

A Study to Assess the Knowledge Regarding Consanguineous Marriages and its Genetic Effects among Young Adults with a View to Develop an Information Booklet at Selected Degree Colleges in Tumkur, Karnataka

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Abstract

Consanguineous marriages are respected and practiced among more than one billion of the world's population with consanguinity rates reaching 20–50%. Consanguinity increases the risk of congenital anomalies, autosomal recessive disorders, perinatal and antenatal morbidities. This study determines the knowledge regarding consanguineous marriages and its genetic effects among young adults.

Objectives: 1. To assess the knowledge regarding the consanguineous marriage and its genetic effects among young adults. 2. To determine the association between knowledge of young adults with selected demographic variables.

Methodology: A descriptive survey research approach was considered the best to assess the knowledge on consanguineous marriage and its effects were used for the study. The convenience sampling technique was used to select 100 young adults as the sample. A structure knowledge questionnaire was used to assess the knowledge. The collected data was analyzed by using descriptive and inferential statistics.

Results: The mean percentage of knowledge score (39.3) and standard deviation was (1.34). Calculated χ^2 values are showed significant association between monthly family income and father's education, with their overall knowledge scores.

Keywords: Assess; knowledge; consanguineous marriage and its effects; young adults.

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.¹

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.²

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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.³

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.⁴

Approximately 4 million babies are born each year. About 3%-4% will be born with a genetic disease or major birth defect. Approximately 1% of all babies will be born with chromosomal abnormality, which can cause physical problems and mental problem retardation more than 20% of infant deaths are caused by birth defects or genetic condition (e .g congenital heart defects, abnormalities). Approximately 10% of all adult and 30% of children in hospital are due to genetically related problems.. There was no increased in autosomal dominant, x linked or chromosomal disorders. The high consanguinity rate reported of certain genetic disease, mainly autosomal recessive and polygenic disorder.⁵

Review of literature

A study was conducted with 65 Israeli subjects who received genetic counseling while considering marriage to a close relative, 40 subjects married to a close relative who did not receive pre-marital genetic counseling, and 125 controls married to a non-relative and never having considered marrying a relative. It was found that 72% of the consanguineous couples who received pre-marital genetic counseling proceeded with their plans and married their relative; 86% of them reported that the counseling influenced their final decision to some degree. Compared to the non-counseled consanguineous group, consanguineous couples who received pre-marital genetic counseling

had fewer children, estimated their genetic risk as lower but its subjective significance as higher, and perceived genetic disorders as more severe. The implications of these results are discussed from both theoretical and practical standpoints.⁶

A study was conducted in Shindoli village of District Belgaum by interviewing 500 married women residing in the rural field practice area. As a result the prevalence of consanguinity was found to be 36%. Majority of the marriages were between first cousins (54.44%). Foetal loss was seen to be significantly higher in the consanguineous group as compared to non-consanguineous group ($p < 0.001$). No significant effect of consanguinity was observed on the number of stillbirths, neonatal mortality, obstetrical complications and congenital malformations. Only 7.6% of the women were aware about the hazards of a consanguineous marriage.⁷

A study was done to define the specific categories of genetic disorders associated with consanguineous marriages. Etiological categories and consanguinity rates were studied among 623 families with genetic syndromes, congenital anomalies or mental retardation, or both, seen at the National Center for Diabetes, Endocrinology and Genetics for the period August 2002 to August 2006. Comparisons were made for first cousin marriage rates in the study group and that for the general population. As a result First cousin marriages constituted 69%, 22% and 41.7% of marriages among families with autosomal recessive conditions, dominant, X-linked and chromosomal conditions and sporadic undiagnosed conditions respectively. The differences in rates of first cousin matings versus non-consanguineous matings were highly significant when comparing known figures in the general population with group 1 and 3, but not significant with group 2. Two messages to the public and health care personnel regarding consanguinity can be derived from this study. The first message is that among genetic disorders, only autosomal recessive disorders are strongly associated with consanguinity. The second message is that approximately 30% of sporadic undiagnosed cases of mental retardation, congenital anomalies and dysmorphism may have an autosomal recessive etiology with risks of recurrence in future pregnancies.⁸

Statement of Problem

A study to assess the knowledge regarding consanguineous marriages and its genetic effects among young adults with a view to develop an information booklet at selected degree colleges in Tumkur, Karnataka

Objectives

1. To assess the knowledge regarding the consanguineous marriage and its genetic effects among young adults.
2. To determine the association between knowledge of young adults with selected demographic variables

Methodology

Research Design:

The research design used in this study is descriptive design.

Setting of the Study:

This study was conducted in Seshadripuram degree college, Tumkur.

Population:

Population in the present study was all the young adults of Seshadripuram degree college Tumkur, Karnataka.

Sample and Sampling Technique:

Convenience sampling technique was used to draw the samples, which is the type of non-probability sampling technique.

Criteria for Selection of Sample:

a) Inclusion criteria

The study includes

- Young adults between the age of 20-25 years.
- Young adults who are present in the college at the time of study
- Young adults who are willing to participate in the study.

b) Exclusion criteria:

The study excludes;

- Young adults who are not willing to participate in the students

Development of the Information booklet

The steps adopted for the development of information guide sheet are

- **First draft:** First draft of information guide sheet regarding consanguineous marriage and its effects was developed based on objectives, extensive review of literature and suggestions obtained after consulting with experts.
- **Development of Criteria Checklist to evaluate the information booklet**
 - ✓ Identification and stating of objectives in behavioral terms depending on needs of learner.
 - ✓ Selection of the content. The content on selected knowledge on consanguineous marriage and its effects was selected through literature search and in consultation with the guide and experts.
- **Content Validity for information booklet**

The initial draft of information guide sheet was given to experts who include experts in the field of OBG department along with the tool. The necessary modifications were incorporated in the self-instructional module based on suggestions of experts.
- **Preparation of final draft of information booklet**

Selection and Development of Tool:

An instrument is a written device that a researcher uses to collect data. The instrument selected in the research should be as far as possible the vehicle which would be the best for obtaining the data to draw conclusions pertaining to the study.

Selection of the Tool

Structured knowledge questionnaire was used to assess the knowledge of young adults regarding consanguineous marriage and its effects.

Description of the Tool

The tool was constructed based on the research objectives, review of related literature, suggestions and guidance of experts in the field of OBG nursing. The tool consists of two sections namely, Socio demographic data and structured knowledge questionnaire.

Section I: It consists of 9 items related to demographic data of the subjects such as age, religion, father's occupation, mother's occupation, monthly family income, father's education, mother's education, area of residence and source of information regarding consanguineous marriage and its effects.

Section II: Structured Knowledge questionnaire consisted 30 items on Knowledge regarding consanguineous marriage and its effects.

Method of Data Analysis:

The data was analyzed by using Descriptive & Inferential statistics.

Descriptive statistics:

1. Organization of data in master sheet. Frequency and percentage distribution are used to analyze demographic data of students. Mean percentage and standard deviation are used to assess the level of knowledge of students.

2. Inferential statistics:

Chi square test was used to find association with the knowledge score and the demographic variables.

Results

The data organized and presented in four sections

Section- I:

Description of selected socio-demographic variables of young adults studying in selected sheshadripuram Degree College, Tumkur, Karnataka.

Section- II:

Finding related association between knowledge scores of young adults regarding consanguineous marriage and its effects with socio demographic variables

Section-I: Frequency And Percentage Distribution Of Selected Socio Demographic Variables Of Young Adults

The study finding demonstrated that among 100 young adults majority 78%(78) of them were between 18-25 years, 22%(22) of them were above 25 years of age.

With regard to the religion of young adults, most of them 45%(45) were Hindus, 28%(28) of them were Christians and rest of them 27%(27) were Muslims.

It was observed that majority of young adults fathers occupation 52%(52) were daily wages, 23%(23) of them were self-employees, 14%(14) of them were Government employees and 11%(11) of them were private employees.

According to the Mothers occupation of young adults majority of them 49%(49) were house wife, 28%(28) of them were self-employees, 16.0%(8) of them were private employees and 7%(7) of them were Government employees.

In relation to monthly income of family, majority of the young adults 52%(52) had Rs. 10000-20000, of monthly income , 21%(21) of them had monthly income of Rs.20001-30000, 15%(15) of them had below Rs.10000, and 12%(12) of them had above Rs.30000 of monthly family income.

Majority of the fathers of young adults had 34%(34) primary education, 25%(25) of them had degree or above education, 22%(22) of them had high school and rest of them 19%(19) had informal education.

It was recorded that, mothers education of young adults were found to be more 31%(31) in degree or above education, x 28%(28) of them had high school, 24%(24) of them had primary education and 17%(17) of them had informal education.

Among 100 young adults, majority of them 49%(49) were from suburban area, 27%(27) of them

were from urban area, and least of them 24%(24) were from rural area.

The socio demographic history of source of information shows that among 100 young adults majority of them 42%(42) were getting information from mass media, 27%(27) of them were getting from relatives, 20%(20) of them getting information from friends and least of them 11%(11) access the information from parents regarding consanguineous marriage and its genetic effects

Section-II

Knowledge Scores Of Young Adults Regarding Consanguineous Marriage And Its Effects

Table 1: knowledge scores of young adults regarding consanguineousmarriage and its effects

n=100

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	< 50%	99	99
Moderate	50--75%	1	1
Adequate	>75%	0	0.00
Total		100	100

Table 1 depicts that knowledge score of young adults regarding consanguineous marriage and its effects. In this study majority of the young adults 99%(99) had inadequate level of knowledge regarding consanguineous marriage and its effects and 1%(1) of them had moderate level of knowledge and none of them had adequate knowledge.

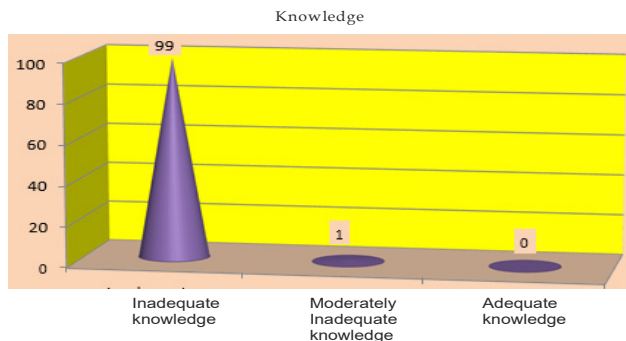


Figure 1: knowledge scores of young adults regarding consanguineous marriage and its effects

Section-II

Association Between Knowledge Scores Of Young Adults With Their Selected Socio Demographic Variables : The chi-square value of the knowledge of young adults were significant at P<0.05 level. It showed that there was significant association between monthly family income and father’s education knowledge scores of young adults regarding consanguineous marriage and its effects. Hence hypothesis H₁ is accepted.

Discussion

Section 1 finding:

The overall knowledge score of young adults regarding consanguineous marriage and its effects. In this study majority of the students 99%(99) had inadequate level of knowledge regarding consanguineous marriage and its effects and 1%(1) of them had moderate level of knowledge and none of them had adequate knowledge. The findings of the present study shows that the knowledge of young adults were inadequate and measures have to be undertaken to improve their knowledge level.

Section 2 finding:

The chi-square value of the overall knowledge scores of young adults were significant at P<0.05 level. It showed that there was significant association between monthly family income, father’s education, regarding consanguineous marriage and its effects with the overall knowledge scores of young adults regarding consanguineous marriage and its effects. Hence hypothesis H₁ is accepted.

The present study shows that there was significant association between knowledge of young adults with their selected socio demographic variables.

Conclusion

In this study majority of the students 99%(99) had inadequate level of knowledge regarding consanguineous marriage and its effects and 1%(1) of them had moderate level of knowledge and none of them had adequate knowledge.

The chi-square values of the knowledge scores of young adults were significant at $P < 0.05$ level with their selected socio demographic variables of monthly family income and father's education.

Recommendations for further research

Based on the findings of the present study and keeping in mind the limitations of the study, the following suggestions are offered to conduct studies on

- A similar study can be undertaken by utilizing other domains like attitude and practice.
- A similar study can be conducted by using different teaching methods.
- Similar study can be conducted for health care personals to identify their knowledge and attitudes of consanguineous marriage and its effects.
- Similar study can be conducted in different community to find out the significant difference between urban and rural community.

Limitation of the study

The study is delimited to:

- ❖ Young adults at selected degree college, in Tumkur.
- ❖ Selected degree colleges of Tumkur

Ethical Committee

Name of the Faculty : Devimaya R
Designation : Associate professor
Subject : OBG Nursing

Title Of The Topic : "A Study To Assess The Knowledge Regarding Consanguineous Marriages And Its Genetic Effects Among Young Adults With A View To Develop An Information Booklet At Selected Degree Colleges In Tumkur".

Ethical Committee Member Approval

1. Governing council members ;

1. Mr Amit Goel(Chairman)

2. Mr Deepak Mittal (Secretary)

3. Dr O P Gupta (Director)

4. Dr Ranganath mg (Principal ,nursing)

faculty adviso : Dr Ranaganath Mg
(Principal)

Source Of Funding : Self

Conflict Of Interest: Nil

References

1. Park.k, Text book of Preventive and Social Medicine, 21st Edition, Jabalpur, Bansaridas Bhanot Publishers, 2011;243-247.
2. Hussain R. Bittles, A.H. "Assesment of association between consanguinity and fertility in Asian population". J Health Popul Nutr. 2004 Mar;22(1):1-12.
3. 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.
4. A.Nath, C.Patil, V.A.Naik. "Prevalence of consanguineous marriges in rural community and its effects on pregnancy out come". Indian journal of community medicine, 2004; vol 29(1).
5. Freire-Maia.N. "Effects of consanguineous marriages on morbidity and precocious mortality: genetic counseling." American Journal of human genetics, vol-9, page; 58-62. Polit and Hungler, "Nursing research principles and method". Lippincot Worterr k. Lower company, 7th edition 2004.
6. M.Hasanzadeh- nazarabadi, G.H. Rezaestalab, F.Dastfan. "Study of youths knowledge, behavior and attitude towards consanguineous marriages."Iranian journal of public health,2006;vol 35(3):page 47-53.
7. Jaber L, Romano.o, Halpern G.J, Shohat.T, "Awareness about problems associated with consanguineous marriages:survey among Isreli Arab adolescents". Isrel journal of medical science, December 2004,vol 32(12): page 1286-9.