

A Study to Evaluate the Effectiveness of Planned Nursing Intervention (PNI) Regarding Genetic Counselling in Terms of Knowledge and Attitude among Staff Nurses Working in Maternity Unit in Selected Hospital at Meerut

Annu Panchal¹, Kalpana Mandal²

Abstract: Genetic counselling is a vital part of the field of medical genetics. Genetic Counsellors are trained in the fields of genetics and psychosocial counselling, and act as advocates for families affected by genetic disorders, helping them to understand the concepts of heredity and assisting them in planning for treatment of affected individuals as well as providing options for future offspring. The objectives of the study were To develop a planned nursing intervention (PNI) regarding genetic counselling for the staff nurses. To assess and evaluate the knowledge and attitude of the staff nurses regarding genetic counselling before and after the administration of planned nursing intervention (PNI). To determine the relationship between post test knowledge and attitude of the staff nurses regarding genetic counselling. To find out the association between post test knowledge and attitude with selected demographic variables. The study revealed that the mean post-test knowledge score (35.07 ± 3.93) of staff nurses regarding genetic counselling were higher than the mean pre-test knowledge (17.83 ± 5.00). The mean post test attitude scores (83.35 ± 6.55) is higher than the mean pre-test attitude scores (54.27 ± 8.71). The correlation co-efficient between post-test knowledge and post-test attitude scores of staff nurses was 0.678 which indicated a significant positive relationship between knowledge and attitude among staff nurses regarding genetic counselling. Work place and attendance in any skilled training programme was found to be significant with the level of knowledge of staff nurses. The study concludes that the planned nursing intervention is an effective strategy in improving knowledge and attitude of staff nurses regarding genetic counselling. More educational strategies can be undertaken to enhance the knowledge of staff nurses and improve the attitude of staff nurses towards the genetic counselling.

Keywords: Evaluate, Effectiveness, Planned Nursing Intervention, Knowledge, Attitude, Genetic Counselling, Staff Nurses, Maternity Unit

1. Introduction

"Making the decision to have a child—it's momentous. It is to decide forever to have your heart go walking outside your body."

Elizabeth Stone

Wald N.J et al (2011) ,says in his article that "god could not be everywhere, so he created mothers. Mother is the precious person for any baby because of her unconditioned love and heartfelt care. Mother and baby are interdependent. Pregnancy period could be the most exciting time because she used to dream a healthy baby. No mother in the world likes her baby to get any kind of genetic disorder.. The happiness of a family depends on the health of the children. In order to prevent these disorders , there are measures that help include avoidance of teratogenic exposures and radiation, smoking, drinking alcohol, medical treatment of maternal illnesses, good nutrition, and routine obstetrical care".

Sanchari Pradhan (2011), says that the Indians represent one-sixth of the world population and India consists of ethnically, geographically and genetically diverse populations with several thousand endogamous groups. In some community the load of genetic disorder is relatively high due to consanguineous marriage practiced in the community. This database has been created to keep track of mutations in the causal genes for genetic diseases common

in India and help the Physicians, Geneticists and other professionals related to genetic disorders to retrieve and use the information for the benefit of the families affected with the disorders.

Anupam Kaur (2010), reported about the prevalence incidences of genetic disorders globally, at least 7.6 million children are born annually with severe genetic or congenital malformations. The genetic and congenital disorder is the second most common cause of infant and childhood mortality and occurs with a prevalence of 25- 60 per 1000 births. The higher prevalence of genetic diseases in a particular community may, however, be due to some social or cultural factors. Such factors include tradition of consanguineous marriage, which results in a higher rate of autosomal recessive conditions including congenital malformations, stillbirths, or mental retardation. Furthermore, maternal age greater than 35 years is associated with higher frequencies of chromosomal abnormalities in the offspring.

World Health Organization (WHO) (2014), reported that about three million foetuses and infants are born each year with major Congenital anomalies. They are found in approximately 3% of newborns. Worldwide surveys have shown that birth prevalence of congenital anomalies varies greatly from country to country. It is reported to be as low as 1.07% in Japan and as high as 4.3% in Taiwan. In the US, a 2-3% birth prevalence of congenital anomalies has been

reported. The birth prevalence of congenital anomalies in England is 2% and in South Africa it is 1.49%. In Lebanon, the incidence of major congenital anomalies has been reported as 1.64 % in Southern Beirut. The most common serious congenital disorders are congenital heart defects, neural tube defects and Down syndrome.

The Free Dictionary (2014), suggested that genetic counselling provides couples with information that can help them make decisions about future pregnancies. It also gives couple additional time to emotionally prepared if a disorder is detected in the fetus. The counsellor discusses the results of testing and informs the couple if a problem is apparent. The doctor or genetic counsellor also discusses the treatment options available. Genetic counselling is done in a non-directive way, so that any treatment selected remains the personal choice of individual involve genetic counselling can provide information essential for family planning and pregnancy management, thus minimizing the chances of positive outcome.

Mrs. S. Vijaylakshmi (2006) published a article on decision making for the current practices across the hospitals that perform feticide for congenital abnormalities. The study done to assess the attitude among midwives who perform an ethical – legal analysis used in the decision making for the current practices across the hospitals that perform feticide for congenital abnormalities. The study involves Obstetricians, Neonatologists, Nursing, Genetics, Counsellors and Social works to make decisions need to be guided by multidisciplinary discussions with the parents and the parties. The study revealed that public health facilities differed in the criteria they were used in making the decision to offer feticide; recommendations are made to strengthen law in order to protect both health workers and patients.

Statement of Problem

“A study to evaluate the effectiveness of planned nursing intervention (PNI) regarding genetic counselling in terms of knowledge and attitude among staff nurses working in maternity unit in selected hospital at Meerut”

Objectives of the Study Were

- 1) To develop a planned nursing intervention (PNI) regarding genetic counselling for the staff nurses.
- 2) To assess and evaluate the knowledge and attitude of the staff nurses regarding genetic counselling before and after the administration of planned nursing intervention (PNI).
- 3) To determine the relationship between post test knowledge and attitude of the staff nurses regarding genetic counselling.
- 4) To find out the association between post test knowledge and attitude with selected demographic variables

Research Hypotheses (at 0.05 level of significance)’

H1:- The mean post test knowledge score of the staff nurses will be significantly higher than the mean pre test knowledge score regarding genetic counselling as evident by structured knowledge questionnaire

H2:- The mean post test attitude score of the staff nurses will be significantly higher than the mean pre test attitude score regarding genetic counselling as evident by structured attitude scale.

H3:- There will be a significant relationship between post test knowledge and post test attitude of the staff nurses regarding genetic counselling as evident by structured knowledge questionnaire and attitude scale.

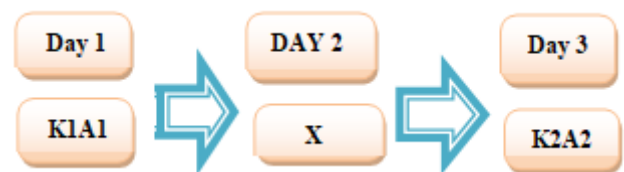
H4:- The will be a significant association between post test level of knowledge score of staff nurses with selected demographic variables.

H5:- There will be a significant association between post test level of attitude score of staff nurses with selected demographic variables.

2. Methodology

The research design used in this study is pre-experimental one group pre test post test design. In this design, the investigator introduced the base measures before and after the administration of treatment. The base measures were the knowledge and attitude of staff nurses and treatment was planned nursing intervention regarding genetic counselling. Sample size in present study consists of 40 staff nurses of selected hospital, Meerut.

The design is represented as-



Keywords:

- K1A1- Pre-test of knowledge and attitude
- X- Planned nursing intervention
- K2A2- Post-test of knowledge and attitude

Frequency and percentage distribution of demographic characteristics of the staff nurses, n=40

S. No	Sample Characteristics	Frequency	Percentage %
1.	Age in Years		
	20-25	13	32.5
	26-30	15	37.5
	31-35	7	17.5
	36 and above	5	12.5
2.	Sex		
	Male	0	0
	Female	40	100
3.	Educational Qualification		
	Senior Secondary	19	47.5
	Graduate	18	45
	Post- graduate	3	7.5
	Any other qualification	0	0
4.	Professional Qualification		
	Diploma in General Nursing Midwifery	35	87.5
	Graduate in Nursing / Basic B.Sc Nursing	5	12.5

	Post Graduate Nursing	0	0
	Additional professional qualification	0	0
5.	Work place		
	Labour Room	6	15
	Post Natal Ward	13	32.5
	Neonatal unit	21	52.5
	Antenatal ward	0	0
6.	Working experience		
	0-1 years	13	32.5
	1-3 years	13	32.5
	3-5 years	5	12.5
	Above 5 years	9	22.5
7.	Attended any skilled training programme		
	No	6	15
	Yes	34	85

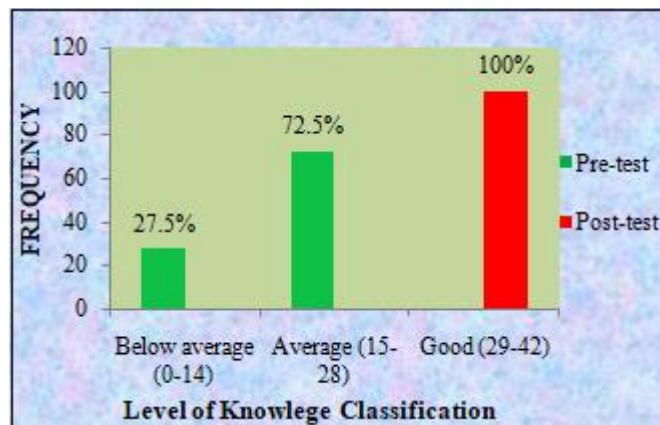
The data presented in above Table depicts that most of the subjects i.e. 15(37.5%) were in the age group of 26-30 years. Majority of the subjects i.e. 40(100%) were under the female category. Maximum numbers of subjects i.e. 19(47.5%) were belongs to senior secondary qualification. Majority of subjects i.e. 35(87.5%) were qualified with diploma in general nursing midwifery. Most of the subjects i.e. 21(52.5%) were belong to neonatal unit. Maximum number of subjects i.e. 13(32.5%) had 0-1 year and 1-3 year working experience and majority of subject i.e. 34(85%) attended any skilled training programme.

Findings of the frequency and percentage distribution of pre test and post test knowledge of staff nurses regarding genetic counselling, n=40

Knowledge Level	Pre test		Post test	
	Frequency	Percentage %	Frequency	Percentage %
Below average (0-14)	11	27.5	0	0
Average (15-28)	29	72.5	0	0
Good (29-42)	0	0	40	100

Above table reveals that in pre-test 11(27.5%) had below average knowledge and 29(72.5%) had average knowledge

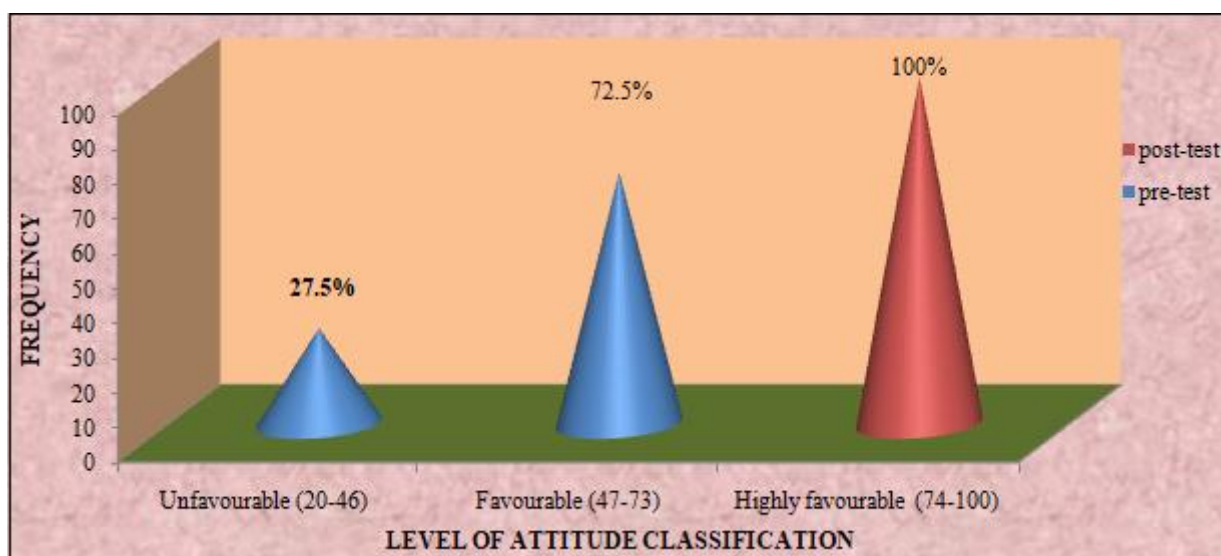
whereas in post- test it was seen that 40(100%) had good knowledge. Hence it can be inferred that the planned nursing intervention was effective in enhancing the knowledge of staff nurses.



Findings of the frequency and percentage distribution of pre test and post test attitude of staff nurses regarding genetic counselling, n=40

Attitude Score	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Unfavourable (20-46)	11	27.5	0	0.0
Favourable (47-73)	29	72.5	0	0
Highly favourable (74-100)	0	0.0	40	100

Above table reveals that in pre-test 29(72.5%) were having favourable attitude and 11(27.5%) were having unfavourable attitude whereas in post- test it was seen that the majority of the sample i.e. 40(100%) were having highly favourable attitude regarding genetic counselling among staff nurses and none of them had unfavourable attitude and average attitude.



3. Conclusion

On the basis of the above findings of the study, most of the staff nurses had average knowledge and unfavourable attitude towards genetic counselling. The planned nursing intervention was effective in enhancing good knowledge of the staff nurses and highly favourable attitude towards genetic counselling. There was a positive relationship found between post-test knowledge and attitude of the staff nurses. There was a significant association between post-test knowledge of staff nurses with working in neonatal unit.

4. Recommendations

On the basis of the findings of the study, the following recommendations have been made:

- 1) A similar study can be replicated on a large scale to generalize the findings.
- 2) A similar study can be conducted to find the differences in the knowledge and attitude level of the staff nurses in government and private institutions.
- 3) Similar kinds of the studies can be conducted by using after teaching strategies like self instructional module, video films etc.
- 4) A study can be done with a control group to compare gain in knowledge and change in attitude.
- 5) Similar study can be conducted among final year nursing students.
- 6) A study can be undertaken for assessing knowledge of adult men and women of general public.

References

- [1] AnupamKaur and Jai Rup Singh, "Chromosomal Abnormalities: Genetic Disease Burden in India" Int J Hum Genet, 10(1-3): 1-14 (2010)
- [2] Sanchari Pradhan, Mainak Sengupta, Anirban Dutta, Kanishak Bhattacharyya et.al. "Indian genetic disease database", Nucleic Acid Research, Nucleic Acids Res. 2011 Jan; 39, D933–D938.
- [3] Wald N.J et al .Blood folic acid and Vitamin B12 in relation to Neural tube defects. Medical Journal of Australia, October 2011, Volume 17:478 – 482.
- [4] World Health Organization, "Birth Defects in South-East Asia A public health challenge", [2013].
- [5] <http://link.springer.com/article/10.1007/BF02722749>
- [6] G. P. Pal, " *Medical genetics*" Published by- A.I.T.B.S. Publishers, India, 1st edition
- [7] Kamal Jyoti, " *Genetics for Nurses*", Published by- Kumar Publishing House, 5th edition