Volume : 5 | Issue : 5 | May 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Research Paper

Effect of Education on The Rate of Anomalies in Consanguineous Marriages of Muslim Population of Kurnool Town

Biological Science

KEYWORDS : anomalies, consanguinity, education.

Dr. S. Shamshad Department of Zoology, K.V.R. Govt. College for Women, Kurnool, A.P.

S. Shameela Department of Biochemistry, S.K. University, Anantapur, A.P.

SM. Sameer Hasan Narayana college, Kurnool, A.P.

ABSTRACT

Muslims represent India's largest religious minority group at nearly 13% of the country's population. Consanguineous marriage is a common and preferable custom of marriage among Muslim population. Consanguinity is an important risk factor in genetic diseases and in congenital malformations. This study was done to compare the frequencies of anomalies among women with different education levels of Muslim community in Kurnool town. The study shows that out of 1050 married women, 26% were illiterate with nil education and 74% of the women were dividing into different education groups based on Primary (up to 5th class), Secondary (up to 10th class) and Higher Education (above 10th class). Overall, the results reveal that the frequency of anomalies is greater among consanguineous marriages with nil education group and fewer or complete absence were observed among non consanguineous marriages with secondary education group.

INTRODUCTION

Consanguineous marriage has long been a controversial topic, with particular attention focused on adverse health outcomes. In general, consanguinity is influenced by geographic, demographic, religious, cultural, and socio-economic factors (Saadat, 2007). The highest rates of consanguineous unions were associated with low socio-economic status, low education, and living in rural areas (Bener and Hussain, 2006; Jurdi and Saxena, 2003). Previous literature reveals that, women married to their blood relatives experienced a greater amount of pregnancy wastage and child loss as compared to those women married to their distant relatives or non-relatives. Children from consanguineous marriages are at a greater risk of inheriting harmful condition caused by homozygous recessive genes and consequently suffer autosomal recessive genetic disorders (AshaBai & Jacob John,1982; Sureender et al, 1998).

The prevalence of consanguineous marriages is above 50% in Muslim countries of the Middle East, Pakistan and Afghanistan, but there is no specific guidance in the Holy Qur'an that could be interpreted as encouraging consanguineous marriages (Hussain R, 2000). Indeed, according to one of the hadiths, recorded pronouncements of the Prophet Mohammad cousin marriages were best discouraged. So, it is traditional and socially practice taken up by Muslim countries. The prevalence of still births and birth defects is substantially greater in the offspring of first cousin parents (Stoll, 1994). Moreover, studies also reveal that the risk of congenital heart diseases is considerably higher among children with parental consanguinity than non-consanguinity (Gowda & Ramachandra, 2006). Kulkarni & Kurian (1990) found a significantly higher rate of stillbirths, congenital malformations, low birth weight and head circumference among children born within consanguineous marriage compared to non-consanguineous marriage.

The present investigation meets the critical need to update the knowledge and information on consanguineous marriages and its effects on pregnancy outcomes by education groups across Kurnool town. In addition, it quantifies consanguineous marriages effect on adverse pregnancy outcomes across education groups.

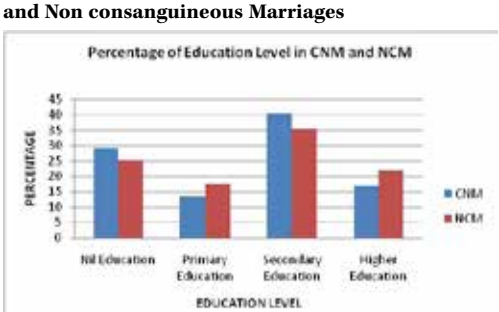
MATERIALS AND METHODS

This study collected primary data from a sample of 1050 married women between the ages of 15-49 using random sampling method and was personally interviewed using a structured questionnaire in Kurnool town to determine the prevalence of consanguineous marriages. A family pedigree was drawn for each marriage to record the type of consanguineous relationship involved. The specific questions asked in this survey are "Are you related to your husband by blood? If so, what is the relationship?" (Options given for this question are no relation, Cousin, Others). Similarly, questions were asked to women concerning the education status, Nil Education, Primary Education, Secondary Education, Higher Education and the history of pregnancy outcomes such as stillbirth, miscarriage, spontaneous abortion and induced abortion, (Desai et al, 2005). The data obtained was fed into the computer and compared and contrasted with the rate of consanguineous and non-consanguineous marriages with respect to financial status.

RESULTS AND DISCUSSION

Consanguineous marriage is deeply-seated and deeply rooted in many communities, but leads sometimes to painful consequences by increasing birth prevalence of infants with sever recessive disorders. This study investigated the association between consanguinity and education level of muslim women in Kurnool town. As the practice of consanguineous marriages is influenced by cultural, social, economic, religious, geographic, and demographic factors (Fuster & Colantonio, 2002; Khlat, 1988), some authors suggested that the highest rates of consanguineous unions were strongly associated with lower parental educational levels, marriage at an early age, low socio-economic status, illiteracy, and rural residence (Alper et al, 2004; Hussain & Bittles, 1999). Even in countries where consanguinity is prevalent because of cultural practices, the association with education level and occupation status is mainly seen among women, but not in men.

Figure-1: Percentage of Education Level in Consanguineous and Non consanguineous Marriages



Volume : 5 | Issue : 5 | May 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

A majority of the literature on consanguinity in India focuses primarily on the southern states. However, this study presented a comparative assessment representative of four education levels in Muslim population of Kurnool town of Andhra Pradesh state. For this study, total of 1050 Muslim women were interviewed, of which 17 % were Consanguineous and the remaining 83% were non consanguineous (Figure-1). Of the consanguineous 29.21% were illiterates, 13.48% were completed their primary education, 40.45% were completed secondary education and 16.86% were belong to above 10 th class. Of non consanguineous 25.22% were illiterates, 17.43% were completed their primary education, 35.45% were completed secondary education and 21.90% were belong to above 10 th class. Our results have demonstrated that maternal education level was seen to influence the woman's pattern of life, access to health care services and her child's health. Low educated women were mainly the housewives showing high proportion of consanguineous marriages.

Table-1: Anomalies in different educational levels in CNM and NCM

ANOMALIES	Nil education		Primary education		Secondary education		Higher education	
	CNM (52)	NCM (220)	CNM (24)	NCM (152)	CNM (72)	NCM (309)	CNM (30)	NCM (191)
Abortions (%)	18	13	07	05	NIL	06	18	13
IUD (%)	09	05	08	03	02	NIL	09	05
NND (%)	20	10	09	10	05	02	20	10
CHDS (%)	08	02	10	03	02	NIL	08	02
PMB (%)	06	03	06	04	03	06	06	03

CNM: Consanguineous Marriage NCM:Non consanguineous Marriage

The frequency of congenital disorders was highly related to the level of maternal education. Table-1 shows the Education wise prevalence of disorders in consanguineous and non consanguineous marriages. In nil education group, the rate of anomalies viz, abortions (18%); IUD (9%), NND (20%), CHD (8%), PMB (6%) are more in consanguineous marriages compared to the non consanguineous marriages abortions (13%); IUD (5%), NND (10%), CHD (2%), PMB (3%) respectively. Almost the same trend is followed in the mothers those completed primary education. Female education is the major clue for future health of populations through two main trajectories. First, maternal state of well-being, as education rectifies women's awareness that is reflected on the quality of her life.

The higher the woman's level of education, the healthier will be her life through healthier active life style, nutrition habits, economic conditions and personal hygiene. No abortions were observed in the mothers of consanguineous marriages those completed secondary education and IUD (2%), NND (5%), CHD (2%), PMB (3%) were observed in consanguineous marriages. But 6% of Abortions & PMB's; and no IUD's & CHD's were reported in non consanguineous marriages of the same education level. But 2% of NND's were observed in that group. These findings have clear implications for design and conduct of genetic epidemiological studies that investigate the effects of consanguinity on human health. Associations between consanguinity and women's education level were reported in several other societies (Bittles & Egerbladh, 2005; Jurdi & Saxena, 2003) although Hussain and Bittles (1998) could not confirm this negative correlation for women with primary school education.

Female education will motivate women to continue their carrier, discourage early marriage, have a better marriage prospectus and even if cultural norms compel consanguineous marriages, girls will be aware of the importance of pre-marriage counseling and access to health care services throughout their reproductive life and through the quality of life of her offspring. In present investigation, in higher education group, the rate of congenital disorders is more in consanguineous marriages than non consanguineous marriages. Education strengthens mother's awareness of appropriate feeding practice, regular childcare, early detection and better management of life threatening conditions and efficient rising of children.

CONCLUSION

The current study found the greatest risk of examined birth defect phenotypes in association with the lowest household education status and rough gradient associations of household index with abortions, IUDs, CHDs, NNDs and PMBs. Nil and primary education status is often considered to be a marker for other factors in the pathway to worse health outcomes. Overall, there is still much work to be done to increase knowledge and awareness of the problems associated with consanguinity among the majority of the members of the Muslim communities in which consanguineous marriages are still the preferred type of union.

ACKNOWLEDGEMENTS

I am very much grateful to UGC for funding the project under minor research project scheme MRP-4812/14(SERO/UGC).

REFERENCES:

1. Alper OM, Erengin H, Manguoglu AE, Bilgen T, Cetin Z, Dedeoglu N, et al. Consanguineous marriages in the province of Antalya, Turkey. Ann Genet. 2004; 47:129–38.
2. AshaBai PV & Jacob John T. "The effect of consanguinity on the gestation period and anthropometric traits of the new-born in Southern India", Tropical Geography and Medicine, 1982; 34: 225-229.
3. Bener A, Hussain R. Consanguineous unions and child health in the State of Qatar. Paediatr Perinat Epidemiol. 2006; 20:372-8.
4. Bittles AH, Egerbladh I. The influence of past endogamy and consanguinity on genetic disorders in northern Sweden. Ann Hum Genet. 2005; 69:549-58.
5. Desai S, Dubey A, Joshi BL, Sen M, Shariff, A and Vanneman R. India Human Development Survey: Design and Data Quality. University of Maryland, College Park, MD. 2005.
6. Fuster V, Colantonio SE. Consanguinity in Spain: socioeconomic, demographic, and geographic influences. Hum Biol. 2002; 74:301–15.
7. Gowda R, & Ramachandra NB. "Parental consanguinity increases congenital heart diseases in South India", Annals of human biology. 2006; 33 (5-6): 519-528.
8. Hussain R, Bittles AH. Consanguineous marriage and differentials in age at marriage, contraceptive use and fertility in Pakistan. J Biosoc Sci. 1999; 31:121–38.
9. Hussain R, Bittles AH. The prevalence and demographic characteristics of consanguineous marriages in Pakistan. J Biosoc Sci. 1998; 30:261-75.
10. Hussain R. Community perceptions of reasons for preference for consanguineous marriages in Pakistan. J Biosoc Sci 2000; 31: 449-461.
11. Jurdi R, Saxena PC. The prevalence and correlates of consanguineous marriages in Yemen: similarities and contrasts with other Arab countries. J Biosoc Sci. 2003; 35:1- 13.
12. Khlat M. Consanguineous marriages in Beirut: time trends, spatial distribution. Soc Biol. 1988; 35:324–30.
13. Kulkarni ML & Kurian M, "Consanguinity and its effect on fetal growth and development: a south Indian study", Journal of Medical Genetics. 1990; 27(6): 348-352.
14. Saadat M. Consanguineous marriages in Iranian folktales. Community Genet. 2007; 10:38-40.
15. Stoll C, Alembik Y, Dott B & Feingold J. "Parental consanguinity as a cause of increased incidence of birth defects in a study of 131,760 consecutive births", American journal of medical genetics, 1994; 49 (1): 114-117.
16. Sureender S, Prabakaran B, & Khan AG. "Mate selection and its impact on female age, pregnancy wastages, and first child survival in Tamil Nadu, India", Social Biology, 1998; 45: 289-301.