

A Study To Assess The Knowledge And Attitude Regarding Health Consequences Of Consanguineous Marriage Among Students Of A Selected College Of Berhampur, Odisha To Develop An Information Guide Sheet On Consanguineous Marriage

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Abstract: *Objective: To assess the knowledge and attitude regarding the health consequences of consanguineous marriage among the students of Khalikot University, Berhampur. Methods: An explorative study was undertaken where a total of 150 samples were taken using stratified random sampling and setting was selected through purposive sampling. The data were collected by using a socio-demographic Performa, structured knowledge questionnaire, and a structured Linkert attitude scale for assessing the knowledge and attitude of students regarding the health consequences of consanguineous marriage. Result: The study reveals that 62% of students had moderate knowledge and only 12% of them have inadequate knowledge regarding the health consequences of consanguineous marriage. The mean knowledge score was 11.5 with SD= 3.12. It also reveals that 64% of students have a positive attitude towards the health consequences of consanguineous marriage. The mean attitude score was 68.8 with SD=7.84. A significant positive correlation was established between the knowledge level and attitude score of students on the health consequences of consanguineous marriage ($r=0.017$). It also showed a significant association of knowledge regarding the health consequences of consanguineous marriage with age, religion, monthly family income, and father's educational status at 0.05 level of significance ($p \leq 0.05$). Conclusion: Good strategic intervention needs to be adopted to aware and sensitize the people of a different section of the community regarding problems of marrying close relatives through a widespread IEC and SBCC (Social and Behavioral Change Communication) to prevent health consequences from consanguineous marriage.*

Keywords: Knowledge; Attitude; Health Consequences; Consanguineous marriage

INTRODUCTION

In several parts of the world, it has been a tradition to marry biological relatives. The entire world has billions of people from various religious and ethnic groups live together and the marriage between the blood relatives is a common practice in most developing countries. Consanguineous marriage is the marriage or union between the people of the same blood or between the biological relatives.¹

Consanguineous marriage is most common in the Middle East, West Asia, and North Africa including India. The rate of consanguineous marriage in different countries depends on several factors like

religion, education level, tradition, and socio-economic status. This consanguineous marriage has a potential effect on the health status of wellbeing like increased risk for congenital anomalies in the families, hearing deficit, mental retardation, cerebral palsy and kyphosis, etc. Several studies also established its relation with consanguinity parents.²It also provokes its susceptibility to develop congenital heart disease and this consanguineous marriage being a potential factor, reversely making more complex congenital heart disease among the patients with CHD.³

It is estimated that globally about 20% of the human population live in the communities with a preference for consanguineous marriage and at least 8.5% of children have consanguineous parents. Prenatal mortality and infant mortality are important indicators of community health; consanguineous marriage increased the risk of having children with autosomal recessive disorders and may be a cause of prenatal and infant death that cannot be prevented.⁴

Around India, Consanguineous marriage has been practiced by many societies from time immemorial. It is widely practiced in some parts of India. One in two rural marriages in south India is Consanguineous.⁵The national-level prevalence of consanguineous marriage in India though declined from 16.2% in NFHS-1 to 14.3% in NFHS-4, but it is distressing in view to its potential health effects like adverse birth outcomes, increased infant and child morbidity & mortality. NFHS also documented in its data that Odisha is in a slightly increasing trend for consanguineous marriage i.e. 7% in NFHS-1 to 8.1% in NFHS-4.⁶

A study by Nath A et. al on the prevalence of consanguineous marriages in a rural community and its effects on pregnancy conducted at Belgaum noted that prevalence of consanguineous marriages was 36% and the awareness concerning the effects of consanguineous marriages was very low (7.6%) among the women.⁷

The youth mass as a potential force has a vital role in the prevention of consanguineous marriages by their adequate understanding of the health consequences of consanguineous marriage so that they can develop a positive attitude towards it. Hence the current study is attempted to explore the knowledge and attitude of college-going students regarding health consequences of consanguineous marriage to develop an information guide sheet on consanguineous marriage and its health effects.

MATERIAL AND METHODS

The explorative study design was adopted for the present study. The study was conducted on the students of Khalikote University, Berhampur. A total of 150 students were selected as study sample using stratified random sampling techniques. First, the researcher made three strata of students based on their graduation year. Then the researcher randomly selected 50 students from each stratum. The data were collected from the participant using validated structured questionnaires developed by the researcher which captured the information on different domains. Firstly, self-structured socio-demographic Performa was used for assessing socio-demographic profile. The socio-demographic variables include age, sex, religion, marital status, monthly family income, father's educational status, mother's educational status, and family history of Consanguineous marriage. Secondly, the participant's knowledge of consanguineous marriage was evaluated using structured knowledge questionnaires. This tool consists of 20 items carrying one score for each correct response. Hence the score was ranging from 0-20 represents their knowledge level on consanguineous marriage. A structured 5 point Linkert scale was applied to assess the attitude of students regarding the health consequences of consanguineous marriage. The highest score was 100 for the attitude scale. The tool had good structural validity which was validated by the experts from several disciplines and the reliability of the instrument was tested for its internal consistency using Split-half methods. The overall Pearson's correlation coefficient of tools shows good internal consistency (Knowledge Questionnaire $r=0.82$ & attitude scale $r=0.73$). The data was collected between the periods of November 2016 to December 2016 exclusively for one month from the study participant meeting the sampling criteria. Sampling inclusion criteria include all students who are willing to participate in the study and should be a student of graduation in the arts of Khalikot University, Berhampur, and should be available during the time of data collection. This study was approved by the institutional ethical committee and prior consent was taken from all study participants before the research tool was applied.

Statistical Analysis: All the data was filled, organized, coded, and entered into the master sheet. SPSS version 20 was used for statistical purposes and the data were analyzed by using descriptive and inferential statistics as per objectives and presented in the form of table and figures.

RESULTS

The present study shows that most of the students (58.7%) were between 17-21 years of age and a maximum of about 52% were found to be female students. The majority of students, 80% belonged to Hindu religion. Maximum students i.e. 46.7% have their gross monthly family income within 10001 to 20000 rupees. The educational status of father & mother reveals that a maximum of about 26.7% of fathers and 28% of mothers of students have their education up to primary level. Maximum about 68% of students have no family history of consanguineous marriage whereas only 32% of students have a history of consanguineous marriage in their family (Table-1).

The study findings also reveal that maximum no. of students i.e. 62% of students had moderate knowledge regarding the health consequences of consanguineous marriage and only 12% of students scored for inadequate knowledge (Table-2). It is also found that a maximum of 64% of students has a positive attitude towards the health consequences of consanguineous marriage (Table-3). The mean knowledge score of students on the health consequences of consanguineous marriage was 11.5 with SD= 3.12. The mean score percentage for knowledge was 57.5% and the mean attitude score was 68.8 with SD=7.84. The mean score percentage for attitude was 68.5% (Table-4).

A significant positive correlation was established between the knowledge level and attitude score of students on the health consequences of consanguineous marriage with r value 0.017. It is inferred that increase in knowledge will increase the attitude of students regarding the health consequences of consanguineous marriage (Table-5). There was a significant association of knowledge regarding health consequences of consanguineous marriage with age, religion, monthly family income, and father's educational status as the P -value for the Chi-square test was less than 0.05 level of significance (Table-6).

DISCUSSION

In the present study, it was found that a maximum of 62% of students had moderate knowledge and about 12% of students have poor knowledge of the health consequences of consanguineous marriage. The mean knowledge score of students on the health consequences of consanguineous marriage was 11.5 with SD= 3.12. Also, it reveals 64% of students have a positive outlook in their attitude towards health consequences of consanguineous marriage and the mean attitude score was 68.8 with SD=7.84. The finding of the study is consonant with a similar study conducted by Vani R et. al (2015), that parents had inadequate knowledge and moderate attitude regarding effects of consanguineous marriage on their offspring's.⁸ Soujanya JP et. al (2013) also noted in her study that 39% of young adults had moderate and 61% of them had inadequate knowledge regarding consanguineous marriage and its genetic effects which is partially congruent with these study findings.⁹

The present study found, a positive correlation between knowledge and attitude of students on the health consequences of consanguineous marriage ($r=0.017$). It deduced that the knowledge of students on the health consequences of consanguineous marriage has a strong impact on their attitude towards consanguineous marriage. This study finding is consonant with the study carried out by V Kusuma et. al (2017) on knowledge and attitude towards consanguineous marriage among adolescents suggested that knowledge has a positive correlation with the attitude of adolescents regarding consanguineous marriage ($r=0.864$).¹⁰ A review carried out by Bittles AH (2001) on background summary of consanguineous marriage stated that despite educational levels of people, the prevalence of cousin marriage remains unchanged. This disagrees with the current study findings that the educational level of an adult has a close association with their knowledge on consanguineous marriage.¹¹

In the current study, a significant association of knowledge regarding the health consequences of consanguineous marriage with socio-demographic variables like age, religion, monthly family income, and father's educational status was also established. Similar study findings were noted in the

studies of Soujanya JP et. al and SedhiM et. al (2012) that knowledge of youth adults regarding consanguineous marriage is significantly associated with the demographic variables like age, educational status of father etc.^{9,12}

Limitation of the present study includes, as it is an explorative study with a small sample size, it does not represent the entire community at large. The researcher only assesses the knowledge and attitude of college-going students on health consequences of consanguineous marriage despite involving other individuals of the community like parents, elder people, clinical & social experts, and researchersto rule out their perception and attitude towards consanguineous marriage. However, more analysis and research in different aspects of this topic need to be undertaken for more outlooks in this area.¹⁰⁻¹²

CONCLUSION

The knowledge and attitude of college students towards health consequences of consanguineous marriage divulged that students had moderate knowledge and a moderate attitude which is not fully satisfactory. Based on the objective, the researcher developed and distributed an information guide sheet on consanguineous marriage to raise awareness among them. Hence this study suggests taking good strategic steps to aware and sensitize the people of a different section of the community regarding problems of marrying close relatives through a widespread IEC and SBCC (Social and Behavioral Change Communication) campaign to prevent several health consequences aroused from it.

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Ethical statement: This study was approved by the institutional ethical committee and the prior consent from the parents was taken before data collection.

Conflict of interest: The authors declare that there is no conflict of interest.

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Table-1: Frequency (f) and Percentage (%) distribution of subjects according to their Socio-demographic Profile.

Variables	N= 150	
	Frequency (f)	Percentage (%)
Age in completed Year		
17-21	88	58.7
21-25	47	31.3
>25	15	10
Sex		
Male	72	48
Female	78	52
Religion		
Hindu	120	80
Muslim	18	12
Christian	12	8
Others	0	0
Monthly Family Income(in Rupees)		
<5000	8	5.3
5000-10000	30	20
10000-20000	42	28
>20000	70	46.7
Father's educational Status		
Illiterate	12	8
Primary education	40	26.7
Secondary education	28	18.7
Higher Secondary	35	23.3
Graduation or above	35	23.3
Mother's Educational Status		
Illiterate	20	13.4
Primary education	42	28
Secondary education	38	25.3
Higher Secondary	38	25.3
Graduation or above	12	8
Family History of Consanguineous marriage		
Yes	48	32
No	102	68
Presence of Inherited Disease		
Present	12	8
Absent	138	92
Family History of Inherited disease		
Present	30	20
Absent	120	80

Table- 2: Frequency (f) and Percentage (%) distribution of subjects according to their level of knowledge on the health consequences of consanguineous marriage.

N=150		
Level of Knowledge	Frequency (f)	Percentage (%)
Inadequate (<50%)	39	26

Moderate (51-75%)	93	62
Adequate (>75%)	18	12

Table- 3: Frequency (f) and Percentage (%) distribution of subjects according to their level of attitude on health consequences of consanguineous marriage.

N=150

Level of Attitude	Frequency (f)	Percentage (%)
Negative (<60%)	22	14.7
Positive (61-75%)	96	64
Highly Positive (>75%)	32	21.3

Table-4: Mean, SD, and Mean % of knowledge & attitude of subjects regarding health consequences of consanguineous marriage.

N= 150

Variables	Items	Max Score	Range	Mean	SD	Mean %
Knowledge	20	20	17-6	11.5	3.12	57.5
Attitude	20	100	82-53	68.5	7.84	68.5

Table-5: Correlation between the knowledge and attitude of college students regarding the health consequences of consanguineous marriage.

N=150

Variables	Mean	SD	Pearson's Correlation coefficient (r)	Inference
Knowledge	11.5	3.12	0.0179	p ≤0.05 *
Attitude	68.5	7.84		

P≤0.05*=Significant

Table 6: Association between levels of knowledge with selected demographic variables.

N=150

Demographic Variables	Chi-Square Value	Df	P-Value	Inference
Age	17.81	6	0.006	Significant
Sex	4.05	3	0.256	Not Significant
Religion	62.35	6	0.000	Significant
Monthly Family Income	27.88	9	0.000	Significant
Father's educational status	31.18	12	0.001	Significant
Mother's educational status	9.81	12	0.632	Not Significant
Family history of consanguineous marriage	3.31	3	0.346	Not Significant

P≤0.05*=Significant