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Causation of Consanguinity Among the Saudi Arabian Population and Its Health  
Consequences

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### **Causation of Consanguinity in Saudi Arabia and its Health Consequences**

Have you ever thought why some cultures allow consanguineous marriages and others do not? Our beliefs of what is right and wrong normally come from our religious and philosophical heritage. However, based on the advancements of knowledge in the health sector, we can better decide what is right and wrong for our health. Consanguinity in the Arabic culture, specifically in Saudi Arabia, is wildly common; because of holding onto old traditions and lack of awareness of related health consequences.

A marriage is consanguineous when the two people involved are descendent from common ancestor with blood relations. In Saudi Arabia, as in most Middle Eastern countries, these marriages are not prohibited with exceptions to first degree relatives, mainly between parents and children and brothers and sisters, which would be incest (Mehndiratta, & Mehndiratta, 2007).

Moreover, since Saudi Arabia is an Islamic country and it follows the teachings of the holy Qur'an, this verse specifies what is prohibited in this area, "Prohibited to you [for marriage] are your mothers, your daughters, your sisters, your father's sisters, your mother's sisters, your brother's daughters, your sister's daughters, your [milk] mothers who nursed you, ..." (The Qur'an, 4:23). However, the bases of these teachings are mainly ethical and spiritual, and do not depend on scientific studies.

The health effects related to consanguineous marriages vary so, it is essential for a high consanguinity rated country, like Saudi Arabia, to spread awareness about them. According to a study published by Medical Principles and Practice (2007) a high rate of consanguinity in a country increases the chances of serious diseases. These diseases include,

cancer, mental disorders, heart diseases, gastro-intestinal disorders, hypertension, and hearing deficit (Bener, Hussain, & Teebi, 2007).

This research will answer the following questions:

1. Why consanguineous marriage is wildly common in Saudi Arabia?
2. To what extend are Saudi people aware of the health risks of consanguinity?
3. What are the health consequences of consanguinity?

### **Literature review**

The topic of consanguinity is a sensitive one to discuss among the Saudi Arabian population, because of its private nature. Never the less, studies and research were conducted to find and understand how common consanguinity is in Saudi Arabia and how is it affecting people's health. Furthermore, these studies should be taken into consideration by the authorities, to further investigate and establish institutions inside the health sectors to prevent its consequences.

There are many factors led to the high rate of relative marriages in Saudi Arabia. One of these factors is suggested to be geographical; as in people who live closer to each other in a rural aria (Al-Abdulkareem, & Balla, 1998). Other reasons, that apply to Dammam city as an example, are closeness and availability of cousins, desire to keep property within the family, and cultural values (Al-Abdulkareem, et al., 1998).

Moreover, Saudi Arabia is as high in consanguinity ranking as Kuwait, Jordan, Iraq, Pakistan, Egypt, and the United Arab Emirates, but higher than South and North America, Europe, South Africa, and Eastern Asia (El-Hazmi, Al-Swailem, Warsy, Al-Sailem, & Al-Meshari, 1995). The main factor suggested by the J Med Genet study was that

consanguineous marriages can be more stable, because the couple who grew up in the same environment are more likely to easily adjust after getting married.

Furthermore, the concluded rate of consanguinity in Saudi Arabia was 56%; 33.6% of which were first cousin marriages (El-Mouzan, Al-Salloum, Al-Herbish, & Qurachi, 2007). Also, it was found that the variation in prevalence of relative marriages differed from one region to another, for example 42.1% in Al-Baha whereas, 67.2% in Madina (El-Mouzan, et al., 2007). These variations are due to the same factors mentioned earlier, where we see slight differences in cultural and family values.

By the same token, many diseases are associated with consanguineous marriages. A study done by Ann Saudi Med in two years (2004-2005) suggested a strong relation between consanguinity and congenital malfunctions, specifically congenital heart diseases (CHD) (El-Mouzan, Al-Salloum, Al-Herbish, & Qurachi, 2008). However, no association with down syndrome, cell disease, or glucose-6-phosphate dehydrogenase deficiency was found (El-Mouzan, et al., 2008).

Although it is less likely to discourage families to avoid relative marriage, because of the strong traditions and family values, and the lack of awareness of health risks, families who have more tendencies to marry their cousin should be informed about the health risks (Warsy, Al-jaser, Albdass, Al-Daihan, & Alanazi, 2014). Marrying a relative is a preferred practice in Saudi Arabia, and that explains why there is no decrease over generations in the prevalence of consanguinity (Warsy, et al., 2014).

In conclusion, there is no doubt that consanguinity is a problem in Saudi Arabia. However, it is the responsibility of educators in the health sector and the higher education

establishment, along with the government, to teach and inform youngsters about the health issues it can cause. Harmful traditions should be open to dissections and changes.

### **Methodology**

This research applied a qualitative methodology to investigate the participants' opinion on consanguinity in Saudi Arabia. It involved five people of different ages.

### **Participants**

In this study, five Saudi people were interviewed. 80% of the participants were males; One of which is married. The participants volunteered to participate. The age of the participants was between 63 years old and 23 years old.

The first subject was Mohammad. He is 63 years old; Has been married since he was 22 years old. He has four daughters and three sons. He retired from working as a high school principle three years ago.

Ibrahim was the Second subject. He is 27 years old. He is not married yet, but thinking about getting married soon. He finished his Electrical Engineering bachelor's degree in England and currently, he is finishing his master's degree in America.

The third subject was Ahmad. He is 23 years old. He has not been married yet. He is a student at Prince Mohammad Bin Fahad University (PMU); He studies Information Technology. He has two siblings. Ahmad's parents are cousins.

The fourth subject was Joharah. She is 23 years old. She is not married yet. She finished her bachelor's degree in biology. She has five siblings and a half-brother.

The fifth and the last subject was Saleh. He is 28 years old. His family is pressuring him to get married. He works as a security guard to an oil company and he has a small business.

### **Materials**

A questionnaire, of nine questions, was given to the participants before the interview. During each interview, the interviewer asked follow-up questions. Please see Appendix A for a copy of the questions.

### **Procedures**

Questions and answers-based interviews were conducted to study the participants' marriage preference, awareness of health consequences of consanguinity, and to learn the health risks of cousin marriage. The first interview was with Mohammad; It was conducted in his father's house. The second interview with Ibrahim was via the Internet; Because Ibrahim lives in America. The third interview was with Ahmad; It took place at the campus of PMU. The fourth interview was with Joharah; It was in her family's house. The fifth one was with Saleh; It was in his house over lunch.

## **Findings**

Consanguineous marriage can affect the health of generations. Some Saudi People prefer to marry from inside the family, but others do not. Additionally, the awareness about this issue varies between superficial to denial. This section discusses marriage preference, awareness of health consequences of consanguinity, and the health risks related to marrying a relative.

### **Preference of marriage in Saudi Arabia**

There are different reasons why some Saudis prefer to marry a relative and why others do not. Mohammad thinks that relative marriage is preferable because of old traditions. He Also believes that who ever you will marry had already been decided by god. Furthermore, Ibrahim would not mind marrying a relative, as long as she is a moral woman. In addition, Ibrahim thinks that marrying someone who you know the environment in which they were raised, is the reason why relative marriage can be better.

In the other hand, Joharah, Ahmad, and Saleh think that marrying out side the family is better. Joharah believes that marrying within the family might cause genetic diseases to her kids. In addition, Ahmad emphasised his disapproval of relative marriage; From his parents' experience, he believes that consanguinity is unhealthy way to get married. Lastly, Saleh thinks that marrying a relative can be a source of problems between relatives and it should be avoided.

### **Saudis awareness of health consequences of consanguinity**

When sked about the health consequences of consanguinity, most participants did not give a specific answer. Mohammad, Ibrahim, Joharah, and Saleh claimed that there are some health risks to marrying a relative; However, they were not able to mention any specific diseases. Moreover, Ibrahim thinks that many Saudis are not aware of the health risks of relative marriage because they are blinded by traditions; Whereas Saleh thinks it is because of lack of education.

Ahmad in the other hand, claims that his family has inherited many health diseases because of many consanguineous marriages among his family members. Also, he thinks more awareness should be spread about the health issues of consanguinity.

**Health risks of consanguinity**

There are many health issues associated with consanguinity. Joharah thinks that relative marriage causes many genetic diseases. Furthermore, Ahmad thinks that allergies and boldness is related to relative marriage.

Mohammad believes that if the person's genes are healthy, then marrying a relative should not cause health problems. In the same token, Ibrahim and Saleh think that relative marriages are safe; Specially because of the health check-ups that are done before the marriage.

**Conclusion**

The first concept or idea was learned, while conducting this research, was that many problems in our life can be avoided by research. A problem like consanguinity, can easily be managed if people were more open to learn more about their health.

The second concept was that to have the best result, you have to observe rather than getting involved. By that I mean, be honest when obtaining the result and maintain a non-bias position.

Thirdly, the results of the research done by others in the topic is close to this research. Almost all of the interviewees agreed that culture plays a big role in the spreading of consanguinity in Saudi Arabia.

Fourthly, younger generation seems to be more open to the idea of changing old and unhealthy tradition. The reason for it is that the source of information is widely open in the digital world.



Lastly, the older the person is the harder for him/her to change their mind.

Conduction this research, I noticed that older interviewees hold onto traditions more dearly than younger interviewees.

### References

- Abdulkareem, A., FFCM, & Seifeddin, G., MD. (1998). Consanguineous marriage in an urban area of Saudi Arabia: rates and adverse health effects on the offspring. *Journal of Community Health*, 23, 1st ser., 75-83. Retrieved from <https://link.springer.com/article/10.1023/A:1018727005707>.
- Bener, A., Hussain, R., & Teebi, A.S. (2007). Consanguineous marriages and their effects on common adult diseases: studies from an endogamous population. *Medical Principles and Practice*, 16, 262-267. Retrieved from <https://www.karger.com/Article/Pdf/102147>
- El-Hazmi, M.A.F., Al-Swailem, A.R., Warsy, A.S., Al-Swailem, A.M., Sulaimani, R., & Al-Meshari, A.A. (1995). Consanguinity among the Saudi Arabian population. *J Med Genet*, 32, 623-626. Retrieved from <https://jmg.bmj.com/content/jmedgenet/32/8/623.full.pdf>
- El-Mouzan, M., Al-Salloum, A.A., Al-Herbish, A., & Qurachi, M.M. (2007). Regional variations in the prevalence of consanguinity in Saudi Arabia. *Saudi Med J*, 28(12), 1881-1884. Retrieved from [http://fac.ksu.edu.sa/sites/default/files/regional\\_variations\\_in\\_the\\_prevalence\\_of\\_consanguinity\\_in\\_saudi\\_arabia.pdf](http://fac.ksu.edu.sa/sites/default/files/regional_variations_in_the_prevalence_of_consanguinity_in_saudi_arabia.pdf)

El-Mouzan, M., Al-Salloum, A.A., Al-Herbish, A, & Qurachi, M.M. (2008). Consanguinity and major genetic disorders in Saudi children: a community-based cross-section study.

*Ann Saudi Med*, 28(3), 169-173. Retrieved from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6074430/pdf/asm-3-169.pdf>

Mchndiratta M. M., Paul B., & Mchndiratta P. (2007). Arranged

marriage, consanguinity and epilepsy. *Neurology Asia*, 12, 1st ser., 15-17. Retrieved from

[https://pdfs.semanticscholar.org/f10b/7c8822fd9309f326d7f1393bde44f8eee503.p  
df](https://pdfs.semanticscholar.org/f10b/7c8822fd9309f326d7f1393bde44f8eee503.pdf)

Warsy, A.S., Al-Jaser, M.H., Albsass, A., Al-Daihan, S., & Alazazi, M. (2014). Is consanguinity prevalence decreasing?: a study in two generations. *African Health Sciences*, 14(2),

314-321. Retrieved from <https://www.ajol.info/index.php/ahs/article/view/104224>

## Appendix A

1. How old are you?
2. Are you married?
3. Do you prefer to marry a relative or outside the family? Why?
4. Would your family pressure you into marrying your cousin? How would you respond?
5. Why do you think some families force their sons or daughters to marry their relatives?
6. Do you know any people that are married to their relative? have any of their kids inherited a health issue because of it?

7. Why do you think relative marriage is common in Saudi Arabia?
8. Are you aware of any health risks when married to a relative?
9. Why do you think most Saudis are not aware of the health risks related to relative marriage?