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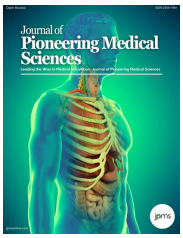

A Study to Assess the Practice and Attitude Regarding the Effects of Consanguineous Marriage in Selected Community Areas

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Abstract **Objectives:** Consanguineous marriages, defined as unions between individuals who are related by blood, are a significant cultural practice in India, particularly in certain regions and communities. **Aim:** The study aims to assess the Practice and attitude regarding the effects of consanguineous marriage in selected community areas. **Methods:** This is a descriptive cross-sectional study. The study will be conducted in rural area of Tamil Nadu, which has been selected. A selected rural area and young adults, aged 18 to 30 years will be used as the study population. For this study the sample size is 140. The participants are selected by using a simple random sampling technique. **Result:** The result of the study showed that in the aspect of knowledge, 71.43% were aware of consanguineous marriage, while 64.29% acknowledged that knowledge of genetic risks of consanguineous marriage. In practice 57.14 percent in the family were consanguineous and at the same time only 21.43 percent were getting genetic risk consultations. Significant associations between marital status and consanguineous marriage history with knowledge. **Conclusion:** The study concluded that the study concluded that the complicated relationship among consanguinity, knowledge, practice and socio-cultural factors in consanguineous marriages in India. Developing culturally sensitive health education programs is critical to decrease health risk while respecting cultural traditions

Key Words Cultural practices, health consequences, community perceptions, genetic counselling

INTRODUCTION

Consanguineous marriages, defined as unions between individuals who are related by blood, are a significant cultural practice in India, particularly in certain regions and communities.[1]

The prevalence of consanguineous marriages in India is notably high, particularly in southern states where it can account for up to 25.8% of all marriages [2]. Studies indicate that regions like Tamil Nadu report even higher rates, with approximately 47% of marriages being consanguineous. Northern and eastern states exhibit lower rates of consanguinity, often below 10% [3]. This trend is often attributed to cultural traditions that favor intra-familial unions, which are believed to strengthen familial ties and ensure compatibility between spouses [4].

In rural areas, where traditional practices are more deeply rooted, consanguineous marriages are more common compared to urban settings where modernization and education may influence marital choices [5,6].

Recent studies suggest a gradual decline in the prevalence of consanguineous marriages in certain parts of India, particularly among educated populations [7,8]. This decline is attributed to increasing awareness of the health risks associated with such unions and changing social norms that favour exogamous marriages. However, the persistence of consanguinity in rural areas indicates that cultural practices continue to exert a strong influence on marital choices [6,9]. Research indicates that educational interventions can play a vital role in changing attitudes towards consanguinity by increasing knowledge about the associated health risks [10,11].

Consanguineous marriages remain a prevalent practice in India, shaped by a complex interplay of cultural, social and economic factors. While these unions are often viewed positively within certain communities, the associated health risks cannot be overlooked. As awareness of these risks grows, particularly among younger generations, there may be a shift in attitudes towards consanguinity. Continued research and public health initiatives are essential to navigate the delicate balance between cultural traditions and health outcomes in the context of consanguineous marriages in India. The researcher aims to assess the practice and attitudes

regarding the effects of consanguineous marriage in selected community areas. The study seeks to identify actionable outcomes that can inform targeted health interventions and policy-making.

METHODS

This is a descriptive cross-sectional design. The study will be conducted in rural area of Tamil Nadu, which has been selected. A selected rural area and young adults, aged 18 to 30 years will be used as the study population. For this study the sample size is 140. Participants are selected using a simple random sampling technique, with measures to enhance representativeness and minimize biases. The study was approved by institutional ethical committee of Govt. Theni Medical college. (REF.NO.971/MEIII/19). Participants will be informed about the study, will give consent in order to participate and will be assured that the personal data received would be used only for research.

Inclusion Criteria:

- Ages from 18-30 years
- Selected rural area residents

Exclusion Criteria:

- People not willing to take part in the study.

Data Collection Tools

We will collect data through the following tools with a structured questionnaire for demographics, questions about practice and attitude. Based on the interview schedule, during face-to-face interview we will be conducting a structured questionnaire to get accurate data. To enhance reliability, the questionnaire was pre-tested in a pilot study, ensuring consistency in responses. Validity was maintained by designing questions based on established literature and expert reviews to ensure they effectively measured the intended variables.

Data Collection Procedure

We obtained prior permission from the village authorities and other relevant ethical bodies to conduct the study. Young adults meeting the inclusion criteria were identified and invited to participate. The study's purpose was explained to all participants and informed consent was obtained from them. Data collection was conducted over a specified period in rural areas using a structured questionnaire. A total of 140 face-to-face interviews, each lasting 15-20 minutes, were completed. While face-to-face interviews ensured clarity and accuracy in data collection, they may have been susceptible to interviewer bias. To address this, interviewers were trained to maintain neutrality and consistency throughout the process.

Statistical Analysis

Data will be entered and analysed systematically using either SPSS or Excel. Frequency distributions will be used to describe the participants' demographic data, current age, gender, education level, marital status, Consanguineous marriages rate and their attitude. The findings will be described in table, figures and illustrations where necessary. Chi-square tests will show relationships for some of the studied variables like age, education and attitudes toward consanguineous marriages.

RESULTS

The Table 1 provides the demographic data, the majority of participants were aged 21-25 years (42.86%), with a fairly even gender distribution of males (53.57%) and females (46.43%). Most participants were married (71.43%) and a significant portion had attained higher secondary education (35.71%). The most common occupation was student (28.57%), with a predominant joint family structure (50%).

Table 1: Demographic variables of the participants N = 140

Demographic Variables	Frequency	Percentage (%)
Age (years)		
18-20	30	21.43
21-25	60	42.86
26-30	50	35.71
Gender		
Male	75	53.57
Female	65	46.43
Marital Status		
Married	100	71.43
Unmarried	30	21.43
Divorced/Widowed	10	7.14
Education Level		
No formal education	5	3.57
Primary	20	14.29
Secondary	40	28.57
Higher Secondary	50	35.71
Graduate	25	17.86
Occupation		
Farmer	20	14.29
Skilled laborer	30	21.43
Unskilled laborer	15	10.71
Student	40	28.57
Homemaker	20	14.29
Other	15	10.71
Income Level		
Less than 10,000	40	28.57
10,000- 20,000	50	35.71
20,001- 30,000	30	21.43
More than 30,000	20	14.29
Family Structure		
Nuclear family	50	35.71
Joint family	70	50.00
Extended family	20	14.29
Religion		
Hindu	90	64.29
Muslim	30	21.43
Christian	15	10.71
Other	5	3.57
Consanguineous Marriage History		
Yes	50	35.71
No	90	64.29
Number of Children		
No children	70	50.00
1 child	30	21.43
2 children	20	14.29
3 or more children	20	14.29
Genetic Disorders in Family		
Yes	40	28.57
No	100	71.43

Table 2: Frequency and percentage distribution of knowledge score (N = 140)

Question	Yes (n and %)	No (n and %)
Are you aware of what consanguineous marriage is?	100 (71.43%)	40 (28.57%)
Do you know that consanguineous marriages can increase the risk of genetic disorders in offspring?	90 (64.29%)	50 (35.71%)
Have you heard of any genetic disorders caused by consanguineous marriage?	80 (57.14%)	60 (42.86%)
Do you think consanguineous marriages have an impact on child health?	110 (78.57%)	30 (21.43%)
Do you believe consanguineous marriage leads to higher infant mortality rates?	85 (60.71%)	55 (39.29%)
Are you aware that consanguineous marriages can increase the chances of congenital disabilities?	95 (67.86%)	45 (32.14%)
Have you ever been informed by a health professional about the risks of consanguineous marriages?	70 (50.00%)	70 (50.00%)
Do you think genetic counseling is necessary before a consanguineous marriage?	120 (85.71%)	20 (14.29%)
Are you aware of any preventive measures to reduce the health risks associated with consanguineous marriage?	75 (53.57%)	65 (46.43%)
Do you believe that awareness programs on the risks of consanguineous marriage are important?	130 (92.86%)	10 (7.14%)

Table 3: Frequency and percentage distribution of practice score (N = 140)

Question	Yes (n and %)	No (n and %)
Have you or your close family members had a consanguineous marriage?	80 (57.14%)	60 (42.86%)
Was consanguineous marriage encouraged by your family?	90 (64.29%)	50 (35.71%)
Did you marry a close relative (e.g., cousin)?	70 (50.00%)	70 (50.00%)
Do you believe marrying within the family helps preserve wealth?	50 (35.71%)	90 (64.29%)
Have you or your spouse consulted a doctor before the marriage to check for genetic risks?	30 (21.43%)	110 (78.57%)
Do you think consanguineous marriages should be promoted in the community?	40 (28.57%)	100 (71.43%)
Do you believe consanguineous marriages strengthen family bonds?	85 (60.71%)	55 (39.29%)
Have you encountered any health issues in your children that could be related to consanguineous marriage?	25 (17.86%)	115 (82.14%)
Have you discouraged others from marrying within the family?	60 (42.86%)	80 (57.14%)
Have you attended any educational sessions or awareness programs about the risks of consanguineous marriages?	20 (14.29%)	120 (85.71%)

Table 4: Association of knowledge with selected demographic variables

Demographic variable	Chi-square statistic	p-value	Df	Significance (p<0.05)
Age (years)	4.17	0.125	2	Not Significant
Gender	3.20	0.074	1	Not Significant
Marital Status	6.45	0.040	2	Significant
Education Level	5.30	0.150	3	Not Significant
Occupation	2.67	0.264	4	Not Significant
Income Level	3.89	0.142	3	Not Significant
Family Structure	1.56	0.457	2	Not Significant
Religion	4.76	0.092	3	Not Significant
Consanguineous Marriage History	6.23	0.030	1	Significant
Number of Children	3.45	0.178	2	Not Significant
Genetic Disorders in Family	2.10	0.092	1	Not Significant

Table 2 provides the knowledge score; a large percentage (71.43%) of participants were aware of what consanguineous marriage is and 64.29% recognized that it can increase the risk of genetic disorders in offspring. However, awareness of specific genetic disorders was slightly lower at 57.14%. A strong majority (78.57%) believed that consanguineous marriages impact child health and 67.86% were aware of the increased risk of congenital disabilities.

Table 3 summarize the practice score of regarding practice, 57.14% of participants or their family members had a consanguineous marriage and 64.29% reported that such marriages were encouraged by their families. However, only 35.71% believed marrying within the family helps preserve wealth and just 21.43% consulted a doctor to assess genetic risks before marriage. Additionally, 60.71% believed consanguineous marriages strengthen family bonds, though only 17.86% had encountered health issues related to the practice in their children. Finally, very few (14.29%) had attended any educational sessions on the risks of consanguineous marriage.

Table 4 reveals that marital status and consanguineous marriage history were significantly associated with knowledge regarding consanguineous wedding through chi square analysis ($\chi^2 = 6.45$, $p = 0.040$; $\chi^2 = 6.23$, $p = 0.030$). Age, gender, education level, occupation, income, family structure, religion, number of children and genetic disorders in family did not show statistically significant association with the outcome ($p>0.05$). This suggests that marital status and consanguineous marriage history influence knowledge and practices more than do other demographic factors in this setting.

DISCUSSION

The result of the study showed majority of participants (71.43%) were aware of consanguineous marriages and 64.29% understood the associated genetic risks. This level of awareness is encouraging, as it suggests that educational initiatives may be having an impact. However, awareness of specific genetic disorders was slightly lower at 57.14%, indicating a gap in knowledge that could be addressed through targeted educational programs. The fact that most participants (78.57%) believed consanguineous marriages impact child health aligns with previous research indicating that awareness of health risks is crucial in communities where such marriages are prevalent [12,13].

This belief is further supported by the recognition of increased risks of congenital disabilities by 67.86% of participants, underscoring the need for continued public health education regarding the implications of consanguinity [13].

In terms of practice, the data reveal that 57.14% of participants or their families had engaged in consanguineous marriages, with 64.29% reporting family encouragement for such unions. This finding highlights the cultural acceptance and familial support that often accompany consanguineous marriages, which can perpetuate the practice despite known health risks [4,14].

The significant associations found between marital status, consanguineous marriage history and knowledge ($\chi^2 = 6.45$, $p = 0.040$; $\chi^2 = 6.23$, $p = 0.030$) suggest that individuals with personal experience in consanguineous marriages may have a more nuanced understanding of the associated risks, highlighting the importance of personal experience in shaping knowledge and attitudes [1].

Furthermore, the lack of significant associations between other demographic factors such as age, gender, education, occupation, family structure and religion indicate that marital status and consanguineous marriage history are key determinants of knowledge and practices in this context. This finding is consistent with previous research that has shown that educational attainment often correlates with awareness of health risks associated with consanguinity, suggesting that educational interventions could be particularly effective in reducing the prevalence of consanguineous marriages [15].

CONCLUSION

The study indicates a reasonable level of awareness regarding consanguineous marriages and their health implications, there remain significant gaps in knowledge, particularly concerning specific genetic disorders. The cultural acceptance of consanguineous marriages and the familial encouragement for such unions suggest that interventions must be culturally sensitive and community-oriented to be effective. Future research should focus on developing educational programs that address these gaps and promote informed decision-making among individuals and families considering consanguineous marriages.

Limitations

The study is limited by use of only one rural area. This could introduce bias in self-reported data and it uses a cross-sectional design, hence behavior cannot be assured to be causative. In addition, rural areas with limited healthcare access may have had an effect on participants' knowledge and may have gone some way to explaining the findings.

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