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**GENETIC DISEASES AND PEOPLE'S PERCEPTION ABOUT  
COUSIN MARRIAGE IN DISTRICT RAJAN PUR**



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ISLAMABAD

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**“Thesis submitted to the Department of Sociology, Quaid-i-Azam  
University, Islamabad, for the partial fulfillment of the degree of Master  
of Science in Sociology.”**

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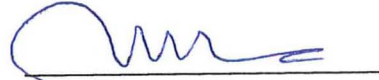
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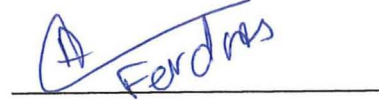
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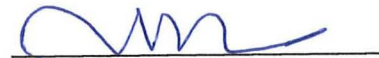
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## Abstract

*Consanguineous marriage increases the genetic disorders among people. It affects the health of newly born baby. Cousin spouse gives birth many genetically and inherited diseases like sickle cell anemia, cystic fibrosis, epilepsy, heart diseases, color blindness and mental diseases. Besides that cousin marriage increases the chance to be happening an abortion among the women. It is also identified that parental consanguinity provokes the bleeding among the women. The people who did the cousin marriage have the weak offspring. For the identification of aboveboard diseases; research was conducted in district Rajan Pur to know the people's perception about cousin marriage. The sample size of the study was 162 respondents. The quantitative research method was used for the research. Snowball sampling was used as sampling technique. Respondents were given the questioner to demonstrate their opinion about the cousin marriage and its risks. The majority of the respondents was involved in the cousin marriage and the childhood engagement with their first cousin. Their progeny were weak and affected by the genetic diseases of color blindness. Besides that abundance of the respondents considered the cousin marriage a religious preferable marriage. The consanguinity was lingering on generation to generation in those people. According to the people refusing from cousin marriage is perceived unethical in their society.*

## Table of Contents

Chapter No 1 INTRODUCTION.....	1
1.1 Meaning of Cousin Marriage.....	2
1.2 Worldwide prevalence of cousin marriage.....	4
1.4 Consanguinity in Asia.....	8
1.5 Cousin marriage in Pakistan.....	9
1.6 Impacts of Consanguineous Marriage on health.....	9
1.7 Cousin Marriage and Genetics Diseases.....	10
1.8 Statement of the problem.....	12
1.9 Objectives.....	13
1.10 Significance of Study.....	13
Chapter No 2 REVIEW OF THE RELEVANT LITERATURE.....	15
2.1 Types of Genetic Diseases.....	22
2.2 Excess of Genetic diseases in First cousin progeny.....	22
2.3 Cousin marriage and genetic diseases in British Pakistanis.....	23
Assumptions.....	24
Chapter No 3 THEORETICAL FRAMEWORK.....	25
3.1 Childhood Familiarity theory.....	26
3.4 Propositions.....	27
3.5 Hypothesis.....	28

Chapter No 4 CONCEPTUALIZATION AND OPERATIONALIZATION	29
4.1 Conceptualization	30
4.1.1 Genetics	30
4.1.2 Disease	30
4.1.3 Consanguinity	30
4.1.4 Marriage:	31
4.2.1 Consanguinity	32
4.2.2 Genetics	32
4.2.3 Disease	33
4.2.4 Marriage	33
Chapter No 5 RESEARCH METHODOLOGY	34
5.1 Research Design	35
5.2 Universe	35
5.3 Units of Analysis	35
5.4 Sample Design	35
5.5 Sample Size	36
5.6 Tool for data collection	36
5.7 Technique for data collection	36
5.8 Pre-testing	37
5.9 Tool for data analysis	37
5.10 Opportunities and Limitations of the study	37
5.11 Ethical concern	38

Chapter No 6 RESULTS.....	39
Chapter No 7 DISCUSSION AND CONCLUSION.....	65
7.1 Discussion.....	66
7.2 Conclusion.....	68
REFERENCES.....	69
List of Tables	
Table 6.1 Gender Of Respondent.....	40
Table 6.2 Age Of Respondent.....	40
Table 6.3 Marital Status.....	41
Table 6.3 Marital Status.....	41
Table 6.4 Family Size.....	42
Table 6.5 Family Types.....	42
Table 6.6 Occupation.....	43
Table 6.7 Monthly Income.....	44
Table 6.8 Got Married With Person.....	45
Table 6.9 Consanguineous Marriages And Genetic Disorders.....	45
Table 6.10 Reasons To Marry With a Cousin.....	46
Table 6.11 Wish To Marry With Cousin.....	46
Table 6.12 Engagements In Childhood.....	47
Table 6.13 Opinion To Favor The Cousin Marriage.....	48
Table 6.14 Compulsion To Get Cousin Marriage.....	48
Table 6.15 Cousin Marriage And Society.....	49

Table 6.15 Cous In Marriage And Society .....	49
Table 6.16 Cousin Marriage And Child Mortality.....	50
Table 6.17 Cousin Marriage And Effected Progeny.....	50
Table 6.18 Cousin Marriage And Various Genetic Disorders.....	51
Table 6.19 Forefathers As Career Of Genetic Anomalies. ....	52
Table 6.20 Cousin Marriage And Future Generation .....	53
Table 6.21 Consanguineous Marriage And Religion.....	53
Table 6.22 Cousin Marriage And Couple's Intention .....	54
Table 6.23 Better Type Of Cousin Marriage .....	55
Table 6.24 Impact Of Cousin Marriage On Family Size.....	55
Table 6.25 Cousin Marriage And Rural Areas .....	56
Table 6.26 Ratio Of Cousin Marriage In Illiterate People And literate.....	57
Table 6.27 Stability Of Cousin Marriage.....	57
Table 6.28 Impact Of Cousin Marriage On Human Fertilization.....	58
Table 6.29 Cousin Marriage And Available Information.....	59
Table 6.30 Cousin Marriage And Percentage Of Satisfied People.....	59
Table 6.31.Impact Of Consanguinity On Family Size And Child Defects Crosstabulation .....	61

**Chapter No. 1**  
**INTRODUCTION**

Consanguinity is a deeply rooted social trend among one-fifth of the world population (Hamamay *et al* 2011:9). It is mostly residing in the Middle East, West Asia and North Africa. It is as well as among immigrants from these communities now residing in North America, Europe and Australia. The mounting public awareness on prevention of congenital and genetic disorders in offspring is driving an increasing number of couples contemplating marriage and reproduction in highly consanguineous communities to seek counseling on consanguinity. Primary health care providers are faced with consanguineous couples demanding answers to their questions about the anticipated health risks to their offspring. Preconception and premarital counseling on consanguinity is the part of the training of health care providers particularly in highly consanguineous populations (Hamamy 2011:9). Marriage institution lies in all societies, but its rules and principal are different from one society to another (Ahmad 1979:636). For example, in some societies, uncle and niece marriage practice is being performed, although it is considered illegitimate in the Muslim community, but in the most popular form of the marriage is consanguineous marriage. It is being performed in the entire world.

### **1.1 Meaning of Cousin Marriage**

“Cousin Marriage is most usually defined as a union between a couple related as second cousins or closer (Asadi-pooya 2005:383)”. The second name of the consanguineous marriage is the cousin marriage. Another author defined the consanguineous marriage “A union between two individuals who are related as second cousin or closer (Bittles 2001:789).

### **1.2 Worldwide prevalence of cousin marriage**

It is expected that one billion of the present worldwide population lives in communities with a favorite for consanguineous marriage (Modell and Darr 2002:225). Cousin marriage is customary and appreciated in the majority communities of Elgolia, Georgia, Saudi Arabia, Qatar, Sudan, China, Japan, Indonesia and Sri Lanka, where intra-familial unions jointly description for 20–50 plus percent of all marriages (Bittles 2011:56). For demonstration of the consanguineous percentages in various countries of the world, a report was prepared by the Hamamy (2011:7). For the preparation of the report, the majority of the Authors belonging to same country submitted their research results for occurrence of cousin marriage.. In these Countries “Afghanistan, Bahrain, Egypt, India, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, the Palestinians, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates and Yemen where the consanguinity rate was about 40 to 66 percent.



#### **1.4 Consanguinity in Asia**

If the consanguinity and its occurrence is glimpsed in the Asia; there is a lot of presence in the Asian countries like India, Bangladesh, Pakistan, Iran, Afghanistan, Sri Lanka. Different writers conducted the research on the Asian countries. Though cousin marriages are favored across numerous parts of the North Africa and the South Asia (Bittles 1994:121); narrow information on the topics was obtainable in the normal demographic text. Existing demographic information are mostly limited to the Iran productiveness study (Goldschmidt, Ronen A., and Ronen 1960:204). Demographic and Health Surveys were chosen in countries, as well as Egypt, Morocco, Tunisia, Pakistan and India. As a result, there is a prominent scarcity of proof with deference to the main demographic factors of fecundity; Such as age at marriage and contraceptive use in consanguineous mates. Observed data propose that women in consanguineous mates usually have minor education, short age at marriage and high fecundity (Bittles 2002:132). There is also considerable proof of privileged baby death rates among consanguineous mates (Bittles 2003:138). In this respect, while some previous researchers did not sufficiently manage for conditions (socioeconomic determinants) other current information from the Middle East, South Asia. Data and evidence on immigrant communities in Western Europe obviously designate that the progeny death disparity is not an exclusively demonstration of socioeconomic weakness (Hussain 1998:158). The Major purpose of the current study is to

evaluate the occurrence of consanguineous marriages in Rajan pur and to assess the connection among consanguinity and fertility, and connected socio-demographic determinants.

### **1.5 Cousin marriage in Pakistan**

According to estimation 62.7 percent people are involved in the cousin marriage in Pakistan. If it is looked into the main cities of Pakistan, the consanguinity is at its highest peak. Likewise, 47.2 percent the people of Lahore are involved in the cousin marriage (Shami and Zahid 1982:189). If it may glimpse to the Sheikhpura situated in the upper Punjab has the 48.9 percent consanguinity rate (Shami and Iqbal 1983:190). In the city of Gujarat 48.5 per cent people are involved in the cousin marriage (Shami and Hussain 1984:191). District Jehlum is also dominated with the consanguinity and it has 44.3 percent consanguinity ratings (Shami and Minhas 1984:199). In Rawalpindi 48.1 percent people are involved in the consanguinity (Shami and Siddique 1984:200). Gujranwala is also affected by cousin marriage the percentage is 58.9 percent (Bittles *et al.* 1993:194). In Faisalabad, Sahiwal, and Sialkot the percentage is respectively 52.1%, 56.1% and 51.8 percent (Bittles *et al.* 1993:195).

### **1.6 Impacts of Consanguineous Marriage on health**

Consanguineous marriage has negative and the positive impacts on the society. It is considered most intentional and customary marriage system. Although it is practiced throughout the world but it throws a lot of negative

impacts on the society as well. These negative impacts are related to the health diseases. The people give more preference to the consanguineous marriage including: strengthening of family ties; relative ease for both men and women in finding a suitable partner among cousin. Support for the status of women and as better relations with her in laws and care for people in their old age. Also, in practice, consanguineous marriages are more stable than marriages between unrelated partners. An anthropological approach on standards affinity may help in understanding these observations. Societies, which is common for relatives to marry has a complex social structure. Couples is embedded in the extended family formed a group within the relevant largest and most marriages that occur. In Pakistan, this group is *biradheri* (Brotherhood); Middle East is tribe affects the social structure of the distribution of gene variants in the population. In "becomes a random mating 'North the European Communities and the differences were distributed widely, but in communities paired often "trapped "in the group's affinity specific. In Oman , for example , the population is tribal units paired with mating is very limited , and genetic disorders interview to be unevenly distributed , and many are limited mainly to family and tribal identification groupings . Genetic strategies for the provision of services must take and because of these differences.

### **1.7 Cousin Marriage and Genetics Diseases**

Consanguineous marriage is usual in many societies, but it leads to an enlarged birth occurrence of progeny with harsh recessive diseases. It is

consequently frequently planned that consanguineous marriage should be dispensed on medical foundation. However, a number of professional groups have keen out that this suggestion is contradictory with their moral ideology of genetic counseling, overlooks the social significance of cousin marriage and is unsuccessful. Instead, they propose that the tradition increases the chances for successful genetic therapy, and suggest a concentrated attempt to recognize families at enlarged risk, and to supply them with risk information and transporter taxing when possible. Consanguineous marriages happen in most populations, but in some they are scrupulously avoided, whereas in others they are completely favored. Consanguineous marriages traditional in the Middle East and parts of South Asia, among Irish Travelers, Zoroastrians, some Jewish communities and numerous tribes in sub-Saharan Africa and South East Asia. Though the custom is often professed to be connected with Islam, in fact it is sovereign of creed. It is predictable that worldwide at least 20% of the human being residents live in communities with a favorite for consanguineous marriage, and that at least 8.5% of children have consanguineous parents. Consanguineous marriage increases the possibility that both members of a spouse will carry any recessive alternative that is being intruded in their relatives, and that this will be obvious in the homozygous condition in their offspring. As the majority recessive matchless is safe, the tradition brings out the hidden genetic assortment in a population. Conversely, it also increases the birth occurrence of infants with grave recessive disorders.

The lofty occurrence, worldwide scope and genetic implications of traditional consanguineous marriage have anxious concentration merely just, partially because relocation has brought important numbers of people from populations that good turn consanguineous marriage to the West. Another cause is that lessening baby death in Middle Eastern and South Asian communities is promoting the part of harsh recessive disorders to babyhood death and morbidity. When the trouble is documented, a widespread first response is that consanguineous marriage should be dispirited for a genetic cause. This thinking has been promoted in the Middle East, where imperfect possessions appear to rule out requirement of genetic services on a Western representation. Nevertheless, the more vigilant thought leads to the gratitude that a consanguineous relationship model is essential to the arrangement of numerous societies, and has numerous social reimbursements. A suitable move toward for genetic counseling should work “Consanguineous marriage increases the chance that both members of a couple will carry any recessive variant that is being transmitted in their family, and that this will manifest in the homozygous state in their children.”

### **1.8 Statement of the problem**

Consanguineous marriage is a popular marriage system existing in all the regions of Pakistan as well as the whole world. It is said that one fifth part of the world is involved in the consanguineous marriage. In Pakistan different cities have different ratio of the cousin marriage. However, district Rajan pur

has a high rate of cousin marriage. District Rajan pur is situated on the south of Daraghazi khan Division and Multan. It is near the Indus River. Before this research, there was no research conducted on the genetic disease and peoples perception about cousin marriage. This research has an important place to control the genetic diseases in the district. The cousin marriage is not a big problem, but the genetic diseases are the great problem because the genetics disease results from the cousin marriage. The majority of the people prefers the first cousin marriage, i.e. father brother's son or daughter. According to the medical studies, first cousin marriages result the genetic diseases. Genetic diseases have four different dimensions in which sex linked recessive, sex linked dominant, autosomal recessive and autosomal dominant are involved. In these four unions counsels all these dimensions of diseases lie with its severe shapes. People do not know about the severe impacts of the cousin marriages.

### **1.9 Objectives**

1. To identify the occurrence of genetic disease in persons.
2. To explore the reason of consanguineous marriage.

### **1.10 Significance of Study**

They consider the cousin marriage religiously preferable, but in reality it is not religiously over-arching and pre-requisite. There are multiple studies on the different cities of Pakistan on the severe impacts of the cousin marriage are conducted both on the District Rajan Pur; there is no other research related

to genetics diseases because of cousin marriage. This research comprises of authentic information and the prevention of the genetic diseases of the residents of district Rajan Pur because having a healthy baby is the wish of every parent. The progeny who is disabled from the legs are limp from the start of the birth, always imposed the responsibilities on the Polio teams. But infect it is the result of genetic diseases. Because of this research people would be aware of the genetic diseases because of cousin marriage. Watermark said that the progeny who closely associated with the childhood have scarce sexual urges as compare to those who live away from others and their children are fewer in number. In district Rajan pur *Nokani Baloch* has a high rate of consanguinity, but they have multiple progeny. It is very interesting, but according to them, in their community, progeny live together just for seven years; play with one another. When they reach at the age of seven years, i.e. their fist grooming, teeth are changed into new teeth; there are separated from one another. When they reach at the age of eighteen years they are married to their cousin at this time they have full urges and produce multiple progeny.

**Chapter No. 2**

**REVIEW OF THE RELEVANT LITERATURE**



Consanguinity and its foundation have the severe impact on the health of children. Consanguineous marriage is generally distinct between second cousins or nearer. This marriage can guide to an improved birth occurrence of Recessive disorders through heritage of a copy of a recessive gene (allele) from each parent (Devi *et al.* 1987). Consanguineous marriages are customarily preferred in Asian, African, North American, Middle Eastern and Western European countries, especially in Muslim countries (Hamamay *et al* 2012:847, Bittle *et al* 1991:794, Mehndiratta, Paul and Mehndiratta 2007:17). However, these types of marriages are the major factor of the inherent diseases (Haldane 1936:281, Nazarabadi, Rezaeetalab and Dastfan 2006:53, Bittle *et al* 1991:794). The higher consanguinity rate has been connected with a prominent prevalence of birth defects and child mortality (Bittle and Black 2010:737, Modell and Darr 2002:225, Shah, Toney and Pitcher 1998:275). With the reference of child mortality Dorsten, Hotchkiss and King (1996:179) Stepped in Amish settlement (India) and explored impact of inbreeding holds a divergent familial mortality risk explanation: The more consanguineous the marriage, the greater the risk of death in early infancy. Consanguineous marriage increases the risk of congenital diseases: heart disease, thalassaemia and other defects in the offspring; Post-neonatal mortality, childhood morbidity, and haemoglobino- pathies are also extensive in the offspring (Zaman 2010:381, Bundey and Alam 1993:206, Modell and Darr 2002:225). Consanguineous parents increase the risk of low intelligence, mental

disability, sickle-cell anemia, and cystic fibrosis in the offspring (Bullock and Khalid 1995:209, Zaman 2010:381). Further, Mehndiratta, Paul & Mehndiratta (2007:15) gave the name of Arrange marriage to the consanguineous marriage and illustrated that the arrange marriage (consanguineous marriage) causes the cryptogenic and Idiopathic epilepsy. Asadi-Pooya (2005:383) identified the child epilepsy with the reference of consanguineous marriage in the Sheraz (Iran). Bener and Hussain (2006:372) conducted a research in the state of Qatar in which Consanguineous rate was identified 52% to 55%. Furthermore Bronchial asthma, mental retardation, epilepsy and diabetes were extensively common in the progeny of the consanguineous than non- consanguineous mates (Bener And Hussain 2006:372, Asadi-Pooya 2005:383). In this way Salih *et al* (2006:91) explored the Brain Stroke in children at King Khalid University Hospital, Saudi Arabia likely to be the creation of consanguineous marriages. Like other world. Pakistan is also surrounded with consanguinity. In Pakistan 66% people are involved in the consanguinity, 80% of these being among first cousins (Hussain 1999:261, Hussain and Bittle 1998:449). In this regard Hasnain and Hashmi (2009:111) conducted a Survey in Jhangara Town, located in District Dadu, Sindh. The purpose of this study was to assess the reasons of occurrence and associated factors for underweight in rural Sindh. Another lethal genetic disease named Bleeding was identified in *Chandio* family (Sindh) through the study of their family tree; out of 533 people, 98 were

diagnosed to have a bleeding disorder on the basis of consanguinity (Borhany *et al* 2010:23). Consanguineous marriage was needed to discourage to solve the low weight. In this way Parveen (2012:23) conducted a research in the Bajur Agency FATA (Federally administered tribal area) to evaluate the couples having genetic disorders like anemia, obesity and thalassemia were 20, 23 and 20%, respectively. A study in Jhelum (Pakistan), present consanguineous marriages was projected to be 44.30% ( $F=0.02615$ ), and first cousin marriages consisted upon 38.30% of the total 1,027 marriages studied (Shami & Minhas 1984). In this regard consanguineous marriages were 48.50% in Gujrat (Shami and Hussain 1984:93). There is also proof that consanguinity can guide to an increased probability of impulsive abortion (Hussein 1998) and it has been predictable that first cousin offspring occurrence 4.4% more pre-reproductive mortalities than non consanguineous children (Bittles *et al.* 1994). Another argument is that consanguineous mates are probably to have had consanguineous ancestors or parents (Darr *et al* 1988). Consequentially, in an edition of uniqueness of alleles at loci on top of that predictable only through the contemplation of parental consecutiveness. A comprehensive review of the result of consanguineous young and its importance to medical genetics is specified by Bittles (2001). Foundation within populations can also guide to a localized rise in the occurrence of a recessive allele (gene), and therefore disease (Heinisch *et al*, 1995). But there are significant differences with the case of consanguinity. In subdivided

inhabitants, genetic flow and originator proceedings can raise the local occurrence of harmful alleles, particularly in societies that have powerfully endogamous kinship. For example, definite hereditary diseases have been originated to happen approximate entirely within person ethnic groups in Oman (Rajib *et al.* 1999). On the other hand, polygenic disorders due to epistemic interactions between alleles at multiple genes are more likely in populations with consanguineous marriage, as consanguineous offspring has an elevated probability of identity by descent across the whole genome. If it might be looked at the cousin marriages from a Western perspective, it is often considered negative. From the Western point of view, it is said that cousin marriages are the source of disturbance. The earliest systematic approach of the cousin marriage is reported by Bemis in 1958 in the United States. He said that the famous philosopher Charles Darwin having fathered ten children from his cousin Emma Wedgewood became confused that the offspring of first cousin might be biologically dangerous. Many commentators accepted that the people who married with their first cousin they predicted 6.25 percent of autosomal loci. But in the some countries the cousin marriages were the commonplace. In these countries the Muslim countries of North Africa, western Asia, and south Asia, north and central India and middle Asian republics of the Soviet Union are famous. In these countries marriage contracted between persons who are related as a cousin (Bittle *et al.* 1991).

It is vague belief that human inbreeding is undesirable and some blood relations are forbidden by law. The research conducted in the current era proved that the marriages with close relations mean first cousin are dangerous for their offspring. Certain and genetic diseases can emerge in the offspring of first cousins. In the Western Europe the first cousin marriages are one percent of the total. The following percentages are demonstrated in the result of first cousin marriages. Xerodermia-pigmentosa is founded 47 percent from the first cousin marriage, retinitis pigmentosa recorded 27 percent, juvenile emeritus idiocy diagnosed 15 percent and Ichthyoids congenital is recorded 14 percent. These examples tell us about the importance of the phenomena of the general health. For this reason the medical committee appointed by the medical research council increased the hospitals. In these hospitals the patients were asked that whether their parents were related and if so how? In those hospitals any less comprehensive research could be worthless because it was proved from the animal's progeny before that (Haldane 1936).

Consanguineous marriages are common and customary in many societies. But it leads to dangerous diseases. It is often said that cousin marriages should be forbidden in the society because of its severe impacts on their progeny. However, various experts said that refrain from cousin marriages is unethical at the societal level. If we look at the social importance of the cousin marriages; it is considered very effective. But in the grammatical context, it is dangerous. Cousin marriage is the source of career of diseases.

Consanguineous marriages occur in majority of population in which some people rigorously abstain, but others prefer with pride. Consanguineous marriage is also being practiced among the Irish travelers, the followers of Zoroastrianism, Jews and many small states of Timbuktu the great Sahara. This custom is often related to Islam, but infection, it is separate from Islam. It is said that 20% people of the whole world prefer the consanguineous marriage and 8.5% children born in the result of cousin marriage. Cousin marriage increases the chance of recessive variant in their progeny and offspring because it is said that the parents who have progeny in the result of cousin marriage suffer in the inherited diseases (Modell and Darr 2002).

Inbreeding demonstrates when two spouses have common ancestors. The inbreeding co-efficient reveal the chance of an individual gets a gene from each parent that is a copy of a single ancestral gene. If the parent does not have the same forefather; the inbreeding co-efficient is zero. An inbreeding coefficient of 1.0 has the 100% probability that a person gets two copies of a single ancestral gene. But in the human being this inbreeding rate is impossible. Commonly the source of mortality in the world is not inbreeding level can be equal to mating between close relatives. Consanguinity has been studied in the population belong to south Asia and Latin America. But the majority of reviews on the consanguinity gave the mix results (Dorsten *et al.* 1996).

## **2.1 Types of Genetic Diseases**

Having a vigorous baby is the main desire of each mate, particularly for those who have practiced a psychologically or bodily retarded child. Millions of children are born with inherited diseases every year. These disastrous information consequences a lot of troubles in the kiln and the society, inherent disorders are innate in four massive classic models. In the populations where cousin marriage is broadly experienced, recessive genetic disorders will carry on to increase greater eminence on the whole range of ill health? In the calculation, the succeeding inbreeding leads to enlarged homozygosity, which in turn, leads to an improved danger of early morbidity and death among the progeny. As a result, consanguinity should be dejected through health education of the community about the distasteful possessions of unified marriage. Hereditary counseling, premarital and antenatal screenings are to be useful whenever possible, at least for those who are at risk of rising hereditary disease. Consanguineous marriages are customarily ordinary right through the Eastern Mediterranean region and South Asia, particularly in the Muslim spouses (Nazarabadi *et al* 2006).

## **2.2 Excess of Genetic diseases in First cousin progeny**

For the purposes of the analysis of British Pakistanis illustrated here, consanguineous marriage was distinct rudely as that between individuals recognized by the respondents to be blood relatives. When practical to exact groups, the term consanguineous needs a more accurate description, since

marriages measured 'normal' in one population can be regarded consanguineous and incestuous in new groups, depending on cultural norms. The descriptions also vital when considering distinctions in the morbidity and mortality recorded in the offspring of consanguineous couples as a consequence of the lack of harmful recessive genes which becomes more regular with enlarged inbreeding. Even marriages between first cousins, by far the commonest state in consanguineous mates in the British Pakistani inhabitants, pose different hereditary possibilities with a double-first cousin marriages screening a better degree of inbreeding (Bittles *et al.* 1991)

### **2.3 Cousin marriage and genetic diseases in British Pakistanis**

Cousin marriage has been the center of new media concentration, some personal belongings highly contentious. Thus the BBC journal programmed for Asian communities '*East*', changed in June 1990, illustrated the practice in an unfavorable luminosity, emphasizing the improved danger of hereditary disorders. The program has been explained as disgustingly deceptive, pessimistic and unpleasant to the preponderance of Pakistani spectators (Modell 1990). Darr and Modell have also argued that the majority connected British Pakistani parents with a child with an inherited disorder have been mentioned by health personnel that their child is sick because they are cousins'. This study gave the sample of the present outlook of British Pakistanis in relation to these influences (Modell *et al.* 1988).



### **Assumptions**

- Consanguineous marriage increases the risk of genetic diseases.
- First cousin marriage increases the risk of autosomal diseases in the progeny.
- Consanguineous marriages causes the chance to be happening the abortion.
- Genetic disorders will carry on to increase greater eminence in the on the whole range of ill health.

**Chapter No.3**

**THEORETICAL FRAMEWORK**

### **3.1 Childhood Familiarity theory**

The theory named Childhood Familiarity was presented by Edward Westermarck in 1920. The Edward Westermarck said that the children who live with one another from the start of the age have scarce sexual urges as compare to those who live away from one another. Infact Westermarck was going to prove the reality of the incest taboo. Watermark included the persons who are closely associated. He gave the example of the siblings who often closely related. They do not have sexual attraction among one another. The Sofi Philosopher Al Ghazali demonstrated for that the people who get consanguineous marriage, have weak progeny because they have less sexual desires (Farah 1984). Similarly, according to Anderson (1982) who interviewed the Ghalzai Pathan existed Afghanistan that the cousin marriage creates the confusion among the married couple.

### **3.2 Inbreeding theory**

Inbreeding theory was first proposed by Lavi Strauss (1955). The purpose of this theory was the elaboration of the incest Taboo. After the Westermarck; it was the second illustration of the incest Taboo. The lexiconal meaning of the Inbreeding; in the sociological context is” To marry within the Family”. So the inbreeding theory illustrates that the people who get marriage within the family, their progeny suffers in the genetic diseases. The theory also demonstrates for distinction among the offspring mortality rate. The mortality rate is high in the progeny who are the product of the spouse having the same

family as compare to spouse getting the divergent family. For many years, this theory was rejected on the basis of the experience of the dogs were the same generations.

### **3.3 Application of theory**

Both childhood familiarity theory and inbreeding theory suit the topic genetic diseases and people's perception about cousin marriage. A childhood familiarity theory proposed that closely associated child have less sexual urges. As a result the progeny has born weak. Closely associated children are the cousins and other relatives. So that is why this theory suits the topic completely. On the other hand, inbreeding theory presented by Lush in which first of all he elaborated the incest taboo, but in the theory he demonstrated that marriage within the family causes severe genetic diseases in the off springs. He exemplified cousin marriage and uncle niece marriage causes the inherent and genetic diseases among the progeny. Further, he said that the likelihood of inheriting a double dose of a harmful recessive, is twice that of the offspring of first cousins.

### **3.4 Propositions**

- Closely associated progeny have scarce sexual urges.
- Closely associated persons in the adult age have weak offspring.
- Marriage within the family causes high rate of child mortality.
- First cousin marriage causes the genetic diseases.
- Less sexual urges causes the fewer number of progeny.

### **3.5 Hypothesis**

$H_0$ =Cousin marriage has no severe impact on the health.

$H_1$ = Cousin marriage increases the risk of genetically diseases.

**Chapter No. 4**  
**CONCEPTUALIZATION AND**  
**OPERATIONALIZATION**

## **4.1 Conceptualization**

### **4.1.1 Genetics**

According to the Columbia Encyclopedia (1993:1058) “The scientific study of the mechanism of heredity”. In this definition the mechanism of heredity is said to be the genes. Because the genes are transferred with the systematic way to one person from another person; until the genetics studies the genes and the related mechanism. Until according to the Chamber dictionary (2007:364) the branch of biology; dealing with heredity and variation; inherited characteristics of an organism; origin; development”.

### **4.1.2 Disease**

According to the Chamber dictionary (2007:620) “An unhealthy state of body or mind; a disorder, illness or ailment with distinctive symptoms, caused e.g. by infection; unhealthiness, or a specific ailment, in plants; a social evil (fig); uneasiness. On the other hand the Collins dictionary (2009:493) elaborated “Any impairment of normal physiological function affecting all or part of an organism, esp. a specific pathological change caused by infection, stress. Producing characteristic symptoms; illness or sickness in general <sup>2</sup> a corresponding condition in plants <sup>3</sup> any situation or condition linked to this: the disease of materialism”

### **4.1.3 Consanguinity**

According to Chamber dictionary (2007:916)

Relationship by blood as opposed to affinity or relationship, by marriage: a close relationship or connection”.

This definition proposed that the marriage within a family or marriage with close relative male or female is called consanguinity. In these close relatives the paternal and maternal cousin marriages are included.

#### **4.1.4 Marriage:**

According to the Chamber dictionary (2007:323)”The ceremony, an act or contract by which a man and woman become husband and wife; a similar, ceremony, etc., between homosexual the union of man and woman as husband and wife a declaration of the king and queen in Beziq, it's a close union until, according to Collins Dictionary (2009:364). Genetics is about or relating to genetics, gene or the origin of something”.

This definition demonstrates that genetics is like a system in which organisms are person is influenced by the origin. Here origin means their ancestors are forefathers; because gene relates to the forefathers or parents.

According to Collins Dictionary (2009:479). Marriage The state or relationship of being husband and wife; the legal union or contract made by a man and a woman to live as a husband and wife”. According to Collins Dictionary (2009:649).Consanguinity is the relationship by blood, kinship, closes affinity or connection.”

According to the Hutchinson encyclopedia (2004:382). disease is a condition that disturbs or impairs the normal state of an organism “Disease is the state in



which a person feels not good. Diseases can be multiple some are viral, some are infectious and some are genetics diseases. When these diseases affect a person his normal state changes into confusing state. In this definition human being is said to be an organism. According to the Hutchinson encyclopedia (2004:275). Genetics is the branch of biology concerned with the hereditary and variation is known as Genetics.”

## **4.2 Operationalization**

### **4.2.1 Consanguinity**

Consanguinity is the synonym of cousin marriage or marriage within the family or with close relatives. Cousin marriage (consanguineous marriage) has many types in which paternal cousin (the sons or daughter of the uncle) and maternal cousin (A sons or daughter of the mother’s sisters). These cousins are also called cross and parallel cousins. So the marriage with these cousins is called the consanguinity and this marriage system is called consanguineous marriage. So the consanguineous marriage is the name of cousin marriage.

### **4.2.2 Genetics**

Genetics is the branch of Biology in which we study the genes. The genes are the something that picks the genetic traits and transfer in the generation. Some traits are transferred by genes, for example color of hair, color of eyes, some habits, walking style and intelligent mind, etc. But it is not necessary that all progeny has the characteristics of their forefathers. Besides that, some diseases are also transmitted by the genes from forefathers to generation, for

example: epilepsy, sickle cell anemia, joint dislocation, mental diseases and heart diseases are also involved. But these diseases prevail mostly in the progeny of the first cousin.

#### **4.2.3 Disease**

Diseases are the breakdown of the body that changes a normal body into a confusing state. There are multiple diseases, but these diseases can be divided into three dimensions are viral diseases, infectious diseases and Genetic diseases. The genetic diseases are the diseases that come from the forefathers by genes.

#### **4.2.4 Marriage**

Marriage is the legal union or contract made by a man and a woman to live as a husband and wife. There are multiple marriage patterns in the world. For example the exogamy; stands for the out of family marriage. Love in marriage is also considered in this marriage pattern. Endogamy is another dimension of the marriage stands for the marriage within a family. Arrange marriage and cousin marriage is also considered in this dimension of marriage. Cousin marriage prevails in the Endogamy is regarded popular form of marriage.

**Chapter No 5**

**RESEARCH METHODOLOGY**

### **5.1 Research Design**

In the present research, the data was collected as the basis of quantitative research because the quantitative research uses numerical analysis. Quantitative research was the easy way to analyze the collected data for the researcher and the researcher easily analyzes by applying this method. Another reason of using this method was that it saved time while quickly collecting the interviews from respondents.

### **5.2 Universe**

The research study was conducted in the both rural and urban areas of district Rajan pur. These include the union councils Hajipur, no repair, Fazilpur and Rajan pur. According to census survey of 1998, the total population of the District Rajan pair was 490,025 persons. 51% were male and 49 percent were female. The urban population was the 9% and the rural population was 91% of the total population of the district.

### **5.3 Units of Analysis**

The target population of the researcher was the respondents of rural areas. The data were collected in District Rajan Pur from 162 consanguineous married couples who had genetic diseased offspring and mostly the respondents belong to rural areas of the District were selected for the collection of Data.

### **5.4 Sample Design**

In order to distinctly characterize and sort an appropriate sample which can be a suitable representative of the entire population. The researcher has gone

through the Snowball sampling. The researcher interviewed them face to face. Also, it was less costly as compared to other techniques.

### **5.5 Sample Size**

A sample is the subset of the whole population because the reflection of the entire community is difficult for a single researcher, so the researcher choosed the number of respondents for all the villages in and Tehsils in District Rajan pur. Moreover, the researcher used the snowball sampling of the research because the people who belong to refusal of genetics diseases are the respondents. From this scenario, they dug out the ground reality behind the topic and they will make the research more accurate. A researcher saves their time and the useful information during the inquiry.

### **5.6 Tool for data collection**

In order to examine the problem within the locale, the researcher employed the questionnaire method to fetch the data from the respondents. The respondents were comprised of literate and illiterate folk. Therefore the necessity arose to apply the questionnaire method. The method has benefitted the researcher to encompass the panorama of a representative sample comprising of literate and illiterate people.

### **5.7 Technique for data collection**

For the data collection of the research: face to face technique was applied. The researcher developed a structure (close handed) questionnaire to gather the data on the Genetics diseases and people's perception about consanguineous

marriage. The researcher try his best to encompass every aspects' of the situation which is affected due to refusals and their reasons i.e., as an individual and as a member of the community.

### **5.8 Pre-testing**

Pre-testing is a tool in which researcher tested his or her research tool before data collection of the data because to ensure the validity and accuracy of the questionnaire. This will perceive very necessary to see the work ability of the tool. The research took 10 respondents for the purpose of protesting. 10 respondents will be enough to show the work ability of a questionnaire.

### **5.9 Tool for data analysis**

After conducting research, data was an analysis by statistical method. So the present inquiry after conducting research data entered into the computer and analysis through statistical package for social sciences (SPSS) data entry software having version 16. The hypothesis tested through chi-square testing. This is commonly used in sociological research. Then the conclusion was drawn.

### **5.10 Opportunities and Limitations of the study**

Opportunities for the study include gaining a better understanding of Genetic diseases and people's perception about consanguineous marriage. The researcher hailed from the same District, which was the study of the universe. So it was an easy opportunity for him to interview as they were easily

available, but the risk is that the people were acquaintances of the researcher helpers.

### **5.11 Ethical concern**

It is the moral duty of the researcher to get permission before initiating any research activity, e.g., asking questions from respondents. Trust was built through politeness and giving due respect to the interviewees. The researcher gives the respondents a respect and avoided personal questions and use of abusive language, which hurts their emotions.

**Chapter No 6**

**RESULTS**



**Table 6.1 Gender of Respondent**

<b>Categories</b>	<b>Frequency</b>	<b>Percent</b>
Male	85	52.5
Female	77	47.5
Total	162	100.0

The table demonstrates the overall percentage distribution of the respondents. In which 85 were the male respondents and the 77 were the female respondents. Male were the 52. % of the total respondents until the female was the 47.5 percent of the total respondents. So, mostly the males were interviewed by the researcher.

**Table 6.2 Age of Respondent**

<b>Categories</b>	<b>Frequency</b>	<b>Percent</b>
24-29	56	34.6
30-35	47	29.0
36-41	29	17.9
42-Above	30	18.5
Total	162	100.0

The Table 6.2 revealed that there are different categories with the reference of the age. At the age of 24-29 years; the respondents were 56 and the 34.6% of

the total respondents. At the age of 30-35 years old were 47 respondents and the 29% of the total respondents. From 36 to 41 years old; the respondents were 29 and the 17.9% of the total respondents. Above the 42 years old the respondents were the 30 and the 18.5% of the total respondents. The majority of youth was asked the questions about the consanguinity.

**Table 6.3 Marital Status**

Categories	Frequency	Percent
Married	144	88.9
Divorced	10	6.2
Widow	8	4.9
Total	162	100.0

The Table 6.3 showed that 144 respondents were then married and the 88.9% of the total respondents. Ten respondents were divorced and 6.2% were the total respondents. Eight respondents were the widow and the 4.9% of the total respondents. In the end the table conveys the message that the married people were interviewed by the researcher.

**Table 6.4 Family Size**

Categories	Frequency	Percent
5-7	56	34.6
Above	106	65.4
Total	162	100.0

Table 6.4 illustrated 56 respondents said that they have 5 to 7 family members in their family. Their percentage is 34.6 percent of the total respondents. On the other hand 106 respondents said that they have long families comprise of the seven above respondents. Their percentage is 65.4 percent of the total. People have long families the conveyed the message

**Table 6.5 Family types**

Categories	Frequency	Percent
Joint	56	34.6
Extended	106	65.4
Total	162	100.0

Table 6.5 describes the different categories regarding the family. Here three categories are given in the upper table. 56 respondents belong to the joint

family structure and they were 34.6 of the total respondents. At the same, 106 respondents sided with extended family and where the 65.4% of the total. Consequently, the majority of the respondents belongs to extended family. So, the majority of the respondents connected with the extended families.

**Table 6.6 Occupation**

Categories	Frequency	Percent
Employed	77	47.5
Farming	56	34.6
Any other	29	17.9
Total	162	100.0

Table 6.6 demonstrated the different types of occupation having the respondents. So, in this table 77 respondents are unemployed and their percentage is 47.5. The count of the respondent who has farming occupation in 56 and the percentage is 34.6. The respondents who have besides the two types of occupation or have another occupation were 29 and their percentage is 17.9 percent. The table elaborates that the majority of the people are not under the poverty line and they are employed.

**Table 6.7 Monthly Income**

Categories	Frequency	Percent
10001-20,000	56	34.6
20,001-30,000	29	17.9
Above	77	47.5
Total	162	100.0

Table 6.7 explained the monthly income of the respondent. Fifty six respondents have 1000 to 20000 monthly income and they were 34.6% respondents of the total. The respondents who have 20000 to 30000 monthly incomes were 29 and their percentage is 17.9%. Seventy seven respondents have above income of 30000 and their percentage is 47.5 percent. So the majority of the people belong to the middle class.

**Table 6.8 Got married with person**

Categories	Frequency	Percent
Father's brother's daughter-Son	86	53.1
Father's sister's daughter-Son	29	17.9
Mother's sister's daughter-Son	47	29.0
Total	162	100.0

Table 6.8 showed that 86 respondents and their percentage 53.1 married with father's brother's daughter or son. 29 respondents married to father's sister's daughter and their percentage 17.9 percent. Forty seven respondents married with mother's sister's daughter or son and their percentage are twenty nine percent. This table shows that people prefer to marry with paternal cousin.

**Table 6.9 consanguineous marriages and genetic disorders.**

Categories	Frequency	Percent
Yes	132	81.5
No	30	18.5
Total	162	100.0

Table 6.9 elaborated that 132 respondents having 81.5 percentages said yes about this question until 30 respondents having 18.5 percentages said no in the favor of this question. This table shows that majority of the respondents marry with their cousin by knowing the risks of cousin marriage.

**Table 6.10 Reasons to marry with a cousin**

Categories	Frequency	Percent
Due to parental force	106	65.4
Due to Biradri force	56	34.6
Total	162	100.0

Table 6.10 explained that 106 respondents married due to parental fears and their percentage is 65.4 percent of the total. On the other hand 56 respondents married because of *biradri* (Brotherhood) force and their percentage is 34.6 percent. So the a number of respondents said that they are married to their cousin due to family force.

**Table 6.11 wish to marry with Cousin**

Categories	Frequency	Percent
Yes	30	18.5
No	132	81.5
Total	162	100.0

Table 6.11 showed that 132 respondents favored the question and said yes their percentage 81.5 on the other hand 30 respondents did not favor the question and said no in the favor of this question. Their percentage is 18.5 percent. This table is concluded that 132 respondents are married to their cousin without their wish.

**Table 6.12 engagements in childhood**

Categories	Frequency	Percent
Yes	133	82.1
No	29	17.9
Total	162	100.0

Table 6.12 showed that 133 respondents favored the question and said yes their percentage 82.1 on the other hand 29 respondents did not favor the question and said no in the favor of this question. Their percentage is 17.9 percent. In the end that majority of the respondents was engaged with their cousins.

**Table 6.13 Opinion to favor the cousin marriage**

Categories	Frequency	Percent
Yes	30	18.5
No	132	81.5
Total	162	100.0

Table 6.13 elaborated that 30 respondents having 18.5 percentages said yes about this question until 132 respondents having 81.5 percentages said no in the favor of this question. The majority of the respondents did not favor the cousin marriage. But they are married to their cousin due to some compulsions.



**Table 6.14 Compulsion to get cousin marriage**

Categories	Frequency	Percent
Strongly agree	85	52.5
Agree	47	29.0
Disagree	30	18.5
Total	162	100.0

Table 6.14 demonstrated that 85 respondents were strongly agreed and their percentage is 52.5 percent. On the other hand 47 seven people having percentage 29.0 were agreed. Until 30 respondents having percentage 18.5 percent disagreed. Its mean that the majority of the respondents was obliged to marry with their cousin.

**Table 6.15 Cousin Marriage and society**

Categories	Frequency	Percent
Strongly agree	76	46.9
Agree	56	34.6
Disagree	30	18.5
Total	162	100.0

Table 6.15 confirmed that 76 respondents were strongly agreed and their percentage is 46.9 percent. On the other hand 56 people having percentage 34.6 were agreed. Until 30 respondents having percentage 18.5 percent

disagreed. The majority of the respondents said that society consider the unethical the person who refuses to marry with his or her cousin.

**Table 6.16 Cousin Marriage and child mortality**

Categories	Frequency	Percent
Yes	106	65.4
No	56	34.6
Total	162	100.0

Table 6.16 showed that 106 respondents favored the question and said yes their percentage 65.4 on the other hand 56 respondents did not favor the question and said no in the favor of this question. The majority of the respondents told the researcher that their progeny were suffering some diseases.

**Table 6.17 cousin marriage and effected progeny**

Categories	Frequency	Percent
1---2	103	63.6
3---4	29	17.9
None	30	18.5
Total	162	100.0

Table 6.17 revealed that the children of 103 respondents affected by the genetic diseases their number are 1 to 2 until their percentage is 63.6 percent. 3

to 4 children are suffering with the inherent disease of 29 respondents. In the field 30 respondents said that their children have no inherent disease in the result of cousin marriage and their percentage is 18.5 percent of total respondents.

**Table 6.18 cousin marriage and various genetic disorders.**

Categories	Frequency	Percent
Colorblindness	56	34.6
Heart disease	29	17.9
Mental disease	47	29.0
Any Other	30	18.5
Total	162	100.0

Table 6.18 confirmed that the progeny of the 56 respondents suffering from color blindness their percentage is 34.6 percent of the total respondents. Twenty-nine respondents having percentage 17.9 percent said that they have heart disease. Forty seven respondents having percentage 29.0 said that they have mental diseases until 30 respondents owning percentage 30 percent said their children have any other diseases. So the color blindness prevails in abundance in the progeny.

**Table 6.19 Forefathers as career of genetic anomalies. .**

Categories	Frequency	Percent
Grand Father	56	34.6
Grand mother	47	29.0
Mother	29	17.9
No one	30	18.5
Total	162	100.0

Table 6.19 revealed that 56 respondents having percentage 34.6 percent said that their grandfather was the carrier of the genetic diseases. 47 respondents having percentage 29.0 said that their grandmother was the carrier of the diseases. 29 respondents having percentage 17.9 said that their mother was the carrier of the diseases. 30 respondents having percentage 18.5 said that no one was the carrier of the diseases. So the paternal consanguinity increases more genetic risks as compare to other marriages.

**Table 6.20 Cousin Marriage and future generation**

Categories	Frequency	Percent
Agree	30	18.5
Disagree	56	34.6
Strongly Disagree	76	46.9
Total	162	100.0

Table 6.20 showed that 30 respondents said that they would recommend their progeny to cousin marriage and their percentage is 18.5 percent of the total. 56 respondents are agreeing and the percentage is 34.6 percent on the other hand 76 respondents are strongly disagreeing and their percentage is 46.9 percent. In the end now the respondent is conscious of the risks of consanguinity. According to them, they would never marry their offspring with their cousin because of any consanguineous risks.

**Table 6.21 Consanguineous marriage and religion**

Categories	Frequency	Percent
Strongly agree	59	36.4
Agree	47	29.0
Don't Know	56	34.6
Total	162	100.0

Table 6.21 explains that 59 respondents having percentage 36.4 were strongly agreed about the question, 47 respondents were agreeing and 56 respondents said they did not know about the question, their percentage was respectively 29.0% and 34.6 percent. The majority of the respondents said that cousin marriage is religiously preferable.

**Table 6.22 Cousin Marriage and couple's intention**

Categories	Frequency	Percent
Agree	30	18.5
Disagree	56	34.6
Strongly Disagree	76	46.9
Total	162	100.0

Table 6.22 showed that 30 respondent said that they were agree and their percentage is 18.5 percent of the total. 56 respondents are disagreeing and the percentage is 34.6 percent on the other hand 76 respondents are strongly disagreeing and their percentage is 46.9 percent. This table shows that couples are not asked about their preference with reference of selecting a mate.

**Table 6.23 Better type of cousin marriage**

Categories	Frequency	Percent
Paternal cousin marriage	133	82.1
Maternal cousin marriage	29	17.9
Total	162	100.0

The Table 6.23 showed that 133 respondents having percentage 82.1 percent said that they married with their paternal cousin and 29 respondents having

percentage 17.9 said that they married with their maternal cousin. So this shows that people considered paternal cousin more preferable than maternal cousin.

**Table 6.24 Impact of cousin marriage on family size.**

Categories	Frequency	Percent
Strongly Agree	47	29.0
Agree	56	34.6
Don't Know	29	17.9
Disagree	30	18.5
Total	162	100.0

Table 6.24 explains that 47 respondents having percentage 29.0 were strongly agreed about the question, 56 respondents were agreeing and 29 respondents said they did not know about the question, their percentage was respectively 34.6% and 17.0 percent. On the other hand 30 respondents having percentage 18.5 were disagreeing. So majority of respondents told that cousin marriage favors the shrankness of family size.

**Table 6.25 Cousin marriage and rural Areas**

Categories	Frequency	Percent
Strongly agree	77	47.5
Agree	56	34.6
Don't Know	29	17.9
Total	162	100.0

Table 6.25 demonstrated for that 77 respondents having percentage 47.5 were strongly agreed about the question, 56 respondents were agreeing and 29 respondents said they did not know about the question, their percentage was respectively 34.6% and 17.9 percent. This table conveys the message that cousin marriage is mostly performed in the rural areas.

**Table 6.26 Ratio of cousin marriage in Illiterate people and literate**

Categories	Frequency	Percent
Strongly agree	47	29.0
Agree	56	34.6
Disagree	59	36.4
Total	162	100.0

Table 6.26 explains that 47 respondents having percentage 29.0 were strongly agreed about the question, 56 respondents were agreeing and 59 respondents said they disagree about the question, their percentage was respectively 36.4% and 34.6 percent. Either it is literate family or illiterate the cousin marriage



exist equally. This Table concluded that Cousin marriage is customarily preferred marriage in the District Rajan pur.

**Table 6.27 Stability of cousin marriage**

Categories	Frequency	Percent
Agree	30	18.5
Don't Know	29	17.9
Disagree	56	34.6
Strongly Disagree	47	29.0
Total	162	100.0

Table 6.27 elaborated that 30 respondents having percentage 18.5 said that cousin marriage is comprised on the long term period until 29 respondents possessing percentage 17.9 said that they did not know about the question. On the third point 56 respondents having percentage 34.6 percent said that they disagree about the question. In the end 47 respondents having percentage 29.0 said that they strongly disagree about the question.

**Table 6.28 Impact of cousin marriage on human fertilization**

Categories	Frequency	Percent
Strongly agree	47	29.0
Agree	85	52.5
Disagree	30	18.5
Total	162	100.0

In the Table 6.28 the respondent was asked that Is cousin marriage shrank the family size? In this respect 47 respondents having percentage 29 were strongly agreed until 85 respondents having percentage 52 plus. On the other hand just 30 percent people were disagreeing from the purpose. This situation proved that cousin marriage decreases the fertility rate. Which dangerous for the whole world.

**Table 6.29 Cousin Marriage and available information**

Categories	Frequency	Percent
Disagree	115	71.0
Strongly Disagree	47	29.0
Total	162	100.0

The Table 6.29 guided us to the results of the question that 115 respondents said that they did not know about the severe impacts of cousin marriage and their percentage is 71.0% on the other hand 47 respondents were strongly

disagreeing and their percentage were 29.0 percent. So the majority of respondents were not familiar with the dangerous impacts of cousin marriage.

**Table 6.30 Cousin Marriage and percentage of satisfied people**

Categories	Frequency	Percent
Agree	30	18.5
Disagree	85	52.5
Strongly Disagree	47	29.0
Total	162	100.0

Table 6.31 argued that 30 respondents having percentage 18.5 said that they would happy to marry with their cousin on the other hand 85 respondents said that they were disagreeing with the question and their percentage was 52.5 of the total respondents until 47 respondents having percentage 29.0 said that they were strongly disagreeing with the question means they would not be happy if they are married with their cousin.

## 6.2 Hypothesis Testing

Through Chi-Square test Do you think that family size shrank because of consanguinity and Are your children suffered from any genetic disease have a positive relationship.

**Table 6.31. Impact of consanguinity on family size and child defects**

### Crosstabulation

Count				
		Are your children suffered from any genetic disease?	Total	
		Yes	No	
Do you think that family size shrank because of consanguinity	Strongly Agree	47	0	47
	Agree	30	26	56
	Don't Know	29	0	29
	Disagree	0	30	30
Total	106	56	162	

Through Chi-Square test Do you think that family size shrank because of consanguinity and Are your children suffered from any genetic disease have a positive relationship.

**Table 6.32 Chi-Square Test**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.004E2 <sup>a</sup>	3	.000
Likelihood Ratio	131.546	3	.000
Linear-by-Linear Association	49.100	1	.000

a. 0 cells (. 0%) have expected count less than 5. The minimum expected count is 10.02.

P is < then 0.05. The relationships between Do you think that family size shrank because of consanguinity and where their children suffered from any genetic disease have a positive relationship and research hypothesis is accepted the significant Pearson square is 1.004E2<sup>a</sup>, degree of freedom is 3 and a P value is .000 which is less than 0.05 which shows the results are significant. However, there is a relationship between” Do you think that family size shrank because of consanguinity and are your children suffered from any genetic disease have positive relationship? So we accept the research hypothesis.

**Table 6.33 Risk of consanguinity and peoples restrictions Crosstabulation**

Count					
		In your opinion people are bounded with reference of cousin marriage			
		Strongly agree	Agree	Disagree	Total
. Is consanguineous marriage increases the risk of genetic disorders?	Yes	85	47	0	132
	No	0	0	30	30
Total		85	47	30	162

Through Chi-Squire testis consanguineous marriage increases the risk of genetic disorders and in your opinion people are bound with reference of cousin marriage have a positive relationship.

**Table 6.34 Chi-Square Test**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.620E2 <sup>a</sup>	2	.000
Likelihood Ratio	155.250	2	.000
Linear-by-Linear Association	136.775	1	.000
N of Valid Cases	162		

a. 0 cells (. 0%) have expected count less than 5. The minimum expected count is 5.56.

P is < then 0.05. The relationships between Is consanguineous marriage increases the risk of genetic disorders and In your opinion people are bounded with reference of cousin marriage have positive relationship and research hypothesis is accepted the significant Pearson square is 1.620E2<sup>a</sup>, degree of freedom is 2 and a P value is .000 which is less than 0.05 which shows the results are significant. However, there is a relationship between” Is consanguineous marriage increases the risk of genetic disorders? In your opinion people are bound by reference of cousin marriage so we accept the research hypothesis.

**Table 6.35 Genetic anomalies and its shapes in progeny Cross tabulation**

**From which diseases your children have suffered**

		Colorblindne SS	Heart disease	Mental disease	Any Other	Total
Are your children suffered from any genetic disease?	Yes	30	29	47	0	106
	No	26	0	0	30	56
	Total	56	29	47	30	162

Through Chi-Squire test Are your children suffered from any genetic disease and from which disease their children have suffered have a positive relationship.



**Table 6.36 Chi-Square Test**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.004E2 <sup>a</sup>	3	.000
Likelihood Ratio	131.546	3	.000
Linear-by-Linear Association	1.064	1	.302
N of Valid Cases	162		

a. 0 cells (. 0%) have expected count less than 5. The minimum expected count is 10.02.

P is < then 0.05. The relationships between Are your children suffered from any genetic disease and From which disease your children have suffered have a positive relationship and research hypothesis is accepted the significant Pearson square is 1.004E2<sup>a</sup>, degree of freedom is 3 and a P value is .000 which is less than 0.05 which shows the results are significant. However, there is a relationship between “Are your children suffered from any genetic disease? \* From which disease your children have suffered, so we accept the research hypothesis

**Chapter No 7**

**DISCUSSION AND CONCLUSION**

## 7.1 Discussion

Genetic diseases are the threat to the society. These can be controlled if the cousin marriage might be controlled. Consanguineous marriages are common and customary in many societies. But it leads to dangerous diseases. It is often said that cousin marriages should be forbidden in the society because of its severe impacts on their progeny. However, various experts said that refrain from cousin marriages is unethical at the societal level. If it might look at the social importance of the cousin marriages; it is considered effective. But in the genetic context, it is very dangerous. Cousin marriage is the source of carrier of diseases. Consanguineous marriages occur in majority of population in which some people rigorously abstain, but others prefer with pride. Consanguineous marriage is common in the different parts of the world. This custom is often related to Islam, but in fact, it is separate from Islam. It is said that 20% people of the whole world prefer the consanguineous marriage and 8.5% children born in the result of cousin marriage. Cousin marriage increases the chance of recessive variant in the progeny because it is said that the parents who have progeny in the result of cousin marriage suffer in the inherited diseases. Inherent diseases can be divided into a multiple types, for example Sickle cell anemia, heart disease, color blindness, epilepsy and heart diseases, etc. but in the some literature, it is said that joint dislocation and chances to happen an abortion is the also a genetic disease. Now the question arises that why the abortion happens because of cousin marriage? According

to Westermarck' the persons who are closely associated have less sexual desires. Their progeny produces weak or disable as result of closely associated persons. On the other hand Strauss had also argued that the people who marry within the family have genetically diseased progeny. If it is talked with the reference of the hypotheses of Westermarck it is true that the chances to happen an abortion are true; because give birth a child is a very difficult task. The mothers who are also the production of consanguinity can be physically weak. She cannot give birth to a child. She cannot have the capacity to bear the child till nine months that is why the chances of abortion can increase in the women who are the production of consanguinity. In the result one of the tables elaborated that the people of the District Rajan Pur prefer the cousin marriage on the basis of religion. The so called religious scholars have provoked the people to bind in the consanguinity. They often relate the cousin marriage with Islam. But infect its totally fake idea. Islam cannot bind are restricting a person to involve the consanguinity. Another reason of cousin marriage is to escape from dowry; because of the current era poor people cannot get married out of the family. He has to pay heavy cast on the result of out of family, marriage this custom is called "*Likhai Parhai*" in the indigenous language. *Likai parhai* means "agreement". The family of the bride takes a heavy amount in the shape of land or gold from the groom's family. That is why an average income person cannot get married out of the family. In the result of compulsion people have to get married with their

cousin. The last reason to get cousin marriage is strong ties with family.

People get cousin marriage to strong the kinship system.

## **7.2 Conclusion**

Consanguinity is the one of traditional custom in the district Rajan poor as well as in the whole world. After the survey, it is proved that the majority of the people have affected by the genetic diseases. Before this research there was no research on the consanguinity and its negative impacts on the health in district Rajan pur. People felt shyness to provide data on the same sort of the question. For example, when the question was asked by the researcher that has their progeny any genetic disease? The respondents felt shyness and bit fear. Reason behind that was, if they say: according to their thinking; that their progeny have genetic diseases. The rumor would spread all around the region. So nobody would be ready to give their daughters or Son to marry with the person who has a genetic disorder. So there is need to suggest the people to refrain from cousin marriage so that the biggest part of the society may escape from the genetic disorders.

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## ANNEXTURE I

### Questionnaire

**Genetic Diseases and people's perception about cousin marriage among the residents of district RajanPur.**

#### **Muhammad Abdullah**

This questionnaire is conducted for the fulfillment of thesis work on the topic "Genetical diseases and people's perception about the cousin marriage in District Rajan Pur". I am a student of the Department of Sociology, Quaid-i-Azam University Islamabad. The purpose of this research is purely academic. This is not used to harm any person. Personal information will not be disclosed and will be kept confidential. This questionnaire will provide you an opportunity to give your opinion about Genetic diseases and people's perception. Please fill this questionnaire.

Thanks....

1. Name of respondent.....
2. Gender of respondent
  - 1) Male
  - 2) Female
3. Age of respondent
  - 1) 18-23
  - 2) 24-29
  - 3) 30-35
  - 4) 36-41
  - 5) 42 and Above
4. Marital status
  - 1) Single
  - 2) Married
  - 3) Divorced







4) Mother

5) No One

22. Would you recommend your generation to cousin marriage?

1) Strongly agree

2) agree 3) don't know

4) Disagree

5) strongly disagree

23. Is cousin marriage considered religiously preferable?

1) Strongly agree

2) agree 3) don't know

4) Disagree

5) strongly disagree

24. Do you think that is couple's intention considered in getting marriage?

1) Strongly agree

2) agree 3) don't know

4) Disagree

5) strongly disagree

25. Now a day which marriage practice is being performed in your area?

1) Paternal cousin marriage

2) maternal cousin marriage

3) Any other

26. Do you think that family size shrank because of consanguinity?

1) Strongly agree

2) agree 3) don't know

4) Disagree

5) strongly disagree

27. Is this marriage being performed in rural areas?

1) Strongly agree

2) agree 3) don't know

4) Disagree

5) strongly disagree

28. Do only illiterate families perform this marriage?

1) Strongly agree

2) agree 3) don't know

4) Disagree

5) strongly disagree