

Effect of Structured Teaching Programme on the Knowledge and Opinion of Nursing Students towards Prevention of Mental Retardation

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Abstract:

Mental retardation is a condition of arrested or incomplete development of mind which is characterised by impairment of skills manifested during the developmental period that contribute to the level of intelligence that is cognitive, language, motor and social abilities (WHO). A quasi experimental study was conducted at College of Nursing, NIMHANS, Bangalore with the objective to assess the effectiveness of structured teaching programme on the level of knowledge & opinion of nursing students towards primary prevention of mental retardation. The 44, 3rd yr BSc nursing students were selected by purposive sampling design. Self administered knowledge questionnaire and opinion scale were used as tools. The knowledge questionnaire consisted of four domains: concept, prenatal, intranatal, postnatal causes and prevention of mental retardation. Opinion scale was prepared as statement. The scale was divided into two domains positive and negatively worded. The interpretation was: higher the score, higher the positive opinion. The score ranging from 30-75 were negative, 76-90 neutral and 91-150 as positive opinion. This study revealed that knowledge score of the subjects were significantly increased at p-value 0.001. Opinion score, analysed using McNamer's chi-square test, indicated that a significant change occurred after structured teaching programme. It is concluded that structured teaching programme seems to be highly effective in improving knowledge and opinion towards primary prevention of mental disorders.

Mental retardation appears in childhood before the age of 18. It is one of the most globally prevalent neurologic disorders. Surveys in developed countries show a prevalence of 3 to 5 per 1,000 with mental retardation that is intelligence quotient (IQ) below 55. Estimates from developing countries, however have found prevalence rates from 5 to as much as 22 per 1,000. Protein-energy malnutrition, dietary micronutrient deficiencies, environmental toxins, and lack of early sensory stimulation or the ability to profit from it may contribute to neuro developmental disabilities. Tropical diseases such as parasites with resultant anaemia, malaria, and other infections are major contributory causes of mental retardation and cognitive dysfunction, especially in developing countries (Garry, 2008).

According to the census of India 2001, the total number of disabled was 21 million that constitute more than 2 percent of total population. As future health professionals, it is important to have knowledge on various causes, identification and preven-

tion of mental retardation. Early intervention may help to reduce, first is its relative frequency, with prevalence as high as 1 percent or greater in most populations and most common childhood disability. Second is its early onset and frequent life long duration. A third is its socioeconomic impacts, which includes adverse impact on productivity and quality of life of affected individual and caregiver as well as increased expenditure on medical care and residential services.

Fourth factor is its prevention, whether primary, secondary or tertiary that is attainable via public health interventions for nearly all forms of mental retardation.

Objectives

This study attempted to:

1. Assess socio demographic characteristics of the nursing students.
2. Study dimension-wise effectiveness of structured teaching programme on the level of knowledge of nursing students towards primary prevention of mental retardation.
3. Evaluate effectiveness of structured teaching

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programme on the level of knowledge of nursing students towards primary prevention of mental retardation.

4. Evaluate effectiveness of structured teaching programme on the level of opinion of nursing students towards primary prevention of mental retardation.

Table 1: Domains with comparison of knowledge score of subjects before and after the intervention (n= 44)

S.No	Domain	Pre test mean (SD)	Post test mean (SD)	't' value	p-value
1	Concept on mental retardation	2.0 (1.6)	6.4 (0.9)	16.2	< 0.001*
2	Pre-natal causes of mental retardation and its prevention.	8.9 (7.1)	20.4 (1.9)	10.8	< 0.001*
3	Intra-natal causes of mental retardation and its prevention	4.5 (2.9)	10.5 (0.9)	12.8	< 0.001*
4	Post-natal causes of mental retardation and its prevention	3.2 (2.4)	8.4 (1.1)	12.8	< 0.001*

* Significant < 0.001

Hypotheses

H₁: There will be statistically significant difference between the scores obtained by the nursing students on the level of knowledge towards primary prevention of mental retardation prior to and after the structured teaching programme (p=0.05).

H₂: There will be statistically significance difference between the scores obtained by the nursing students on the opinion towards primary prevention of mental retardation prior to and after the structured teaching programme (p=0.05).

Methodology

Research design: A quasi experimental approach with one group pre-test and post-test designs were used (Table 1). Forty-four samples collected from 3rd yr BSc nursing students at college of nursing NIMHANS, Bangalore using purposive sampling method.

Variables: Independent variable is structure teaching programme on primary prevention of mental retardation. Dependent variables are knowledge and attitude of nursing students towards primary prevention of mental retardation.

Tools and techniques: Tool for the present study was constructed by researcher.

Socio-demographic data sheet: The socio-demographic information had 12 items which includes age, sex, marital status, education of parents, occupation of parents, consanguinity of marriage in the family, type of family, area of residence, socio-economic status of family, hobbies of reading of health periodicals, history of mentally retarded child in the family, previously exposed to any educational class on mental retardation, etc.

Knowledge questionnaire: There were 50 multiple choice questions in the knowledge questionnaire with only one correct

answer. The items in the questionnaire were divided under 4 dimensions (concept, definition, epidemiology, myth and facts, causes and its classification. pre-natal, intra-natal and post-natal causes of mental retardation and its primary prevention measures). The scoring was one mark for correct answer and zero for wrong answers.

Opinion scale: Opinion scale was prepared as statement. There were 30 items (15 positive and 15 negatively worded). These items were prepared in Likert type with 5 point scale: Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SD). Scoring was 5 for Strongly Agree, 4 for Agree, 3 for Undecided, 2 for Disagree, 1 for Strongly Disagree. The interpretation was higher the score, higher the positive opinion. The score ranging from 30- 75 were negative, 76-90 neutral and 91- 150 as positive opinion.

Validation and reliability: The content validation was established by the 6 experts from various specialties. Guttman spilt half method was used and found $r = 0.99$. The pilot study was conducted for checking the feasibility of the study.

Findings of the study

Table 1 reveals that knowledge score of subjects were significantly increased after the structured teaching programme. Table 2 shows that opinion score of subjects were significantly increased after the structured teaching programme.

Table 2: Comparison of opinion score of subjects before and after the intervention (n= 44).

Paired sample 't' test	Pre test Mean (SD)	Post test Mean (SD)	't' value	df	p-value
Opinion	119.4 (8.9)	130.4(6.3)	7.15	43	< 0.001*

* Significant < 0.001

Table 3 : Comparison of opinion score of subjects before and after the intervention with McNamer's χ^2 test (n= 44).

		Post Test - Opinion		
		≤ 120	>120	
Pre Test - Opinion	≤ 120	3 (12%)	23 (88%)	26
	>120	2 (11%)	16 (89%)	18
		5	+ 39	= 44

Table 3 is a cross table of pre and post opinion assessment. Data was analysed using McNamer's χ^2 test and it indicated significant changes in pre and post score opinion.

Discussion

The present study revealed that higher percentages of nursing students were at the age of 20 years (63.61%), female 84.1 percent and male were 15.9 percent. The level of knowledge score highly significant, pre-test score of 18.6 to post-test score 45.7 after intervention so H_1 was retained($p < 0.001$). This finding was supported by Moraes, et al (2006).

The level of opinion score highly significant, pre test score 119.4 to post test score 130.3, after intervention so H_1 was retained($p < 0.001$). To know the cause of high score of opinion scale at pre-test level data was again analysed using McNamer's test (Table 3). This is a cross table of pre- and post-opinion assessment. Subjects were divided into 2 groups based on the mean total opinion score at baseline (120).

Majority of the subjects (n=23, 88%) who have had low opinion scores (≤ 120) at pre-test level had high opinion scores after the intervention; 19 (16+3) had remained without any change in their scores after the intervention, among these 3 (12%) were in low and 16 (89%) were in high opinion score. About 11 percent of the subjects (n=2) who have had high opinion scores, scored low after intervention. Data was analyzed using McNamer's Chi-Square test and it indicated significant changes in pre- and post-score opinion.

Similar analysis was not done for the knowledge score, because everyone had post-score above the mean of the total knowledge at pre-test level. In opinion scale the higher score obtained at pre-test

because the scale used for assessment of opinion had more statements on knowledge than skills. Similar study finding was reported by Thompson, et al (2003) on attitudes of nurses and their response toward individuals with disabilities and chronic illnesses. The findings suggest that education about, and experience with, individuals with disabilities positively affect the attitudes of nursing students toward individuals with disabilities.

Recommendations

1. A similar study can be (i) conducted by taking samples from ANM/ASHA (ii) replicated on a larger sample.
2. A comparative study can be conducted by taking samples from two different levels like BSc nursing and general nursing students.
3. Effectiveness of other educational methods can be evaluated.
4. This study can be followed up after 1 year to find out the practice of this knowledge in terms of reduction of occurrence.

Conclusion

Structured teaching programme seems to be highly effective in improving knowledge and opinion towards primary prevention of mental disorders. Nurses play a key role to provide care in primary, secondary and tertiary level. This structure teaching programme will help to gain professional competence and confidence to meet the needs of the society.

Implications for Nursing

Nursing education

Enlightened nurse practitioners will be able to allay fears, wrong notions and educate individuals, families and communities people for proper consultation and treatment by imparting correct and scientific information about primary prevention of mental retardation.

Nursing practice

Nurses working at grass root level and antenatal clinics should have knowledge on primary prevention of mental retardation. This will help them to be more confident and useful for society in prevention of mental retardation.

Nursing administration

There should be in-service education, workshops

and seminars for nurses regarding the nursing aspects of primary prevention of mental retardation. So the nurse administrators can encourage this type of study to keep the updated knowledge among staffs and students.

Nursing research

The research should be conducted among senior nursing students to find out the variation in knowledge according to the year in which they are studying, and also with larger sample size. Different methods of teaching intervention can also be evaluated.

Thus, the findings of the study, when put into practice and replicated in other settings, will no doubt contribute towards enriching the knowledge and practice of health professionals in the prevention of mental retardation.

References

1. World Health Organization, Geneva. The ICD-10 Classification of mental and behavioural disorders. 10th edn, 2007, Delhi: AITBS. Publishers, pp 225-31
2. Garry. Effects of poverty on cognitive function, a hidden neurologic epidemic, *J America Academy of Neurology*. West Harrison, St Chicago, 2008; 71:441-57
3. Census of India. Office of the Registrar General, India, Census report on disability, New Delhi, 2001
4. Moraes AM, Magna LA, Marques AP. Prevention of mental retardation: Knowledge and perception by health professionals. *Cad Saude Publica* 2006 : Mar; 22(3): 685-90
5. Mounir GM, Mahdy NH, Fatohy IM. Impact of health education program about reproductive health on knowledge and attitude of female Alexandria University students. *J Egypt Public Health Asso* 2003; 78(5): 433-66
6. Thompson TL, Emrich K & Moore G. The effect of attitudes of nursing students toward disability. *Rehabil Nurs* 2003 Jan-Feb; 28(1): 27-30

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