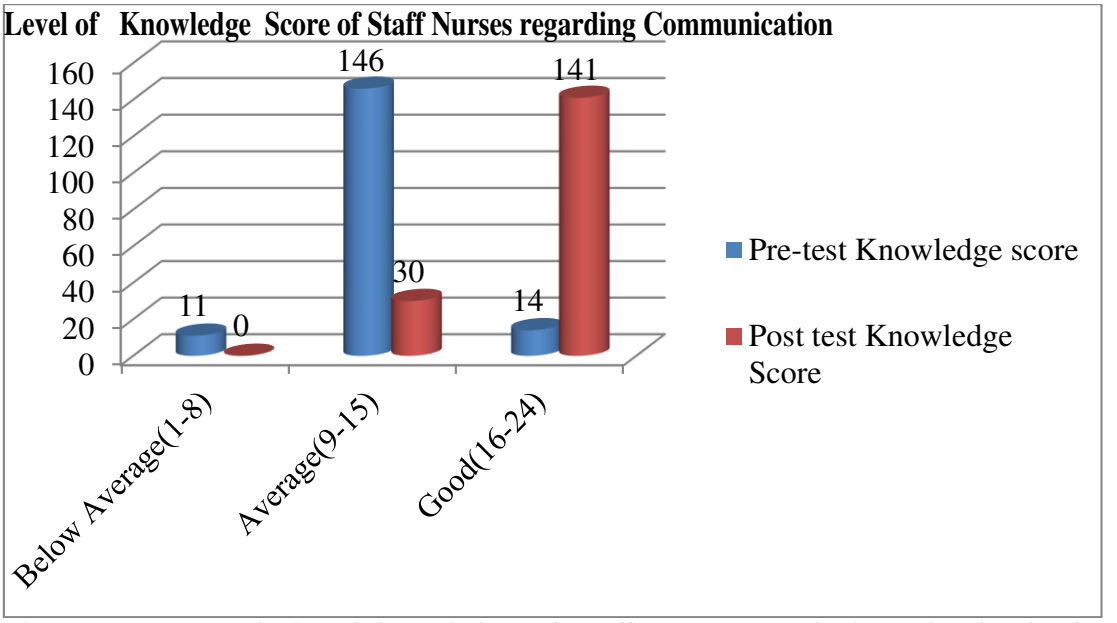

Figure No 1: Analysis of knowledge of staff nurses to depicts the level of knowledge regarding communication with comatose patients.

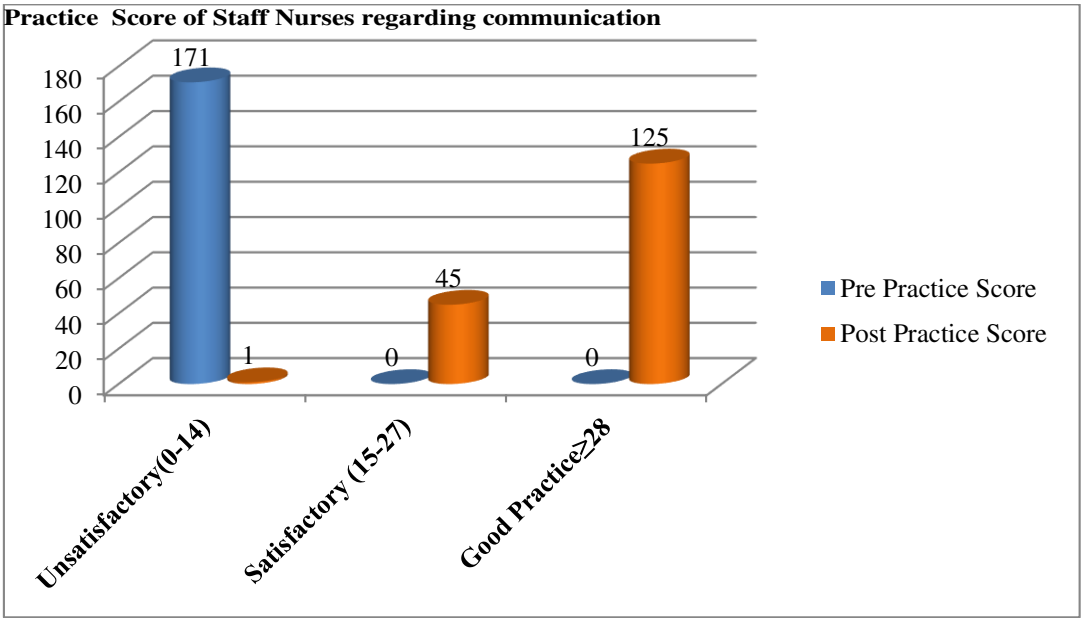

Figure No 2: Analysis of practice of staff nurses to depicts the level of practice regarding communication with comatose patients.