

A Study to Assess the Effectiveness of Structured Teaching Programme On Knowledge Regarding Consanguineous Marriages and Its Genetic Effects Among Young Adults At Selected College in Ajmer

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Abstract :

Introduction: Linguistically, consanguinity is a term that is derived from two Latin words "con" meaning common, or of the same and "sanguineus" meaning blood, hence, referring to a relationship between two people who share a common ancestor or blood. In other words, consanguineous marriage refers to unions contracted between biologically-related individuals.

Materials & Methods: For the present study a pre-experimental one group pre-test post-test design was used by taking 60 samples through convenient sampling technique at purposively study in D.A.V college at Ajmer. The data was developed and interpreted by using descriptive and inferential statistics on the basis of objectives. Reliability of the tool was done using Karl Pearson (Co-relation, co-efficient) formula and it was found to be significant i.e. for structured knowledge question ($r=0.80$).

Results: Findings of the study revealed that in pre-test, young adults had moderate knowledge (58.33%), 26.67% had inadequate knowledge and 15% had adequate knowledge. Whereas in the post-test most of the subjects had acquired moderate knowledge (31.67%), 56.67% had acquired adequate knowledge and 11.67% had inadequate knowledge regarding consanguineous marriages and its genetic effects. Evaluation of effectiveness of structured teaching programme in terms of gain in knowledge score

Discussion: The findings showed that pre-test knowledge was moderate in 58.33% of young adults, while 56.67% achieved adequate knowledge in the post-test. The mean knowledge score increased from **61.28% to 74.93%**, with a statistically significant improvement ($t=5.51, p<0.05$), indicating that the structured teaching programme was effective.

Keywords: Consanguineous marriages; genetic effects; structured teaching programme; knowledge; young adult.

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.⁽¹⁾

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.⁽²⁾

All human society however primitive or geographically isolated prohibits the mating of the first-degree relatives, namely the mating between parents and children and brother and sister. Any marriage between relatives less close than siblings (brother and sister) or parents and offspring are not necessarily outlawed, but the dividing line between the legal and illegal is hazy and varies somewhat between the countries.⁽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⁾

The consanguineous marriage and or cousin marriage is generally accepted and evaluated in the light of the genetic problem. The sickness that are frequently observed in countries with consanguineous marriage are

phenylketonuria, thalassemia, Landsteiner-Fanconi-Anderson's syndrome, haemophilia, nervous system disorders and many other sicknesses.⁽⁵⁾

Although a high proportion of marriages in Asia are consanguineous (i.e. contracted between close biological relatives), with some notable exceptions, there is a dearth of demographic and anthropological literature on the association between consanguinity and fertility.⁽⁶⁾

The International Conference on Population and Development (ICPD), which met in Cairo, and the Fourth International Conference on Women, in Beijing endorsed the rights of young people to reproductive health information and services.⁽⁷⁾

The incidence of consanguineous marriages is very high in the Pattusali population. First cousin marriages are preferred mostly. The consanguinity effects obtained in this population are also mostly confined to these marriages only. The inbreeding coefficient for the population is 0.02997. The consanguinity on fertility, mortality and morbidity are high.⁽⁸⁾

Consanguineous marriage is customary in many societies, but leads to an increased birth prevalence of infants with severe recessive disorders. It is therefore often proposed that consanguineous marriage should be discouraged on medical grounds. However, several expert groups have pointed out that this proposal is inconsistent with the ethical principles of genetic counseling, overlooks the social importance of consanguineous marriage and is ineffective.⁽⁹⁾

THE OBJECTIVES OF THE STUDY WERE

1. To assess the existing knowledge of young adults regarding consanguineous marriages and its genetic effects.
2. To administer structured teaching program regarding consanguineous marriages and its genetic effects to young adults.
3. To assess the post-test knowledge score after administering structured teaching program.
4. To determine difference between mean pre-test knowledge score and mean post-test knowledge score.
5. To find out the association between pre-test knowledge score with their selected demographic variables

THE STUDY ATTEMPTED TO TEST THE FOLLOWING HYPOTHESIS:

H₁: The mean post-test knowledge score will be significantly higher than the mean pre-test knowledge score.

H₂: There will be a significant association between pre-test knowledge scores of young adults with their selected demographic variables.

MATERIALS & METHODS

The methodology is a technique used to structure a study and to gather and information in a systematic fashion.

Research Approach

Research approach indicates the basic procedure for conducting study. Research approach tells the researcher how to collect the data and how to analyse it. It also suggests possible conclusions and to help the researcher in answering specific research questions in most accurate and efficient way.

An evaluative approach was used for the study. Evaluative research is an applied form of research that involves finding out how well a programme, practice, or a policy is working. The main goal is to evaluate the success of the programme.

Research Design

The research design adopted for the present study was pre-experimental one group pre-test post-test design. This design was adopted to assess the knowledge gained by the young adult on consanguineous marriage and its genetic effects, following the administration of structured teaching programme.

Variables of The Study

Independent variable

The variable that is believed to care or influence the behaviour and ideas.

In this study structured teaching programme was the independent variable.

Dependent variable

In this study, the dependent variable is the knowledge of young adults regarding consanguineous marriages and its genetic effects.

Demographic variables

It is the variables that is used to assess the characteristics of the sample. The demographic variables in this study are age, religion, type of family, educational status, occupational status, monthly family income, area of residence and previous knowledge regarding consanguineous marriages and its genetic effects.

Research Setting: The physical location and condition in which data collection takes place in a study. The study was conducted in D.A.V. college at Ajmer.

Population: In this study targeted population consists of young adult who are selected college at Ajmer.

Sample: In this study, sample is young adult with who fulfilled the inclusion criteria in D.A.V. college at Ajmer.

Sample Size: The proposed sample size is 60 young adults in D.A.V. college at Ajmer.

Sampling Technique: The sampling technique used for the study was non- probability purposive sampling technique is used. The young adults belong to D.A.V. college at Ajmer are selected for the data collection and meet the criteria is taken as sample.

Criteria of Sample Selection

The samples were selected with the following pre-determined set of criteria.

Inclusion criteria

- Young adults between the age of 18-25 years.
- Young adults who are present in the college at the time of study.
- Young adults who are willing to participate in the study.

Exclusion criteria

- Young adults below age of 18 years and above 25 years.
- Young adults who are not willing to participate in the study.

Data Collection Method

Demographic and structured knowledge questionnaire were used to collect data from young adult. Intervention was given in the form of structured teaching programme on consanguineous marriage and its Genetic Effects.

Description of Instrument**Part 1: Demographic variables****Part 2: Structured knowledge questionnaire regarding consanguineous marriages and its genetic effects****RESULTS****DEMOGRAPHIC PROFILE OF YOUNG ADULTS****Table – 1: Distribution of Young adults by their age****N=60**

1) Age of participate (in years)	Frequency	Percentage
a. 18-19	20	33.33
b. 20-21	19	31.67
c. 22-23	15	25.0
d. 24-25	6	10.0
Total	60	100.0

Table –42: Distribution of Young adults by their Religion**N=60**

2) Religion of participate	Frequency	Percentage
a. Hindu	30	50.0
b. Muslim	19	31.67
c. Christian	7	11.67
d. Jain	4	6.67
e. Others	0	0.0
Total	60	100.0

Table – 3: Distribution of Young adults according to their type of family**N=60**

3) Type of family	Frequency	Percentage
a. Nuclear	38	63.33
b. Joint	22	36.67
Total	60	100.0

Table – 4.1.4: Distribution of Young adults by their educational status**N=60**

4) Educational status	Frequency	Percentage
a. 1st year graduation	20	33.33
b. 2nd year graduation	30	50.0
c. 3rd year graduation	10	16.67
Total	60	100.0

Table – 5: Distribution of Young adults by their Father's education status**N=60**

5) Father's education status	Frequency	Percentage
a. Primary education	22	36.67
b. High school	19	31.67
c. Degree or above	14	23.33
d. Informal education	5	8.33
Total	60	100.0

Table –6: Distribution of Young adults by their Father’s occupational status**N=60**

6) Father’s occupational status	Frequency	Percentage
a. Self employed	8	13.33
b. Government employee	14	23.33
c. Private employee	23	38.33
d. Others	15	25
Total	60	100.0

Table – 7: Distribution of Young adults by their mother’s education status**N=60**

7) Mother’s education status	Frequency	Percentage
a. Primary education	27	45.0
b. High school	19	31.67
c. Degree or above	5	8.33
d. Informal education	9	15.0
Total	60	100.0

Table –8: Distribution of Young adults by their mother’s occupational status**N=60**

8) Mother’s occupational status	Frequency	Percentage
a. Home maker	20	33.33
b. Self-employed	20	33.33
c. Private employee	14	23.33
d. Government employee	6	10.0
Total	60	100.0

Table – 9: Distribution of young adults by their Monthly family income**N=60**

9) Monthly family income (in rupees)	Frequency	Percentage
a. Below 15,000	6	10.0
b. 15,001-30,000	14	23.33
c. 30,001-45,000	28	46.67
d. Above 45,001	12	20.0
Total	60	100.0

Table –10: Distribution of young adults by their Place of residence**N=60**

10) Area of residence	Frequency	Percentage
a. Urban	34	56.67
b. Rural	26	43.33
Total	60	100

Table – 11: Distribution of young adults by their previous knowledge**N=60**

11) (a)- Do you have any previous knowledge on consanguineous marriage and its genetic effect?	Frequency	Percentage
a. Yes	35	58.33
b. No	25	41.67
Total	60	100.0

Table –12: Distribution of Young adults according to Source of information**N=35**

11. (b) If yes, Sources of information	Frequency	Percentage
a. Books	18	30.0
b. Mass media	10	16.67
c. Health professional	3	5.0
d. Family relatives	4	6.67
Total	35	100

TABLE – 13: Knowledge level of young adults in pre-test and post test
N=60

Knowledge level	Pre Test		Post Test	
	Frequency	Percent	Frequency	Percent
a. Inadequate knowledge	16	26.67	7	11.67
b. Moderate knowledge	35	58.33	19	31.67
c. Adequate knowledge	9	15.0	34	56.67
Total	60	100	60	100

TABLE – 14: Mean percentage and standard deviation for pre-test knowledge of young adults
N= 60

Sl. No.	Knowledge Aspect	No. of Items	Max Score	Mean	Mean %	Median	SD
1.	General information of consanguineous marriages	4	4	2.517	62.93	3	1.08
2.	Cause, effects and risk of consanguineous marriage	15	15	9.45	63.0	10	2.73
3.	Genetic effects and genetic counselling	6	6	3.35	55.92	3	1.39
Overall Knowledge		25	25	15.32	61.28	16	3.70

TABLE – 15: Mean percentage and standard deviation for post-test knowledge of young adults
N= 60

Sl. No.	Knowledge Aspect	No. of Items	Max Score	Mean	Mean %	Median	SD
1.	General information of consanguineous marriages	3	3	3.1	77.50	3	0.85
2.	Cause, effects and risk of consanguineous marriage	15	15	11.267	75.11	3	2.32
3.	Genetic effects and genetic counselling	6	6	4.367	72.78	9	1.07
Overall Knowledge		20	20	18.733	74.93	15	3.06

TABLE –16: Comparison of pre-test and post-test knowledge score of young adults regarding consanguineous marriages and its genetic effects

N= 60

Sl. No.	Knowledge Aspect	PRE TEST		POST TEST		Mean difference	t Value	Df	Inference
		Mean	Mean	SD	SD				
1.	General information of consanguineous marriages	2.517	1.08	3.1	0.85	0.583	3.29	59	S
2.	Cause, effects and risk of consanguineous marriage	9.45	2.73	11.267	2.32	1.817	3.93	59	S
3.	Genetic effects and genetic counselling	3.35	1.39	4.367	1.07	1.017	4.49	59	S
Overall Knowledge		15.317	3.7	18.733	3.06	3.416	5.51	59	S

Among 60 young adults, the majority were aged 18–19 years (33.33%), Hindu (50%), from nuclear families (63.33%), and studying in the 2nd year of graduation (50%). In the pre-test, 58.33% had moderate knowledge, while in the post-test, 56.67% had adequate knowledge regarding consanguineous marriage and its genetic effects. The overall mean knowledge score increased from 15.32 ± 3.70 (61.28%) in the pre-test to 18.73 ± 3.06 (74.93%) in the post-test.

The obtained **t-value of 5.51 (df=59)** showed a statistically significant improvement in knowledge. Significant associations were found with **religion, type of family, area of residence, previous knowledge, and source of information.**

No significant association was found with **age, educational status, parents' education/occupation, and monthly family income.**

DISCUSSION

The findings revealed that youngest adults were aged 18–19 years (33.33%), belonged to Hindu religion (50%), and lived in urban areas (56.67%). Regarding knowledge, 58.33% had moderate knowledge, 26.67% inadequate knowledge and 15% adequate knowledge in the pre-test.

In the post-test, 56.67% had adequate knowledge, 31.67% moderate knowledge and 11.67% inadequate knowledge. The mean knowledge score increased from 61.28% in the pre-test to 74.93% in the post-test. The obtained t-value (5.51, $p < 0.05$) indicated a statistically significant improvement in knowledge, showing the effectiveness of the structured teaching programme. A significant association was found with religion, type of family, area of residence, previous knowledge and source of information.

CONCLUSION

The study concluded that youngest adults had moderate knowledge (58.33%) in the pre-test, while 56.67% had adequate knowledge in the post-test. The mean knowledge score increased from 61.28% in the pre-test to 74.93% in the post-test. The difference was statistically significant ($t = 5.51$, $p < 0.05$), indicating that the structured teaching programme was effective in improving knowledge regarding consanguineous marriage and its genetic effects. Significant associations were found with religion, type of family, area of residence, previous knowledge, and source of information.

RECOMMENDATIONS FOR FUTURE RESEARCH

- Plan and organize health education programme to educate individuals regarding consanguineous marriages and its genetic effects in both hospital and community settings.
- Structured teaching programme regarding consanguineous marriages and its genetic effects may be made available in school colleges, hospitals and PHCs.
- A similar study can be replicated on a large sample with a control group.

- A self-instructional module can be developed based on learning needs of the young adults.
- A comparative study can be undertaken to find out the difference in knowledge among young adults on consanguineous marriages and its genetic effects.
- A comparative study can be undertaken to compare the effectiveness of structured teaching programme and self-instructional module on consanguineous marriages and its genetic effects.
- The study can be conducted using various research design.
- Study can be done with randomization for better result.

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REFERENCES

1. Hussain R. Bittles, A.H. "Assessment of association between consanguinity and fertility in Asian population". J Health Popul Nutr. 2004 Mar;22(1):1-12.
2. Y.A. Jaffer, M. Afifi, F. Al. Ajmi and K. Alouhaishi. "knowledge, attitude and practice of secondary-school pupils in Oman". Reproductive Health, June 2008
3. A. Nath, C. Patil, V. A. Naik. "Prevalence of consanguineous marriages in rural community and its effects on pregnancy outcome". Indian journal of community medicine, 2004; vol 29(1)
4. Freire-Maia. N. "Effects of consanguineous marriages on morbidity and precocious mortality: genetic counseling." American Journal of human genetics, vol-9, page; 58-62.
5. Freire-Maia. N. "Genetic effects in Brazilian population due to consanguineous marriages." American Journal of human genetics. vol-16; 66-69.
6. Polit and Hungler, "Nursing research principles and method". Lippincott Williams & Wilkins, 7th edition 2004.
7. M. Hasan-zadeh-nazarabadi, G. H. Rezaeestab, F. Dastfan. "Study of youths knowledge, behavior and attitude towards consanguineous marriages." Iranian journal of public health, 2006; vol 35(3): page 47-53.
8. Jaber L, Romano. O, Halpern G. J, Shohat. T, "Awareness about problems associated with consanguineous marriages: survey among Israeli Arab adolescents". Isrel journal of medical science, December 2004, vol 32(12): page 1286-9.
9. Shoshana Shiloha, Haike Reznick, Mariassa Bat-Miriam Katznelson C, B and Bole Slav Goldmann. "Premarital genetic counseling to consanguineous couples: attitudes, beliefs and decisions among counseled, non counseled and unrelated couples in Isrel". School of medicine, March 2000.

