

“A Pilot Study to Evaluate the Effectiveness of Planned Teaching Programmed On Knowledge Regarding Consanguineous Marriages and Its Genetic Effects among Women in Selected Rural Areas of Moodbidri”

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Abstract: A study to determine the effectiveness of planned teaching programme on knowledge regarding consanguineous marriages and its genetic effects among women in selected rural areas. A Pre-experimental one group pre-test post-test design was used to evaluate the knowledge of women on consanguineous marriages and its genetic effects. Sample of the study comprised of 10 women in selected rural areas. There was a significant improvement obtained from PTP on the knowledge regarding consanguineous marriages and its genetic effects. Pretest mean is 12.7, SD is 1.18 and after STP mean is 16.9, SD IS 1.48. Its enhancement mean is 4.2. Paired t test value 5.21 is significant at $p < 0.05$ level. There was a significant improvement obtained following PTP. This study enlightens that there is a need for educational programme in the community based educational programmes to improve the knowledge regarding genetic effects of consanguineous marriages. This study motivates other researchers to conduct further studies to evaluate the attitudes and practices of consanguineous marriages in the community area.

Key words: consanguineous marriages, genetic effects, women, knowledge.

Date of Submission: 21-05-2018

Date of acceptance: 05-06-2018

I. Introduction

Marriage is an institution which admits men and women to family life. It is a stable relationship in which a men and women are socially permitted to have children; the right to have children implying the right to sexual relations.¹ As a part of biological health, marriages are the most vital and powerful relationship. The human population has seen modern civilization and is still within the family boundaries. One such family-social bound is consanguineous marriage.²

Consanguinity describes a relationship between two people who are related to each other because they share a common ancestor: a “shared blood” relationship. Consanguinity is defined as marriage between close relatives. The deleterious effects associated with consanguinity may be cause by the expression of rare recessive gene inherited from common ancestors. Consanguinity may result in the homozygous condition for recessive autosomal/ deleterious genes. The incidence of consanguinity reported in India is 50-60 percent and uncle-niece and first cousin are the more commonly occurring relationship in Indian population.³

There is also some evidence that death rate in childhood, apart from known genetic or congenital conditions, is also raised. Surveys have indicated that at least one in fifth newborns has a major congenital anomaly, about one in hundred has a unifactorial disorder and about one in two hundred has a major chromosomal abnormality.⁴

II. Need For the Study

Consanguineous marriages is a relationship between two people who share an ancestor, or share blood, such marriages are favoured by different populations usually bound to traditional customs, beliefs and to keep property in united form within the family. Consanguinity is a deeply rooted social trend among one-fifth of the world population mostly residing in the Middle East, West Asia and North Africa.²

In India cousin marriage vary sharply by religion and culture. The family law in India takes into account the religious and cultural practices and they are all equally recognized. For Muslims, governed by un codified personal law, it is acceptable and legal to marry a first cousin, but for Hindus, it may be illegal under the Hindu Marriage Act. The Hindu Marriage Act makes cousin marriage illegal for Hindus with the exception of marriages permitted by regional custom. Practices of the small Christian minority are also location-dependent: their cousin marriage rates are higher in southern states such as Karnataka with high overall rates. Consanguineous marriages are major responsible risk factor for bipolar disorders. The marriage system has been reported as an important factor in the appearance of autosomal recessive diseases and congenital anomalies.⁵

Consanguineous marriage may be favourable for the women's status, including the wife's better relationship with her in-laws who could support her in time of need. There is a general belief that marrying within the family reduces the possibilities of hidden uncertainties in health and financial issues.⁶ Prenatal consanguinity is often associated with a higher frequency of genetic disorders and congenital malformations in their progeny. Consanguinity and inbreeding in a population lead to an increase in homozygosity, resulting in an increase in genetic anomalies. Phenotypic characteristics like blindness, mental retardation and seizures are much more common among the offspring of such marriages than in the general population. The frequency of malformation and diseases caused by inheritance in consanguineous marriages is nearly twice as much as in non-consanguineous marriages.⁷

The report of infant mortality rate is commonest between first cousins (26.2%) in UAE, in Southern Italy where 16 out of 18 consanguineous marriages among parents, consanguineous marriages increased from 39% - 50.5%, higher in katar 54%, in Arab Emirates it was high (50.5%), in India is due to the risk of consanguineous marriages, 20% in Kerala. The incidence of congenital malformation was 39.1/ 1000 birth in south India.⁸

III. Statement of the Problem

A study to evaluate the effectiveness of planned teaching programme on knowledge regarding consanguineous marriages and its genetic effects among women in selected rural areas of Moodbidri.

IV. Objectives of the Study

Objectives of the study are to:

assess the level of knowledge of women regarding consanguineous marriages and its genetic effects.
evaluate the effectiveness of planned teaching programme by comparing the pre-test and post-test knowledge score. find an association between pre-test knowledge score with selected demographic variables.

V. Operational Definitions

Evaluate: In this study evaluate refers to a systematic process of determining the extent of knowledge achieved by women regarding consanguineous marriages and its genetic effects with the help of planned teaching programme.

Effectiveness: In this study effectiveness refers to a significant increase in the knowledge score after planned teaching programme related to consanguineous marriages and its genetic effects measured from the difference between pre-test and post-test knowledge score.

Planned teaching programme (PTP): In this study PTP refers to systematically developed teaching programme for women to provide information regarding consanguineous marriages and its genetic effects.

Knowledge: In this study knowledge refers to the correct responses of women to the structured questionnaire regarding consanguineous marriages and its genetic effects.

Consanguineous marriages and its genetic effects: In this study consanguineous marriages refers to the adolescents who will get marry their own blood relatives and it influence altered development of fetus.

Women: In this study women refers to mothers who have adolescents.

Rural areas: In this study rural area refers to the people who are residing in selected areas of Moodbidri.

VI. Methodology

Pre-experimental one group pre-test post-test design was adopted. The study was conducted at selected rural areas of Moodbidri, having total population of 29,431 in that women who have adolescents are selected. Based on inclusion criteria, Non-probability purposive sampling technique was used to select the sample of 10 women.

Tools and score interpretation:

In order to measure the knowledge level structure knowledge questionnaire was used. This consists of 24 questions related to consanguineous marriage and its genetic effects. It is divided into 2 sections.

Section A- Consists of 6 questions regarding consanguineous marriage

Section B- Consists of 18 questions regarding genetic effects and genetic counseling.

Each multiple choice has 4 options with one correct response with a score of ‘1’ and ‘0’ for wrong answer. The maximum possible score was 24 and minimum score was 0.

VII. Data Collection Procedures

The necessary administrative permission was obtained for conducting the Pilot study. After taking the informed consent, the data were collected by using structured knowledge questionnaire. An average time limit of 30-45minutes were taken for each sample.

VIII. Data Analysis and Interpretation

The data were interpreted under the following section

Section I: Demographic data.

Section II: Distribution of subjects according to knowledge score.

Section III: Evaluation of the effectiveness of planned teaching programme in terms of gain in knowledge score.

Section IV: Association between pre-test knowledge score and selected demographic variables.

MAJOR FINDINGS OF THE STUDY

Table 1: Frequency and percentage distribution of women according to the level of knowledge score
n= 10

Level of knowledge	Pre-test knowledge score		Post-test knowledge score	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Inadequate	1	10	0	0
Moderate	9	90	3	30
Adequate	0	0	7	70

The data presented in table 2 shows that in pre-test 10% of the women had inadequate knowledge, 90% of the women had moderate knowledge regarding consanguineous marriages and its genetic effects whereas in post-test 70% of women had acquired adequate knowledge and 30% of women had moderate knowledge on consanguineous marriages and its genetic effects.

Table 2: Mean, standard deviation, mean difference and paired ‘t’ test of pre-test and post-test knowledge score
= 10

Knowledge score	Mean	Standard deviation	Mean difference	‘t’ value	Remarks
Pre-test	12.7	1.18	4.2	5.21	*significant
Post-test	16.9	1.48			

Table value $t_{(9)}=2.26, p<0.05$

The data presented in table 2 shows that ‘t’ value computed between pre-test and post-test knowledge score is statistically significant ($t=5.21$, table value $t_{(9)}=2.26, p<0.05$). The calculated value was greater than table value. Hence the null hypothesis was rejected and research hypothesis was accepted. This shows that there is significant difference between the mean pre-test and post-test knowledge score of women regarding consanguineous marriage and its genetic effects.

Table 3: Area wise paired ‘t’ test showing significant difference between pre-test and post-test knowledge score.

Areas	Pre-test knowledge score		Post-test knowledge score		‘t’ value
	Mean	SD	Mean	SD	
Consanguineous marriage	3.7	1.11	4.1	1.23	1.03
Genetic effects and genetic counselling	9	2.7	11.8	3.54	*2.49

Table value $t_{(9)}=2.26, p<0.05$ *Significant

The data presented in table 3 shows that paired ‘t’ test computed between pre-test and post-test knowledge score is statistically significant. This shows that planned teaching programme was effective in improving the knowledge of women regarding consanguineous marriages and its genetic effects.

IX. Conclusion

Consanguinity is a deeply rooted social trend. Consanguineous marriages are associated with an increased risk for congenital malformations and autosomal recessive diseases. Now in present generation Consanguineous marriage has to opposed to prevent from genetic disorder. Increasing public literacy on consanguinity could be achieved by providing proper education, on all health and social issues related to consanguinity. In addition to their primary goals, premarital counselling and screening programs in some communities have helped in raising the public's awareness of genetic diseases.

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Dr. BA Yathikumara Swamy Gowda "A Pilot Study to Evaluate the Effectiveness of Planned Teaching Programmed On Knowledge Regarding Consanguineous Marriages and Its Genetic Effects among Women in Selected Rural Areas of Moundbird". IOSR Journal of Nursing and Health Science (IOSR-JNHS) , vol. 7, no.3 , 2018, pp. 30-33.