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Rate of Consanguineous Marriages in Afghan Society and Its Effects on Health

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Abstract

Purpose: This study exposes the rate of consanguineous marriages in afghan population and its effects on the health of their children.

Methodology: A questionnaire was designed to collect the data. A total of 2300 respondents were asked about their socio-demographic and attitude towards consanguineous marriages in which 2201 responded according to criteria. The paper describes the quantitative and qualitative types of surveys, which include field observations and doctor interviews for various positions in private and public health organizations. The target population was the Afghan Community as a whole in Afghanistan.

Findings: By stratified sampling, the respondents highlighted that 69% married people have Paternal and maternal relationship with their partners, among which 47.4% and 33.9% have Paternal and maternal relations respectively. The data analysis exhibits that 20.1% of consanguineous couples mention that their Children have different types of congenital health defects like mental retardation, limb anomalies, stillbirth, recurrent abortion, thalassemia, albinism, cardiovascular, metabolic disorder, dental anomalies, and physical and mental disabilities. Consanguineous marriage was preferred by 66% of Afghans, while 33% of Afghans were not interested in consanguineous marriage. Big families' trend is commonly a sign of pride and honor in the Afghan community. Therefore, consanguineous marriages are widely practiced in afghan population.

Unique Contribution to Theory, Policy and Practices: Genetics studies have recognized "consanguinity" as one of the major causes of hereditary diseases. The occurrence of congenital abnormalities, mental retardations, and physical disabilities was noted in the offspring of consanguineous couples; thus, it will be helpful to understand consanguinity as a risky practice in Afghan society.

Keywords: *Consanguineous marriages, Congenital defects, Maternal, Paternal, Consanguineous couple*

Introduction

The word consanguinity comes from two Latin words: ‘con’ means common and ‘sanguineous’ mean blood. This term is used for those marriages in which the both partners share common grandparents or a fairly recent ancestor within a few generations. Consanguinity or biological relation between husband and wife is consider as one of the causative factors of genetic disorders.

The genetics of consanguinity shows that consanguinity increases the probabilities of occurrence of the homozygosity of mutant and lethal genes. The offspring of consanguineous couples are at increased risk for autosomal recessive disorders due to their high chance of homozygosity by descent. The closer the biological relationship between parents and child, the more likely it is that their children will inherit identical copies of one or more harmful recessive genes. For example, first cousins are predicted to share 12.5% of their genes. Thus, on an average, their progeny will be homozygous at 6.25% of gene loci. [8]

Consanguinity is prevalent in many Middle Eastern and Arab cultures and societies [2]. Some studies have shown significant differences in genetic disorders between children born to consanguineous marriage partners and those born to non-consanguineous parents [3], while others have found no significant differences [4]. Marriage between close biological relatives is generally regarded with suspicion and distaste.

It is estimated that globally, over 20% of the human population live in communities with a preference for consanguineous marriage, and over 8.5% of all children have consanguineous parents.[14] Consanguinity is widely practiced in countries of Asia and Africa, especially in societies where Islam prevails while its prevalence is low in Western countries.

In the Afghan population, there is a strong preference for consanguineous unions, most frequently contracted between first cousins, and marriage outside the family is considered as a social conflict issue in Afghanistan.

Consanguineous marriages are more common in Muslim populations all around the world compared to non-Muslims. Aside from the people's familial customs, some people associate consanguineous marriages with the religion of Islam. (I-e the Holy Prophet Hazrat Mohammad ‘s daughter Bibi Fatima was married to the cousin of the Holy Prophet Hazrat Ali). Some Muslims call this the sunnah of the Holy Prophet, but there is no clear evidence that Islam supports consanguineous marriages in Islamic studies[15].Some studies have shown a relationship between consanguinity and some genetic conditions and health problems such as phenylketonuria (PKU), immunodeficiency disorders, children’s hypertension, beta-thalassemia, protein-C and protein-S deficiency, low birth weight and Down syndrome [9], [10], [11].

The aim of this study was to determine the rate of consanguineous marriage in Afghanistan and its effects on health.

Problem statement

Based on genetic researches, it has been revealed that marriages between blood relatives cause a number of hereditary diseases in children. The existence of a tradition of marriages between blood relatives in Afghans and unawareness of the common people about the inherent confusion caused by such marriages is a big problem.

Research questions

1. Is the rate of consanguineous marriages in Afghan society high like the other Islamic countries?
2. Do consanguineous marriages have negative impact on the health of Afghan Population?
3. How many Afghans prefer consanguineous marriages over distant marriages?

Research objectives

Main Objective

The main purpose of this study is to educate the general public about the risks of marriage between blood relatives.

Specific Objectives

- Obtaining accurate data about the tradition of marrying blood relatives and its negative effects, and also clarifying its risks and negative effects according to genetics and medicine.
- Clarifying the facts about the number of consanguineous marriages in Afghans and the health problems caused by them.
- To find out how much preference is given to marriages with relatives in Afghan society.

Literature review

Previous studies show that the percentage of consanguineous marriages in Islamic societies is much higher compared to the other religions. Saudi Arabia has 57.7%, UAE has 50.5%, Qatar has 54%, Kuwait has 74%, Oman has 49% and Pakistan has 60% (Journal of Investigative Genomics Volume 5 Issue 1 - 2018)

There is substantial variation between countries in the prevalence of such marriages, with rates ranging 0.2 percent in the U.S. to 3.9 percent in Japan, between 10 and 40 percent in many countries in the Middle East, North Africa and West Asia, and reaching 45-50 percent in parts of China, Pakistan, India, Saudi Arabia and Syria (Hamamy et al. 2011, Global Consanguinity website.)

Scope and limitations of the study

This study was conducted only to collect the data and facts that the tradition of marriage between blood relatives prevails in the Afghan society and the percentage of children born due to such

marriages have congenital health problems. This study is only related to the Afghan community and this research started from June 2019 and was completed in November 2019 through a survey of people living in urban and rural areas of different provinces of Afghanistan

This study experienced some limitations and challenges, since it was the first of its kind at the regional level, some of the people were reluctant to answer questions and share their personal information, and did not agree easily to conduct an interview. On the other hand this issue is considered a sensitive one by the point of view of Islam. Islamic religious scholars are not all of the same opinion.

Methods

We are investigating the proportion of consanguineous marriages in the Afghan population. The study was conducted as a survey pattern in urban and rural areas of Afghanistan between June 2019 and November 2019. The total sample of 2201 married couples were approached for study. The degrees of consanguinity among families having paternal and maternal relations were recorded through a reliable questionnaire.

Under the stratified sampling strategy, the population size (N) was 2201 married couples responded to questionnaire. For further more effective findings, the doctors interviewed (n=100).

Sampling procedures

The data for the field mix type quantitative and qualitative research was collected from the field by ROKHAN INSTITUTE OF HIGHER EDUCATION (RIHE) students (N = 100). Students were engaged in the study to familiarize and motivate them with the tactics and interest in Field Research, regarding data collection and data analysis. The degree of consanguinity between each male and female was recorded by students after guiding them through data assortment strategy and techniques.

Instruments

Two types of self-designed questionnaires were used in this study. A 39 items questionnaire was used for the field survey. The first and second block of the questionnaire was specific for information of the surveyor and respondent respectively.

And the second 10-item questionnaire was designed for a specialist doctor's interview to add their opinion about consanguineous marriages into the study.

Both questionnaires were in Pashto language. The questionnaire was pre-tested on 10 respondents to ensure the reliability of questions and duration of the interview. The total time spent on each interview was 5 to 7 minutes. A pilot test was conducted on 35 students and 5 doctors and the instruments was proven reliable.

Data analysis procedure

A quantitative and qualitative analyses approach was used in the study. In the first step, all the returned filled questionnaires were checked in terms of the eligibility criteria. The data was analyzed on the basis of 6 variables. The analysis were carried out via SPSS 21.

Findings and results

Table 1

The numbers of respondent gender wise.

						Bootstrap for Percent ^a			
								95% Confidence Interval	
		Frequency	Percent	Valid Percent	Cumulative Percent	Bias	Std. Error	Lower	Upper
Valid	Male	1672	76.0	76.0	76.0	.0	.9	74.1	77.7
	Female	529	24.0	24.0	100.0	.0	.9	22.3	25.9
Total		2201	100.0	100.0		0.0	0.0	100.0	100.0

Note, Unless otherwise noted, bootstrap results are based on 2201 bootstrap samples

Table 2

The rate of consanguineous marriages and non-consanguineous marriages

						Bootstrap for Percent ^a			
								95% Confidence Interval	
		Frequency	Percent	Valid Percent	Cumulative Percent	Bias	Std. Error	Lower	Upper
Valid	Yes	1518	69.0	69.0	69.0	.0	1.0	67.1	72.9
	No	683	31.0	31.0	100.0	.0	1.0	29.1	32.9
Total		2201	100.0	100.0		0.0	0.0	100.0	100.0

Note, Unless otherwise noted, bootstrap results are based on 2201 bootstrap samples

Table 3

The pattern of relation (paternal/maternal)

		Frequency	Percent	Valid Percent	Cumulative Percent	Bootstrap for Percent ^a			
						Bias	Std. Error	95% Confidence Interval	
								Lower	Upper
Valid	Not Specific	286	18.9	18.9	18.9	.0	.8	17.3	20.5
	Paternal	720	47.4	47.4	66.3	.0	1.1	45.2	49.4
	Maternal	512	33.7	33.7	100.0	.0	1.0	31.7	35.7
	Total	1518	100.0	100.0		0.0	0.0	100.0	100.0

Note, Unless otherwise noted, bootstrap results are based on 2201 bootstrap samples

Table: 4

Rate of Congenital defects in consanguineous couples offspring

		Frequency	Percent	Valid Percent	Cumulative Percent	Bootstrap for Percent ^a			
						Bias	Std. Error	95% Confidence Interval	
								Lower	Upper
Valid	Not Specific	94	6.2	6.2	6.2	.0	.5	5.3	7.3
	Yes	305	20.1	20.1	26.3	.0	.9	18.3	23.9

No	1119	73.7	73.7	100.0	.0	1.0	68.7	75.7
Total	1518	100.0	100.0		0.0	0.0	100.0	100.0

Note, Unless otherwise noted, bootstrap results are based on 2201 bootstrap samples

Table 5

The type of defects in children mentioned by parents

		Bootstrap for Percent ^a							
		Frequency	Percent	Valid Percent	Cumulative Percent	Bias	Std. Error	95% Confidence Interval	
								Lower	Upper
Valid	Not Specific	225	73.9	73.9	73.9	.0	1.0	71.9	75.7
	Mental Retardation	22	7.2	7.2	81.1	.0	.5	6.2	8.3
	Limb anomalies	4	1.2	1.2	82.3	.0	.2	.7	1.7
	Stillbirth	3	.9	.9	83.2	.0	.2	.6	1.3
	Recurrent abortion	12	4.0	4.0	87.2	.0	.4	3.2	4.9
	Thalassemia	14	4.7	4.7	92.0	.0	.5	3.9	5.6
	Albinism	1	.3	.3	92.2	.0	.1	.1	.5
	Cardiovascular	6	2.1	2.1	94.4	.0	.3	1.5	2.8
	Metabolic Disorder	8	2.5	2.5	96.9	.0	.3	1.9	3.3

Physical Disability	10	3.1	3.1	100.0	.0	.4	2.4	3.9
Total	305	100.0	100.0		0.0	0.0	100.0	100.0

Note, Unless otherwise noted, bootstrap results are based on 2201 bootstrap samples

Table: 6

Preference of Afghans toward the consanguineous marriages

						Bootstrap for Percent ^a			
								95% Confidence Interval	
		Frequency	Percent	Valid Percent	Cumulative Percent	Bias	Std. Error	Lower	Upper
Valid	Not Specific	5	.2	.2	.2	.0	.1	.0	.5
	Yes	1433	66.0	66.0	66.2	.0	1.0	63.9	67.9
	No	733	33.8	33.8	100.0	.0	1.0	31.8	35.8
	Total	2171	100.0	100.0		0.0	0.0	100.0	100.0

Note, Unless otherwise noted, bootstrap results are based on 2201 bootstrap samples

Discussion

This study was designed to find out the actual rate of consanguinity in afghan society. Previous studies on consanguinity show that the percentage of consanguineous marriages in Islamic societies is much higher compared to other religions. Saudi Arabia has 57.7%, UAE has 50.5%, Qatar has 54%, Kuwait has 74%, Oman has 49% and Pakistan has 60% (Journal of Investigative Genomics Volume 5 Issue 1 - 2018)

We were expecting that the rate of consanguineous marriages would be high in the Afghan population. The result was not beyond our expectations. All of us know that Afghan people have been the victims of war and violence for forty years. This is a dark era of war and instability. They bear a big loss in every field of life, especially in the field of education and modern technology. They are far behind the other developed countries. Illiteracy and unawareness of modern science is the big issue of the current Afghan population. Consanguineous marriage is a health-related issue proven by clinical genetics. As we can conclude from the findings of our study that the rate of consanguineous marriages is very high in the Afghan population. All around the world, maternal age is considered a main reason for congenital disorders, but here in Afghanistan maternal age is not a big issue because of the trend of teenage marriages. So it can be supposed that consanguineous marriages can be the main cause of congenital disorders in Afghanistan.

According to the civil law of Afghanistan, “A family is composed of people that have common grandparents”. Big families' trend commonly is a sign of pride and honor in the Afghan community. Therefore, it is an appreciated custom among Afghan people to increase the number of individuals in a single family. For this reason, the trend of consanguineous marriage is a part of Afghan custom and preferential marriage. Consanguineous marriages are widely practiced in the Afghan population.

Most Afghan medical doctors are aware of this health-related issue and do not favor consanguineous marriages. Some religious scholars link the issue with Islam and consider consanguineous marriage as a sunnah of the Holy Prophet MOHAMMAD (PBUH) because consanguineous marriages took place in the family of the holy prophet [15]. For this reason, it is a sensitive issue that we cannot discuss with everyone in public.

Most Afghan family elders and seniors believe that only our blood related can keep the pride of our family. So they prefer marriage inside the family. Therefore, mostly they do not even ask the opinion of boys and girls about their partner. Most people are unaware of the genetic problem caused by consanguinity

Conclusion

The study reveals that the rate of consanguineous marriages is very high in the Afghan population comparing to western and other Asian countries. Most of Afghan people prefer marriage within the family. As the result of the study shows that 69% of marriages are consanguineous and 20.1% consanguineous parents mentioned that their children have different congenital abnormalities like Mental Retardation, Limb anomalies, Stillbirth, Recurrent abortion, Thalassemia, Albinism, Cardiovascular, Metabolic Disorder, Dental Anomalies and Physical and mental Disabilities. Most of these parents didn't specified the name of defects.

The awareness rate of the people from the disadvantages of consanguineous marriage is low. Custom, big family trend, economy and illiteracy are the main reasons of high rate of consanguinity in Afghan society.

Most Islamic Shariah scholars believe that marrying cousins is not a Shariah prohibition from the perspective of Islam. But if it turns out to be a health problem, then it's best to get married outside your family. Because one of the functions of religion is the preservation of race. [15]

The relative abundance of congenital defects in Afghan population is clearly associated with practice of consanguinity, the fact should be brought to the attention of health and other social authorities. A shift in belief of public is needed to bring down the rate of consanguineous marriages in society. A clear registration system and genetic counselling centers should include in public health centers for consanguinity. Furthermore, neonatal mass screening, particularly for prevalent disorders, should be included in the public health system, as should the implementation of various diagnosis techniques such as premarital, carrier detection, postnatal, and prenatal diagnosis. This will help to notify accurate risk of consanguinity. In order to address the problem properly, healthcare and education systems need to incorporate and utilize research in different aspects of this study. More and more studies will help to bring down the rate of consanguinity in Afghanistan.

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