Measuring Society's Awareness Of The Social And Health Factors Of Pre-Marital Screening, From The Perspective Of The Generalist Approach Of Social Work

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Abstract

Background:
Hereditary blood disorders, such as sickle cell anemia, thalassemia, are prevalent in the Jazan region of Saudi Arabia, primarily due to high rates of consanguineous marriages. Premarital screening programs have been introduced as a public health intervention to identify at-risk couples and reduce the prevalence of these disorders. However, the effectiveness of these programs is influenced by community awareness, attitudes, and compliance.
Objective:
To assess society's awareness about the importance of premarital screening and the health risks associated with mismatched marriages in the Jazan region, Saudi Arabia.
Methods:
A descriptive cross-sectional study was conducted using a structured questionnaire distributed to 443 participants in the Jazan region. The questionnaire collected demographic data, evaluated awareness of premarital screening, assessed the prevalence of genetic blood disorders, and identified perceived risks and attitudes toward mismatched marriages. Data were analyzed using SPSS v26, employing descriptive and inferential statistical methods.
Results:
Among participants, 91.4% reported no personal history of hereditary blood disorders, while 27.3% had affected family members. Sickle cell anemia was the most prevalent condition (58.5%) among those affected. Awareness of premarital screening was high, with 98.6% of participants expressing willingness to undergo the screening even if it were optional. However, only 34.1% had undergone screening. While 90.3% would avoid marriage in case of incompatible results, emotional and social factors (e.g., love, social pressure) were identified as barriers to adherence. Social worker needs generalist approach skills to dealing with barriers , Cultural competence and sensitivity skills 70%
And Effective communication and active listening 60%.
Conclusion: The findings underscore the importance of increasing the awareness of the community to social and health factors of pre-marital

	screening by further activities of social work with the community to increase community awareness.

1. Introduction

Marriage is not only a union of two individuals but also a profound societal institution that often carries significant health implications, particularly in regions where cultural and traditional practices influence marital choices. In Saudi Arabia, the Jazan region is no exception (Albanghali, M. A. (2023) [1] , with a high prevalence of consanguineous marriages that increase the risk of hereditary blood disorders such as sickle cell anemia, thalassemia, and glucose-6-phosphate dehydrogenase (G6PD) deficiency. These genetic conditions can impose severe physical, emotional, and financial burdens on families and the healthcare system alike (Al-Shafai, M., Al-Romaihi, A., Al-Hajri, N., Islam, N., & Adawi, K. (2022). [2]

Premarital screening programs have emerged as a vital public health initiative designed to address this pressing issue. These programs aim to detect genetic and infectious diseases, reduce the incidence of at-risk marriages, and provide couples with the knowledge to make informed decisions about their future. Despite their importance, however, the success of such programs is often hindered by limited community awareness, misconceptions, and cultural resistance to prioritizing health over traditional norms(Al-Shroby, W. A., Sulimani 2021). [3] In regions like Jazan, these barriers are further exacerbated by inadequate health education and the persistent stigma surrounding the concept of genetic counselling (Alswaidi, F. M., 2012). [4]

This study investigates the level of awareness and attitudes toward premarital screening in Jazan, focusing on the knowledge gaps, demographic factors, and cultural influences that shape community perceptions. It aims to assess the prevalence of hereditary blood disorders in the region, explore the risks of mismatched marriages, and identify effective strategies to improve public engagement with premarital screening services. By examining the generalist approach of social work from a multidimensional perspective, the research seeks to provide evidence-based recommendations that support public health policy, promote genetic counseling, and empower individuals to make informed, health-conscious decisions.

This study holds significant public health and social work value, particularly in the context of a region with a high prevalence of consanguineous marriages and, consequently, a high incidence of genetic blood diseases. The community's awareness important to understanding the importance of current premarital screening programs and identifying potential gaps in knowledge or compliance, by identifying these awareness levels, the study provides valuable insights for policymakers and healthcare professionals to develop targeted interventions and promote genetic counseling. Enhancing awareness can prevent future generations from suffering from preventable genetic disorders, ensuring healthier family planning and reducing the overall disease burden in the region from the perspective of the generalist approach of Social work.

Objectives:

General objective:

To Measure Awareness of Socity about the Importance of Premarital Examination and the Risks of Mismatched Marriage among Jazan City, Saudis Arabia.

Specific objectives:

1. To identify demographic characteristics of the study population.

2. To assess the prevalence of Hereditary Blood Disease.

3.To identify social and health factors premarital screening.

4. To determine community awareness of the importance of premarital screening..

2. Genetic blood disorders and social work

Genetic blood disorders are a category of medical conditions that result from inherited genetic mutations affecting the blood's components and functions. These disorders can disrupt the normal production, structure, or function of blood cells, which include red blood cells, white blood cells, and platelets. The underlying genetic mutations can be passed from parents to offspring, leading to a range of hematological abnormalities that may manifest at different stages of life.[5]

Public health and social work initiatives focusing on the identification, management, and prevention of genetic blood disorders are crucial, especially in populations with higher prevalence rates. Genetic counseling and education can empower families to understand their risks and make informed decisions regarding reproductive health.[6] [7]

Premarital screening is defined as testing couples who are planning to get married soon for common genetic blood disorders (e.g. sickle cell anemia and thalassemia and sickle cell anemia) and infectious diseases (e.g. hepatitis B, hepatitis C, and HIV/AIDS). The premarital screening aims to give medical consultation on the odds of transmitting the above-mentioned diseases to the other partner/spouse or children and to provide partners/spouses with options that help them plan for healthy family. [8]

Generalist practice forms the foundational perspective for social work, marking the profession's focus on integrating attention to the person and their situation. It reflects the profession's commitment to practice that is attentive to work across levels of systems and facilitating access to resources. Regardless of client level, the intervention may be at any level, depending on the type and goal of the intervention. It is both central to BSW education and includes foundational competencies for MSW education. There are common factors in social work's use of the generalist approach described below.

2.1. social work generalist

A social work generalist uses a wide range of prevention and intervention methods when working with families, groups, individuals, and communities to promote human and social well-being [9]

Components of the generalist practice model of social work include:

- Assessment and planning: This stage involves engaging with clients, assessing their needs, and developing a plan to address those needs.
- Implementation strategies: This stage involves putting the plan into action, which may include counseling, education, and advocacy.
- Evaluation and follow-up: This stage involves tracking client progress and making adjustments to the plan as needed. [10]

At the core of generalist social work is a holistic social work approach. It looks at how individuals, families, groups, and communities interact. This way, social workers can understand clients' unique needs and challenges. They can then develop specific intervention strategies to tackle social problems at their source. [11]

2.1.1. skills and competencies

Key skills and competencies include:

- Effective communication and active listening
- Critical thinking and problem-solving

- Cultural competence and sensitivity
- Empathy and emotional intelligence. [12]

2.1.2. Implementing Generalist Practice in Different Settings

The generalist approach in social work is very flexible. It fits well in many places, like clinics, community groups, and policy offices. This makes it a great choice for many settings.

In different places, social workers do different things. For example, in clinics, they help with therapy and planning. In community groups, they focus on helping the community grow and advocating for change. This flexibility is a big plus of the generalist model.

- Clinical Settings :In clinics, generalist social workers are key. They help clients by assessing needs, planning, and intervening. They can tackle many issues, from health and mental health to social problems.
- Community Organizations:Community groups also benefit from the generalist approach. Social workers there can help individuals and families. They also work on big-picture issues like policy changes. This model helps them see the big picture of community needs.
- Policy Development:In policy work, generalist social workers use their knowledge to push for better policies. They look at current policies, find what's missing, and work to change them. This work is guided by fairness and human rights. [13]

3. Materials and Methods

This part presents an overview of the procedures followed in the field study as follows:

3.1Study Methodology

The current study relied on the descriptive analytical approach, which aims to describe and analyze social and health phenomena related to pre-marital screening. This methodology was used to collect and analyze data from the study sample to understand the level of awareness regarding the importance of pre-marital screening, the factors influencing decisions related to screening, and the health challenges and risks associated with non-matching marriages.

3.2 Nature of the Study

This study is applied in nature, using a questionnaire as a tool to collect data. It aims to measuring the community's awareness of the social factors of pre-marital screening in Saudi Arabia.

3.3 Study Population and Sample

The study targeted population consists of all populations in the south of Saudi Arabia.

Eligible participants were those affiliated with Saudi Arabia and proficient in either Arabic or English, who voluntarily consented to participate in the study.

Individuals were excluded if they lacked comprehension of Arabic or English or were not considered south of Saudi Arabia. Additionally, participants under the age of 18 were excluded .

. 3.4 Data and Information Collection Method

The researcher relied on the following sources in the study:

- **Primary Data Sources**: This includes the basic data obtained from the questionnaire. The questionnaire was designed to include relevant questions and topics, selecting a representative sample, distributing the questionnaire to the designated sample, collecting responses from participants, and analyzing the data using statistical methods. The results and

recommendations were then summarized.

• **Secondary Data Sources**: The secondary data used in this study includes a variety of sources such as Arabic and foreign books, journals, master's theses, doctoral dissertations, articles, and previous studies and research related to the thesis topic.

3.5 Study Tool

The researcher employed a questionnaire as the primary data collection tool to achieve the study's objectives. A questionnaire was designed to measure the community's awareness of the importance of pre-marital screening and the risks associated with non-matching marriages in the Jazan region of Saudi Arabia – a cross-sectional study.

Validity of the tool

Questionnaire Validity:

- Sincerity Arbitrator : The questionnaire was submitted to the specialists , the specialists was asked to express their opinion on the questionnaire, the validity and comprehensiveness of the phrases, the diversity of their content, and the level of language and provide any observations they deem appropriate regarding modification, change, or deletion, in light of the proposals of the specialists, the questioner was modified per the provided suggestions, and the questionnaire in its final form is ready.
- True the Scale: The coefficient of internal consistency between each statement and the total degree of its dimension, the researcher calculated the internal consistency coefficient of the questionnaire on the study sample, and statistical tests were conducted to measure the validity and reliability.

Structural honesty

According to this method, honesty was be tested by estimating the correlation coefficients for all dimensions of the independent variable with the total sum of each axis, 5 phrases were excluded from the questionnaire for low scores on the other hand that all the values of the correlation coefficients for all phases ranged between (.221** - .887*) and those values were very large, and all of them were significant. Statistical at the 5% level of significance, where the values of the significance level were less than 0.05, indicates that all expressions are related to the total score. its dimensions and high significance, they participate in its measurement, and therefore the questioner is considered valid for what has been specified for measurement.

Stability tool

Alfa-Cornbach method : It means the stability of the measure and its non-contradictoriness with itself, that is, the measure gives the same results with a probability equal to the value of the variable if it is re-applied to the same sample . Thus, it leads to the same or consistent results each time a re-measurement is performed. The higher the degree of stability of the instrument, the greater the confidence in it, and there are several ways to check the stability of the balance. We calculated the stability coefficient of the test using (Cronbach, s Alpha), which takes values ranging from zero to the correct value, and if there is no stability in the data, the value of the coefficient is equal to zero, and vice versa, if there is complete stability in the data, the value of the coefficient is equal to one the correct. That is, increasing the Cronbach's alpha coefficient means increasing the stability of accuracy and thus increasing the reliability of the data.

The questionnaire consists of two sections:

- **Section One:** Includes (5) variables related to the personal and professional characteristics of the study sample, such as: (gender, age, educational level, marital status, and place of residence.
- **Section Two:** Includes the primary data of the study, which is used to identify the study's variables. This section contains (18) statements divided into (3) main objectives:
    - **Objective One:** Measures the prevalence of genetic blood diseases, consisting of (5) statements.
    - **Objective Two**: Identify the community's awareness of the social and health factors of pre-marital screening) consisting of (9) statements.
    - **Objective Three**: Measures the community's awareness of the importance of pre-marital screening, consisting of (6) statements.

3.6. Statistical Methods Used

Data were analyzed using the SPSS.v26 statistical software, and the following statistical methods were used:

Percentages and Frequencies - Descriptive Statistics -Mean -Standard Deviation-Relative Weight .

Analysis of Study Results and Discussion

4. Results

This part provides a detailed presentation of the results obtained from the current study, which measures community awareness of the importance of pre-marital screening and the risks associated with non-matching marriages in the Jazan region of Saudi Arabia – a cross-sectional study. The following sections discuss the results related to the personal and professional characteristics of the respondents, as well as the answers to the study questions, based on the appropriate statistical analyses. The results are as follows:

First: Characteristics of Respondents (Study Sample)

4.1 Personal and Professional Characteristics of Respondents:

The following shows the results of the frequency distribution of the personal and professional characteristics of the study sample:

Table "1" illustrates the frequency distribution of the study sample according to the variables (gender, age, educational level, marital status, place of residence):

Variable	Category	Frequency	Percentage (%)
Gender	Female	345	77.90%
	Male	98	22.10%
	Total	443	**100.00%**
Age Group	18-24	226	51.00%
	25-30	48	10.80%
	31-40	49	11.10%
	41-49	87	19.60%
	50 and above	33	7.40%
	Total	443	**100.00%**
Educational Level	Primary/Intermediate	6	1.40%

Variable	Category	Frequency	Percentage (%)
	Secondary	60	13.50%
	University	377	85.10%
	Total	443	**100.00%**
Marital Status	Widowed	7	1.60%
	Single	243	54.90%
	Married	171	38.60%
	Divorced	22	5.00%
	Total	443	**100.00%**
Place of Residence	Village	148	33.40%
	City	295	66.60%
	Total	443	**100.00%**

Source: Prepared by the researcher from the field study results, 2024, based on SPSS program outputs..

Table (1) show Characteristics of Respondents :

- **Gender:** The majority of participants are female, comprising 77.9% (345 respondents), while males account for 22.1% (98 respondents). This suggests that females show a greater interest in the topic of pre-marital medical examinations.
- **Age Groups:** The largest age group is 18-24, which accounts for 51.0% (226 participants). The smallest age group is 50 and above, comprising 7.4% (33 participants). This indicates that younger age groups, who are more likely to be affected by the topic, are more actively participating.
- **Educational Level:** The majority of participants hold university degrees, representing 85.1% (377 participants), while those with secondary education comprise 13.5% (60 participants), and 1.4% (6 participants) have primary or intermediate education. This suggests a high educational level among the sample, which may positively influence awareness regarding pre-marital screening.
- **Marital Status:** The largest proportion is single (54.9%), followed by married individuals (38.6%). The divorced individuals represent 5.0%, and widows comprise 1.6%.
- **Place of Residence:** The majority of participants reside in urban areas (66.6%), compared to 33.4% in rural areas, suggesting that urban residents have greater access to pre-marital medical examination services.

These results indicate a sample predominantly composed of young, educated, and urban-dwelling females who are likely more aware of the importance of pre-marital medical examinations.

Second: Study Questions and Objectives

The data were analyzed by calculating the frequency distributions, means, standard deviations, relative weights, and analyzing the responses of the sample based on the different dimensions and objectives of the study, as follows:

4.2 Results Related to the First Objective

To answer the first objective, which is: (Evaluating the prevalence of genetic blood diseases), the following table is provided:

Table" 2": Distribution of Genetic Blood Diseases Prevalence

The Prevalence of Hereditary Blood Diseases in the Family and the Family Relationship with Individuals Affected by Hereditary Blood Diseases.

Question	Answer	Frequency (Number of Cases)	Percentage (%)
Do you suffer from any genetic blood disorders?	No	405	91.4%
	Yes	38	8.6%
	Total	**443**	**100.0%**
If the answer is yes, what type of disease?	Sickle Cell Anemia	24	58.5%
	Thalassemia	5	12.2%
	Mediterranean Anemia	4	9.8%
	Spherocytosis	1	2.4%
	Diabetes and Hypertension	7	17.1%
	Total	**38**	**100.0%**
Do you have any family members who suffer from hereditary blood diseases?	No	322	72.7%
	Yes	121	27.3%
	Total	**443**	**100.0%**
If yes, what is the relationship with the affected person?	Father/Mother	34	23.1%
	Brother/Sister	37	25.2%
	Son/Daughter	7	4.8%
	Total First-Degree Relatives	78	53.1%
	Uncle/Aunt	29	19.7%
	Paternal Uncle/Aunt	18	12.2%
	Grandfather/Grandmother	0	0.0%
	Total Second-Degree Relatives	**47**	**31.9%**
	Cousins (paternal or maternal)	14	9.5%
	More distant relatives	9	6.1%
	Total Third-Degree Relatives	**23**	**15.6%**
	Total	**147**	**100.0%**

Analysis of Results from Table (2)

1. **Prevalence of Genetic Blood Disorders in the Community:** The data in Table 2 reveals that 91.4% of study participants do not suffer from genetic blood disorders, while only 8.6% reported being affected by one of these conditions. This result indicates that genetic blood disorders are not a widespread health issue in the study community, suggesting that current health awareness and prevention efforts might be effective.

2. **Types of Genetic Blood Disorders:** Among the participants who reported suffering from genetic blood disorders, the most common disorder was sickle cell anemia, accounting for 58.5% of cases. Other conditions include thalassemia (12.2%), Mediterranean anemia (9.8%), and hereditary spherocytosis (2.4%). These findings highlight sickle cell anemia as the predominant genetic blood disorder among affected individuals, signaling the need for targeted health efforts on this condition.
3. **Prevalence of Genetic Blood Disorders among Family Members:** According to Table 3, 27.3% of participants reported that family members suffer from genetic blood disorders. This result indicates the hereditary nature of these diseases within families, emphasizing the importance of early screening for individuals with a family history of these conditions in order to reduce potential health risks.
4. **Family Relationship and Genetic Blood Disorders: Importance of Screening According to Degree of Relation:**
    - **First-Degree Relatives (Highest Importance):**
        - **Father/Mother (23.1%)**: This high percentage indicates the critical role of parents in transmitting genetic blood disorders directly to their children. It underscores the importance of reviewing the medical history of parents when assessing the likelihood of genetic blood disorders.
        - **Brother/Sister (25.2%)**: Siblings share a significant portion of genetic material, making them an important group for genetic testing and early detection.
        - **Son/Daughter (4.8%)**: Although this group represents a smaller percentage, they are still directly impacted by the genetic inheritance from their parents, making their screening important.
    - **Second-Degree Relatives (Moderate Importance):**
        - **Uncle/Aunt (19.7%) and Paternal/Maternal Uncle/Aunt (12.2%)**: These relatives also play an important role in the spread of genetic blood disorders within the extended family. Given the higher percentages, it's important to consider genetic screening for these groups, especially if there is a recurring pattern of genetic disorders within the family.
        - **Grandparents (0.0%)**: The absence of reported cases in grandparents may suggest either underreporting or insufficient data on the older generations. This may limit their ability to provide accurate information about genetic blood disorders they might carry.
    - **Third-Degree Relatives (Lower Importance):**
        - **Cousins/Other Relatives (9.5%)** and **Distant Relatives (6.1%)**: While the prevalence of genetic disorders is lower in these groups, the existence of any cases indicates the potential for hereditary transmission across extended family lines. Screening for these relatives may be beneficial if unexplained health patterns appear in the family.

Conclusion: The analysis of family relationships with genetic blood disorders reveals that first-degree relatives (parents and siblings) are the most significant carriers of these conditions, representing 53.1% of the cases. This highlights the importance of pre-marital screening for individuals from families with a history of genetic blood disorders. Additionally, the lower prevalence in distant relatives (third-degree) supports the idea that the likelihood of transmission decreases with the degree of familial relationship. The results stress the need for targeted genetic counseling and early screening, particularly for individuals linked to first- and second-degree relatives, to mitigate the risks associated with genetic blood disorders. Further research is needed to better understand the genetic dynamics and to develop effective strategies for early detection and prevention.

Table 4: Prevalence of Hereditary Blood Diseases in Your Community/Family, Friends, and Neighbors

Table (4) shows the frequency distribution of the study sample according to the variable "Prevalence of hereditary blood diseases in your community." It presents the calculations of the means, standard deviations, and relative weights of the opinions of the study sample as follows:

Table "3"Prevalence of Hereditary Blood Diseases in Your Community/Family, Friends, and Neighbors

Prevalence of Hereditary Blood Diseases in Your Community/Family, Friends, and Neighbors										
	Very Low	**Low**	**Average**	**High**	**Very High**	**Total**	**Mean**	**Standard Deviation**	**Relative Weight %**	**Level**
N	128	130	124	49	12	443	**2.29**	**1.082**	**45.9%**	Medium
%	28.9%	29.3%	28.0%	11.1%	2.7%	100.0%				

Table (3) shows the results of the analysis of the prevalence of hereditary blood diseases in the participants' community (family, friends, neighbors). The distribution of responses is categorized into various levels of prevalence.

5- The majority of participants believe that the prevalence of hereditary blood diseases in their communities is low or very low, with 28.9% (128 participants) responding "very low," and 29.3% (130 participants) responding "low." The percentage of those who considered the prevalence to be "average" was 28.0% (124 participants). On the other hand, 11.1% (49 participants) thought the prevalence was "high," and only 2.7% (12 participants) believed it was "very high."

- The mean of participants' estimates was 2.29, which indicates a relatively low level of perceived prevalence of hereditary blood diseases according to the sample's opinions. The standard deviation was 1.082, reflecting moderate variability in the responses. The relative weight was 45.9%, placing the level of prevalence in the "medium" category.

These results suggest that the study sample perceives the prevalence of hereditary blood diseases in their surrounding environment as moderate, with a tendency towards lower rates. This could be linked to increased awareness or improvements in early screening programs aimed at reducing the transmission of these diseases within communities.

4.3 Results Related to the Second Study Objective

To answer the second objective, which is: (Determining the community's awareness of the social and health factors of pre-marital screening), the following is presented:

Table (4) presents the calculation of means, standard deviations, and relative weights of the study sample's opinions on the items related to "Determining the society's awareness of the social and health factors of pre-marital screening," as follows:

Table"4" Determining Community Awareness of the Health Factors of Pre-Marital Screening

م	Statement	Mean	Standard Deviation	Relative Weight %	Level	Rank
1	I know that premarital screening helps reduce the spread of thalassemia	4.90	0.290	96.4	High	
1	Prenuptial screening helps reduce the spread of sickle cell anemia	2.98	1.839	70.9	High	1
2	Premarital examination may not help reduce the spread of hereditary diseases	4.99	0.832	91.5	High	2
3	Premarital screening helps reduce the spread of hepatitis B and C	4.32	0.666	90.1	High	3
4	I know that premarital screening helps prevent infectious diseases	4.59	0.744	93.1	High	3
All Statements		4.03	0.567	87.9	High	-

Table"5" Determining Community Awareness of the social Factors of Pre-Marital Screening

م	Statement	Mean	Standard Deviation	Relative Weight %	Rank
1	Pre-marital examination is important to reduce family problems	3.86	0.201	90.8	1
2	Know that pre-marital examination reduces the problem of marital alienation	2.21	0.315	63.3	2
3	I am convinced that pre-marital examination helps create a cohesive family	4.55	1.621	82.1	4
5	The result of a pre-marital examination affects my decisions	3.50	0.598	80.7	3
All Statements		3.28	0.511	61.1	-

The results from Table (4and5) show that the overall awareness of the social and health factors of pre-marital screening

It was at a high level, with a mean of 4.03 in health factors and 3.28 in social factors, a standard deviation of health factors was0.567 and 0.511in social factors, and a relative weight of 89.9% in health factors and 61.1in social factors.

The high level of community awareness of the social and health factors of pre-marital screening can be attributed to current awareness programs and general trends toward improving public health in community. However, , there is still a need to deal with cultural changes ,the lack of information indicates the need for expanding the scope of awareness, particularly by providing comprehensive and early information about screening and integrating psychological support into the process to ensure a thorough and integrated experience for individuals approaching marriage.

4.4 Results Related to the Third Study Objective

To address the third objective, which is: (Determining the community's awareness of the importance of pre-marital screening), the following is presented:

Table "6": Distribution of Study Sample's Responses Regarding the Importance of Pre-Marital Screening

Question	Answer	Frequency (Cases)	Percent (%)
Assuming pre-marital screening is optional, would you undergo pre-marital screening?	No	6	1.4%
	Yes	437	98.6%
	Total	443	100.0%
Have you previously undergone pre-marital screening?	No	292	65.9%
	Yes	151	34.1%
	Total	443	100.0%
If you underwent screening and the results were incompatible, would you marry?	No	400	90.3%
	Yes	43	9.7%
	Total	443	100.0%

From the results in Table (6), the following conclusions can be drawn:

1. **Pre-marital Screening Participation:** The vast majority of the sample (98.6%) indicated they would undergo pre-marital screening, even if it were optional, reflecting a high level of awareness about the importance of this screening. Only 1.4% of participants stated they would not undergo the screening.
2. **Previous Screening Experience:** Only 34.1% of participants had previously undergone pre-marital screening, while 65.9% had not, indicating that a significant proportion had not had the opportunity to undergo screening despite being aware of its importance.
3. **Reaction to Incompatible Results:** The results showed that 90.3% of the sample would not marry if the screening results were incompatible, reflecting a clear understanding of the potential health and social risks associated with marrying incompatible individuals. On the other hand, only 9.7% said they might marry despite incompatible results.

These results indicate a high level of societal awareness regarding the importance of pre-marital screening. The majority of participants expressed their readiness to undergo the screening, even if it were optional. However, the significant proportion who have not undergone screening in the past highlights the need to enhance awareness about the procedures for screening and to make it

more accessible to everyone. Additionally, the high percentage of individuals who would reject marriage if the results were incompatible reflects the success of awareness efforts in highlighting the risks associated with marrying individuals who are genetically incompatible.

Table"7": Distribution of Study Sample's Responses Regarding Factors Risks of Pre-Marital Screening and handles .

Question	Answer	Frequency (Cases)	Percent (%)
What factors might lead you to ignore the results of the screening?	Social pressure	111	25.1%
	Love and emotions	176	39.7%
	Lack of awareness of risks	264	59.6%
	Lack of alternatives	77	17.4%
	None	44	9.9%
	Total	**443**	**100.0%**
Do you have enough information on how to handle the risks if the results are incompatible?	No	270	60.9%
	Yes	173	39.1%
	Total	**443**	**100.0%**
What are the most important skills for changing society's view of the importance of pre-marital examination	Effective communication and active listening	270	60%
	Critical thinking and problem-solving	243	54.9%
	Cultural competence and sensitivity	310	70%
	Empathy and emotional intelligence	223	50%
	Work with a multidisciplinary team	111	25.1%
	Total	**443**	**100.0%**

Analysis of the Results in Table (7):

1. Factors that Lead to Ignoring Screening Results:
    - The most significant factor leading to ignoring the results of pre-marital screening was "Lack of awareness of risks" with 59.6%. The second most influential factor was "Love and emotions" at 39.7%. "Social pressure" also had an impact, with 25.1%, while 17.4% cited "Lack of alternatives" as a reason for ignoring the results.
2. skills for changing society's view of the importance of pre-marital examination:
    - The highest perceived skills was " Cultural competence and sensitivity ", with 70% of respondents identifying it as a important skills . "ritical thinking and problem-solving" were recognized by 54.8%, and " Empathy and emotional intelligence " were noted by 50%. " Work with a multidisciplinary team " were considered a potential skills by 25.1% of the sample.
3. Information on Handling the Risks:

- A significant portion of the sample (60.9%) reported that they did not have sufficient information on how to handle the risks arising from marrying incompatible individuals, indicating a knowledge gap in this area.

Need for Improved skills : The findings emphasize the need to improve many skills to dealing with community culture , particularly social work role in community ,schools and through media channels, to bridge the knowledge gap and raise awareness about the importance of pre-marital screening and the handling of its results.

Domain	Relationship Between Variables	Pearson Correlation (r)	Significance (p)
Demographic characteristics And awareness of important Pre-Marital Screening	Education level and awareness of important Pre-Marital Screening	0.119	<0.05
	Age and awareness of important Pre-Marital Screening	0.222	<0.01
	Gender and awareness of important Pre-Marital Screening	0.020	>0.05
	Marital Status and awareness of important Pre-Marital Screening	-0.012	>0.05

Table "8" Demographic characteristics and awareness of important Pre-Marital Screening.

The relationship between education and awareness of important Pre-Marital Screening, where Pearson Correlation (r)value reached (0,119), with a probability value (<0.05), and the probability value was less than the confidence level of 0.05, and this confirms statistical relationship between age and awareness of important Pre-Marital Screening .

And the relationship between age and awareness of important Pre-Marital Screening, where Pearson Correlation (r)value reached (0.222), with a probability value (<0.01), and the probability value was less than the confidence level of 0.05, and this confirms that the relationship of age and awareness of important Pre-Marital Screening represents a relationship with the variable.

While the relationship between gender and awareness of important Pre-Marital Screening, where Pearson Correlation (r)value reached (0,020), with a probability value (>0.05), and the probability value was less than the confidence level of 0.05, and which confirms there is no statistical relationship.

While the relationship between Marital Status and awareness of important Pre-Marital Screening, where Pearson Correlation (r)value reached (0,012), with a probability value (>0.05), and the probability value was less than the confidence level of 0.05, which confirms that there is no statistical relationship.

4.5 Results Related to Study Variables

This study aimed to measure the awareness of the community in the Jazan region, Saudi Arabia, regarding the importance of pre-marital screening and the risks resulting from incompatible marriages, and to provide recommendations to enhance this awareness. The main findings of the study include:

- Prevalence of Genetic Blood Diseases: 91.4% of the participants in the study do not suffer from genetic blood disorders, indicating that these diseases are not a widespread health issue in the community. The most common condition among those affected is sickle cell anemia, with 58.5%, suggesting that health efforts should focus on this disease.

- Types of Genetic Diseases: Sickle cell anemia is the most prevalent among patients (58.5%), followed by thalassemia and Mediterranean anemia.

- Prevalence of Genetic Diseases Among Family Members: 27.3% of the participants reported that family members have genetic blood disorders, highlighting the importance of early screening for individuals with a family history of these diseases.

- Familial Relationship with Genetic Disease: It was observed that first-degree relatives (father/mother, brother/sister) form the highest percentage of affected cases, emphasizing the importance of pre-marital screening for individuals from such families.

- Community Awareness of Pre-Marital Screening: The study found a high level of awareness about the importance of pre-marital screening, with a relative weight of 88.9%, indicating strong awareness regarding the detection of genetic diseases. However, the study also revealed a lack of sufficient information about the screening process, with a relative weight of 73.2%, suggesting a gap in available information about the screening in the community.

- Actions in Case of Incompatible Results: 90.3% of participants indicated they would not marry if the screening results were incompatible, while 9.7% stated they might proceed with the marriage regardless.

- Factors Influencing Ignoring Screening Results: The main factors were "lack of awareness of risks" (59.6%), followed by "love and emotions" (39.7%), "social pressures" (25.1%), and "lack of alternatives" (17.4%).

- Risks of Incompatible Marriages: The highest perceived risk was "genetic problems" (92.8%), followed by "chronic diseases" (68.8%), "congenital defects" (58.5%), and "psychological problems" (40.2%).

- Information on Handling Risks: 60.9% of participants reported lacking sufficient information on how to deal with the risks associated with incompatible marriages.

5. Discussion

The results of this study provide a critical perspective on awareness, attitudes, and practices related to premarital screening in the Jazan region, reflecting both progress and persistent challenges.

A key objective was to assess awareness levels about premarital screening. In this study, 98.6% of participants demonstrated awareness of premarital screening programs. This aligns with a study by Al-Aama et al. (2020), which reported similar high awareness levels across Saudi Arabia, particularly in urban areas. However, when considering the practical application, only 34.1% of our participants had undergone screening, a gap also noted by Alhosain et al. (2019), where logistical challenges and personal reservations limited participation despite awareness.

Another objective was to identify the factors influencing participants' willingness to proceed with incompatible marriages. Our study revealed that emotional factors, including love and societal pressure, were significant contributors. This finding is consistent with Rahman et al. (2018), who found similar cultural barriers in Southeast Asia. However, compared to studies in countries like Jordan (AlHassan et al., 2021), where religion played a dominant role in influencing decisions, our participants placed less emphasis on religious considerations, highlighting regional cultural differences.

In terms of hereditary conditions, sickle cell anemia was the most commonly reported disorder in this study (58.5%). This corroborates findings by Al-Arrayed et al. (2017), which showed that sickle cell anemia remains a significant public health issue in Gulf Cooperation Council countries due to the prevalence of consanguineous marriages. Our study also supports Alhosain et al. (2019), who emphasized that targeted health campaigns addressing specific genetic disorders could reduce their occurrence.

The study highlighted a reliance on healthcare professionals (79.2%) and health education programs (67.7%) for information, while schools and religious institutions played a minimal role. In contrast, a study conducted in Sudan (Ahmed et al., 2018) found that religious leaders were pivotal in promoting premarital screening. This discrepancy suggests that leveraging different community channels, such as schools and religious authorities, could further enhance outreach in Jazan.

Lastly, 90.9% of participants in our study advocated for integrating psychological counseling into premarital screening programs. This finding aligns with Browne et al. (2017), who reported that counseling services significantly reduce the emotional burden of screening and improve compliance.

6. Conclusions

The findings suggest that the likelihood of genetic diseases transmission decreases as the familial relationship becomes more distant, reinforcing the importance of early screening for individuals connected to first- and second-degree relatives. Further research is needed to better understand the genetic dynamics and develop effective strategies for early detection and prevention of these diseases.

The results show that the sample's perception of the spread of genetic blood disorders in their community is moderate with a tendency towards a decrease, which may be linked to increased awareness or improved early screening programs to reduce the spread of these diseases.

The results highlight that professional sources (such as doctors and health education programs) are the most trusted among the study sample. However, there is a noticeable lack of involvement from educational and religious institutions, suggesting the need to strengthen awareness programs in schools, universities, and through Friday sermons to raise awareness of the importance of pre-marital screening.

In conclusion, premarital screening serves as a pivotal tool in promoting public health and ensuring a brighter, healthier future for upcoming generations. This practice not only helps in identifying and mitigating the risks of genetic and infectious diseases but also empowers individuals to make informed decisions about their marital and family planning choices. By fostering awareness, addressing societal and cultural barriers, and encouraging community participation, we can create a culture that values health and responsibility in relationships. Collaboration between individuals, communities, and health organizations is essential to maximize the impact of premarital screening programs and build a stronger.

Limitations of the Study

Cross-Sectional Design: The study’s design limits the ability to assess causal relationships or observe long-term trends in attitudes or behaviors related to premarital screening.

Sample Specificity: The sample was restricted to the Jazan region, and thus, the findings may not be generalizable to other regions in Saudi Arabia or beyond.

Self-Reported Data: Data collection relied on self-reports, which may have introduced social desirability bias, potentially affecting the accuracy of responses.

Second: Study Recommendations

In light of the study's results, the researcher recommends the following:

1. **Enhance Awareness Programs:** Awareness campaigns should be intensified in schools and universities, with a focus on integrating pre-marital screening information into curricula. Awareness should also be extended to include psychological support for those preparing for marriage within the screening process.
2. **Improve Information Availability:** Efforts should be made to provide comprehensive and accessible information about pre-marital screening through multiple media and educational channels, ensuring that information reaches all segments of society, including those with lower levels of awareness.
3. **Encourage Screening in Families with a Medical History:** Families with a history of genetic blood disorders should be encouraged to undergo early screening for their children and those preparing for marriage to reduce potential health risks.
4. **Raise Awareness of Social and Health Risks:** Community awareness campaigns should be intensified to highlight the health and social risks of incompatible marriages. Effective strategies should be adopted to reach individuals who may ignore screening due to emotional or social factors.

The study demonstrates the importance of pre-marital screening in preventing genetic diseases, with a strong need for enhanced community awareness, comprehensive information provision.

Informed consent statement

Informed consent was obtained from all subjects involved in

the study.

Abbreviations

NA

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Data availability statement

The data used for this study was not publicly available.

Author Contributions

Amal Ramadan designed the study, and Asharaf khattab and Ebtihag Mahdi planned the methodology. Maha Yousif, Ebtihag Mahdi and Faiza collected the data. Maha Yousif date analysis. Amal Ramadan and Tahani Babiker drafted the manuscript, Faiza Khiri , Tahani Babiker and Ashraf Khattab reviewed the manuscript and approved the final draft. Amal Ramadan contacted with the journal.

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NA

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The author declare no conflict of interest

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