

# The Knowledge and the Attitude of Youth Couples On/Towards Consanguineous Marriages in the North of Iran

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## ABSTRACT

**Aim:** Consanguinity is an important risk factor in genetic diseases and in congenital malformations. This study was done to assess the knowledge and the attitude of youth couples on/towards consanguineous marriages in the north of Iran.

**Material and Methods:** This descriptive-analytic study was carried out on 250 young people (125 couples) in Northern Iran during the year 2008. The information was obtained by a direct interview and the questionnaire included four sections which comprised of 39 closed questions. The data was analyzed by using SPSS, version 11.5 and the Chi-Square test.

**Results:** Consanguineous marriages were observed in 32.5% of the couples. Consanguineous marriages were determined in 20.87% and 11.63% of the rural and the urban residents

respectively. The knowledge of the youth was poor (49.2% of the females and 40% of the males) on the genetic consequences of inbreeding. The results on the attitude of youths showed that 38.8% of the subjects had agreed and that 61.2% of them had disagreed on consanguineous marriages.

There was a significant association between the knowledge of the youths and their attitudes towards consanguineous marriages with their ethnicity, education and residency ( $p < 0.05$ ).

**Conclusions:** This study showed that the knowledge of the youth couples towards consanguineous marriages was poor. Health education programs are needed to improve the knowledge of the youth couples on consanguineous marriages; that they are a potential risk factor in congenital malformations and in genetic diseases in the offspring.

**Key Words:** Consanguineous marriage, Youth, knowledge, Attitude, Iran

## INTRODUCTION

Congenital malformations are an important cause of offspring mortality, morbidity, bedridden, familial problem and inability [1,2].

Several studies have shown that consanguineous marriages can increase the disability of the offspring due to birth defects [3] and the pro-reproductive mortality [4,5]. A positive association has been shown between the multiple malformations and consanguineous marriages [6]. Also, an association between consanguinity and deafness has been reported [7].

Consanguineous marriages (familial marriages) are more common in Asia and Africa, particularly among Muslims and to different degrees among Christians and Hindus [8].

Consanguineous marriages are not common among people of the Western countries [9].

Consanguineous marriages are widely preferred among a majority of the populations in Afghanistan (46.2%) [10] and Turkey (40.7%) [2].

In the Arab countries, consanguineous marriages have been reported from (25% to 60%) [11], Syria (35.4%) [12], Jordan (51.25%) [13] and Lebanon (42%) [14], especially among first cousins and so, there are tribal populations in some areas with more prevalence [11].

In the Middle East, Iran is one of countries with an elevated grade (38.6%) of inbreeding [15]. Also, in Iran Georgian consanguineous marriages have been reported to be up to 23.3% [16].

In our country, the rate of consanguineous marriages is high, in comparison to that in other areas. Thus, it can be considered as

one of the most important reasons behind the genetic disorders, birth defects and the infants' inabilities [15].

The knowledge and the attitude of youths is effective in consanguineous marriages. The averages of the knowledge and the attitude in different societies are varying [6].

With respect to the important role of consanguineous marriages in congenital diseases and the high rates of some birth defects such as the neural tube defects (NTDs) in this area, this study was done to assess the knowledge and the attitude of youth couples on/towards consanguineous marriages in the north of Iran.

## METHODS

This descriptive-analytic study was done on 250 young people (125 couples) who were referred to the Gorgan Health Centre for premarital advisory and laboratory tests in Gorgan, Northern Iran, during the year 2008. The ethical approval for this study was obtained from the ethics committee of the Golestan University of Medical Sciences. The subjects were selected by using a simple sampling method. The consent agreement form was submitted by all the participants. All the subjects were young people who were going to get married.

Ordinarily, it was necessary for each couple (inhabitants of the urban or the rural areas) to attend these centres for pre-marital tests.

The data were obtained by direct interviews. The subjects filled out their personal characteristics and their knowledge, attitude and practice on/towards/on consanguineous marriages with their questions concerning the degree of the relationship, which were obtained through direct interviews.

The questionnaire included four sections which comprised of 39 closed questions.

The first section included variables of the socio-demographic status, which included age, the level of education and the ethnicity (14 questions). The other sections were about the knowledge (8 questions), attitude (17 questions) and the practice (one question).

The Likert method (a five-point scale) was applied to validate the data about the youths' attitudes. The internal consistency index of the questionnaire was specified by the Cronbach's alpha coefficient (Knowledge questions: 0.749, Attitude questions: 0.75). Each correct knowledge acquired a score of 2 and each incorrect one acquired a score of 1. The scores of the knowledge questions were varied, about 8 to 16 (8-10 poor, 11-13 moderate, 14-16 good knowledge). The scores for the attitude were arranged so that scores of 11-22 were regarded as negative, those of 23-33 were regarded as neutral and those of 30-34 were regarded as positive. A negative attitude was defined as a tendency towards consanguineous marriages and Positive in opposite of it. The data was analyzed by using SPSS, version 11.5 and the Chi square test. A p value of less than 0.05 was considered as significant.

### RESULTS

The mean ages of the males and the females were 24.4±4.6 and 20.8±4.8 years, respectively. 47.9% and 52.1% of the subjects resided in the urban and the rural areas, respectively.

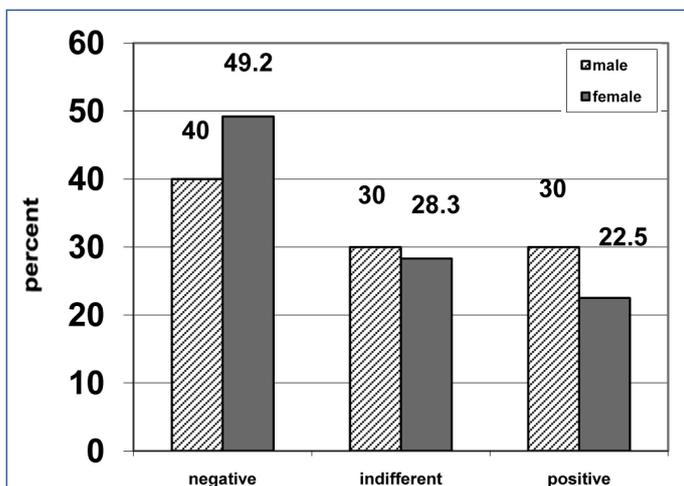
The frequency of consanguinity of the couples was 32.5%. The data which concerned the youths' knowledge regarding the consanguineous marriages revealed that 44.6%, 29.2% and 26.3% had a poor, moderate and a favourable knowledge, respectively [Table/Fig-1].

A significant association was observed between the youths' knowledge and their level of education (P<0.05), ethnicity (P<0.002) and their habitat (P<0.05).

The subjects with a higher level of education had more knowledge about the genetic outcomes of inbreeding.

The data which concerned the youths' attitude regarding consanguineous marriages revealed that 30.9%, 33.9% and 35% had a good, moderate and a poor attitude, respectively [Table/Fig-2].

The data on the youths' attitude showed that 38.8% had agreed and that 61.2% had disagreed on consanguineous marriages.



[Table/Fig-1]: knowledge of Youths about consanguineous marriage in North of Iran

A significant correlation was seen between the youths' attitude towards consanguineous marriages and their level of education (P<0.001), ethnicity (P<0.0006), habitat (P<0.05) and their occupation (P<0.05).

The percentage of the subjects who agreed to consanguineous marriages was higher in the males (58.3%) than in the females (35.8%).

There was a prominent relationship between the youths' marriages and their parents' marriages with respect to a consanguineous mating (P<0.05).

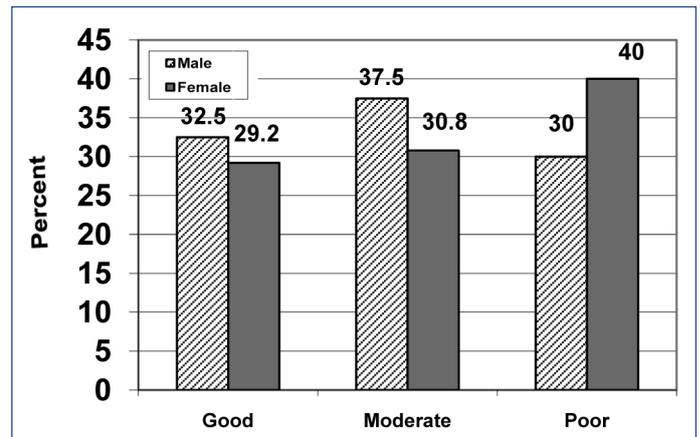
Furthermore, there was a correlation between their practical and having sisters or brothers with consanguineous married (P<0.005).

91.7% of the youths who were not in a consanguineous marriage, had a negative attitude towards it. Moreover, the prevalence of the consanguineous marriages was 64.2% in the rural areas, while it was 35.8% in the urban areas.

There was a significant association between the type of marriage (consanguineous or non consanguineous) and the ethnicity, habitat and the education of the youths (P<0.05).

56.8% of the parents' couples with consanguineous marriages had familial relation, but this rate was 24% in the parents' youths without consanguineous marriages.

The knowledge of the youth couples who were in consanguineous marriages was low (15.9%), in comparison to those who were not in consanguineous marriages (84.1%) (P<0.05).



[Table/Fig-2]: Attitude of Youths about consanguineous marriage in North of Iran

Country	Authors	Year	Total (%)	First Cousin (%)
Jordan	Khoury et al. [13]	1992	51.25	33
Saudi Arabia	El-Hazimi et al. [29]	1995	57.7	28.4
Oman	Rajab et al. [30]	2000	20.8	24.1
Turkey	Alper et al. [2]	2004	33.9	12.8
Yemen	Gunaid et al. [31]	2004	44.7	71.6
Qatar	Bener et al. [6]	2006	54	34.8
Iran, Mashhad	Hasanzadeh et al. [8]	2006	28.4	77
India	Mukherjee et al. [27]	2007	7.3	50
Lebanon	Kanaan et al. [14]	2008	43	31
Pakistan	Hussain & Bittle [26]	1998	60	48
Iran, Gorgan	Present study	-	32.5	78.2

[Table/Fig-3]: The rate of consanguineous marriage and first-cousin in different studies.

## DISCUSSION

In this study, the rate of the consanguineous marriages was 32.5%. This rate was higher in the north east of Iran (28 %) [1]. A study from the whole of Iran which was done during the year 2004, reported that the mean proportion of the consanguineous marriages in the country was 38.6%, ranging from 15.9% in the northern provinces to 47.0% in the eastern provinces [15].

The prevalence of consanguineous marriages varies worldwide. Such marriages are rarely reported in north America, the European countries and Australia [17,18].

The rates of the consanguineous marriages are remarkable in the Middle East and in South, Central and West Asia [19]. It was found that in the Middle East, Pakistan had the most rates of inbreeding marriages (60%) [20]. Qatar (54%) [21] and Saudi Arabia, with a 51.3% rate, came in the next grade [22].

Also, the rates of consanguineous marriages were reported to be 30.6% in Turkey, 28.9% in Egypt and 25% in Lebanon [23,24]. The rates of consanguineous marriages in different countries have been depicted in [Table/Fig-3].

In our study, it was found that there was a tendency (32.5%) towards consanguineous marriages. The higher tendency towards inbreeding in Iran and other countries could be associated with some traditional beliefs and more family bonds [8], which could be attributed to the poor educational status in the rural areas or to parents who were in consanguineous marriages [9].

In this study, consanguineous marriages were higher in the rural than in the urban areas. Our finding was similar to the finding of a study which was done in Turkey [2]. The higher rates of the consanguineous marriages in the rural areas could be due to the low educational status, close families, the culture and the effect of the parents' positive opinions towards consanguinity. The findings of this study showed the influence of the parents on the marriages of their offspring, which was similar to the finding of a study from Mashhad, north east of Iran [8].

In our study, 44.6% of the youths had a poor knowledge on the genetic consequences of inbreeding. This rate was lower than that of another study from Iran (75%) [8].

The current study revealed the high attribute to consanguineous marriages. Our finding in this regards, was higher than that of another study from Iran [8].

Also, there was a positive association between the inbreeding marriages and the youths' ethnicity. Similar findings have been reported by Saadat et al. [15].

In our study, the poor knowledge of the youth couples on consanguineous marriages may have affected their opinion, whereas a high level of education could have affected the youths' knowledge and attitude towards non consanguineous marriages. In this study, a good knowledge and attitude were significantly seen in the highly educated people.

Although, the influence of the consanguineous marriages in the world is declining over time, it is particularly popular in the Islamic societies and among the poor and less educated populations in the Middle East and in South Asia [19, 21].

In spite of the important knowledge towards inbreeding marriages, it can go to a greater probability of congenital malformations [25], 38.8% of the youth agreed that the consanguinity was due to traditional customs and a variety of ethnic and family ties.

In Saudi Arabia, the rate of the second cousins consanguineous marriage is higher than the first cousins marriage [22] but in our study, the first cousins consanguineous marriage took the first place. In this regards, our results were similar to those of other studies from Mashhad, Iran [8] and from Karachi in Pakistan [26].

There are high rates of consanguineous marriages in many Arab countries, particularly among the first cousin marriages, which constitute 25%-30% of all the marriages. Qatar, Yemen and United Arab Emirates are the countries with increasing rates of consanguinity in the present generation [25] [Table/Fig-3]. Among the muslim population of West Bengal, the consanguineous marriage rate is 7.3% and the marriages among the first cousins constitute 50% of all the marriages [27]. This may be due to the religious and the cultural beliefs and the society restrictions in these populations [28].

## CONCLUSIONS

This study showed that the knowledge and the attitude of youth couples regarding consanguineous marriages is poor. Health educational programs are needed for an increase in the knowledge of young people with regards to consanguineous marriages as the main potential risk factor of genetics disorders and congenital malformations in their offspring.

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