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Misconceptions towards traditional medicine among infertile women in north Jordan

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Abstract---The study aimed to identify the misconceptions towards traditional medicine among infertile women in north Jordan. To achieve the objective of the study, the descriptive survey method was used. The study instrument (questionnaire) consisting of (14) items was distributed to a purposive sample of (162) women who attended the IVF at the King Abdullah University Hospital in the Hashemite Kingdom of Jordan in 10/4/2022-30/6/2022. The results showed that the total degree of misconceptions towards traditional medicine among infertile women scored a mean of (1.08), indicating a small degree from their point of view. The reason for turning to traditional medicine may sometimes be that traditional medicine is available and easy to obtain and free of chemicals. Also, traditional medicine is more economical in terms of money than modern official medicine. In addition, the results showed statistically significant differences in the misconceptions towards the treatment with traditional medicine among infertile women due to the age variable in favor of the age group 20-30 years. However, no statistical differences were found according to the variables of the educational level (high school and less, university) and place of residence (countryside, city, desert).

Keywords---misconceptions, traditional medicine, infertile women, Jordan

Introduction

Scientists believe that the relationship between humans and the environment contributes to creating a strong basis for organizing indigenous medical knowledge. Since ancient times, the first human beings used the natural products of plants, animals, microorganisms, and marine organisms to extract medicines to treat diseases or alleviate them in the patient. There is no doubt that the use of natural products for medicinal purposes constituted a great challenge for early humans (Shi et al., 2010). Throughout the ages, humans have learned how to develop new

medicines and drugs to treat and prevent diseases. Traditional medicines used natural products, and they were of great importance in the widespread use in the field of medicine, such as traditional medicine (Alves & Rosa, 2007). Traditional medicine is widely used in the treatment, diagnosis, prevention, treatment, and solution of several health problems. Globally, traditional medicines are easily accessible and affordable. Several people wish to treat their diseases using traditional medicine (Aryal et al., 2016). However, this type of medicine has been associated with several mistakes in the treatment that led to complications in patients and even reached death. However, some people still resort to it at present despite the progress and development in the field of modern official medicine (Maqbob, 2016).

traditional medicine refers to the health practices, knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not. It is used to maintain health, diagnose, prevent, and treat physical and mental problems, and other diseases (World Health Organization, 2013). Traditional medicine is a practice inherited by generations since the beginning of humanity. Diseases have accompanied man since his inception. He sought to overcome them with several experiments until he came up with ways to treat his pain. A group of people has settled on certain treatments from the surrounding nature. These treatments vary according to diseases and the culture of people (Ammar, 2014). Traditional medicines can also be defined as a specific cultural and regional body of knowledge developed by local and indigenous communities over time in response to the need for a specific local process (Aryal et al., 2016).

Historical studies indicate that the eastern region of the Mediterranean, including most of the Arab countries, has been distinguished from other regions by a rich stock of traditional medicine products, especially medicines from herbs and plants. Women and the elderly are more likely to use this type of medicine (Naja, et al., 2015). In the face of existence of several and different in the Arab society, the number of traditional medicine healers has increased in order to alleviate patient's suffering. Some of them took it as a way to make money, which resulted in some irresponsible persons or impersonators for this work, which caused suffering to patients. This resulted in patients' loss of money, exacerbation of their disease and its complications, or death (Bin Atto, 2016).

Based on the foregoing, the interest in studying treatment using traditional medicines deserves attention because it has become the focus of attention for several societies and cultures. It has been shown that there is a conflict between folk medicine and modern official medicine. It is a continuous struggle that has not stopped despite the scientific achievements in the field of modern official medicine. Modern official medicine considers disease to be the result of some causes and physiological or external factors such as germs and microbes while traditional medicine attributes the causes of disease to other factors. Traditional medicines views the human body as an integrated unit with no room for separating one organ from another. Contrary to this, modern official medicine separates the organs of the human body with scientific development and various scientific disciplines. Thus, every organ of the human body has a specialized doctor who is more

concerned with treating the disease than treating the patient (Hamadneh & Mahnashi, 2022).

Today, several diseases are specifically related to genetics, lifestyle, and environment such as infertility and other diseases. Some countries still use traditional or folk medicine in the treatment and prevention of infertility, such as Traditional Indian Medicine (TIM) and Traditional Chinese Medicine (TCM). It is used to strengthen the body's self-healing mechanism and balance and regulate hormones such as follicle stimulating hormone and Luteinising hormone. This treatment as viewed by some individuals is less expensive, safer, or more effective (Kochhar, et al., 2017). Increasing evidence indicates that the prevalence of traditional medicines among patients seeking infertility treatment is increasing worldwide. There are several products available in the market. Several infertile patients request information about traditional medicine from health care providers (Bardaweel et al., 2013).

Infertility is a disease of the reproductive system, whether in males or females. It is defined as the inability to achieve pregnancy after 12 months or more of regular and unprotected intercourse. Infertility affects millions of people of childbearing age around the world, affecting their families and communities. It is estimated that there are between 48 million couples and 186 million individuals in the world who live with the problem of infertility (World Health Organization, 2020). Infertility is a disease of the reproductive system that affects both men and women with approximately equal frequency (Callahan & Caughey, 2008). Existing definitions of infertility clearly show heterogeneity of criteria used to define infertility, rendering comparisons in the prevalence of infertility among populations or over time extremely challenging. In addition, the absence of a clear definition compromises clinical management and undermines the impact of research findings. For example, demographers tend to define infertility as childlessness whereas the epidemiologists' definition is based on 'trying for' or 'time to pregnancy, generally in a population of women exposed to the risk of conception (Bardaweel et al., 2013).

Infertility is a source of distress for couples in any society. Women endure most of society's perceptions that women are the cause of infertility and childlessness. This causes them some psychological disorders such as anxiety, stress, aggression, depression, self-blame, and suicidal ideation (Fido, 2004). Infertile women are subjected to verbal or physical abuse in their homes. Even they are ostracized, deprived of their inheritance, or returned to their father's home. They are viewed with contempt by society, or even they are divorced due to the inability to have children (Ali et al., 2011). Therefore, women make great attempts to find a solution to infertility. Some women resort to using different forms of treatment, including traditional medicines because they believe that this type of treatment is fast, effective, and safe (Fido, 2004). Also, most societies, including societies in developing countries, still resort to this treatment. Some beliefs in the presence of supernatural forces as a cause of infertility are still prevalent, especially among people with low education. They resort to alternative treatment by traditional medicine for infertility as a popular and preferred option, and that artificial insemination is an unfamiliar or unacceptable option for some women (Ali et al, 2011).

Bardaweel et al. (2013) conducted a study on a sample of (1021) infertile couples in Jordan and showed that 44.7% of the sample resorted to the use of traditional medicines. The vast majority of traditional medicine users were female. The most common traditional medicine remedies were herbs and spiritual healing. Ali et al. (2011) conducted a study on a sample of 447 adults accompanying patients in hospitals in Karachi, Pakistan about their knowledge and perceptions of infertility. It was shown that beliefs about evil and supernatural powers as the main cause of infertility were still prevalent, especially among people with a low level of education. Traditional medicine for infertility using herbs and plants remained a popular choice for 28% of study participants.

Kashani, et al. (2013) assessed infertile patients' knowledge, attitudes, and use of herbal remedies (HRs). In a referral infertility care center, this cross-sectional study was conducted. At the hospital in Arash, 336 outpatients—men and women—presenting for the first time with a complaint of infertility were enlisted. The findings showed that the knowledge of HRs was held by 47.3% of participants, with female gender and lesser educational background being the associated knowledge characteristics. Patients who had substantial female dominance exhibited positive attitudes regarding HRs in the proportion of 43.4%. Participants who were using HRs made up 31%. Only 3.2% of those utilizing HRs reported their physician. Mental disorders (33.3%) and gastrointestinal disorders (30.8%) were the health conditions that most promoted herbal use. 3.5% of participants used HR as a fertility treatment, and this was noted most significantly in women and those with low levels of formal education. A sizable portion of our population utilizes human resources without adequate information and has a favorable attitude toward them. Importantly, patients did not disclose their use of herbal remedies to clinicians. To sum up, despite scientific progress and the abundance of health education methods in the Jordanian society, traditional medicine, often mixed with myths, still receives some kind of resorting to it. Even it is being marketed and promoted on social media to exploit patients, including women who suffer from infertility and reproductive problems to obtain their money illegally. Hence, this study aimed to identify the misconceptions towards the treatment with traditional medicines among infertile women in the Jordanian society.

Statement of the problem

Traditional medicines is still rooted in the depths of human culture and continues its role in maintaining people's health. It is prominently present in various societies due to its close connection with the culture of these societies towards a specific disease and their reliance on treating it following a set of practices such as herbs and medicinal plants. They consider that nature is rich in everything that benefits them and their first pharmacy. Traditional medicines has tried to treat different age groups. Women are found the most important category, especially those who are unable to bear children and thus seek treatment using traditional medicine. There is a lack of studies on the treatment of traditional medicine, in general, and infertility, in particular. In addition, due to the increasing conflict between modernity and tradition, this field study tries to clarify the misconceptions towards traditional medicine among infertile women in the Jordanian society to identify its realistic image and anticipate its future. Therefore, the problem of this study clarifies the issue that is being raised and links it to the lived reality through a field

study of the Jordanian society to resort to medication using traditional medicines. Also, the study examined the most demographic factors (age, educational level, and place of residence) related to using traditional medicines in treating women's infertility. Accordingly, there was a need to conduct this study. The problem was formulated in the following questions:

- What are the misconceptions towards traditional medicines for infertile women?
- Are there statistically significant differences in the misconceptions towards traditional medicines treatment among infertile women due to the variables of the educational level, age, and place of residence?

Objectives of the study

This study aimed to identify the misconceptions towards the treatment with traditional medicines has tried to treat different age groups among infertile women. It also targeted any statistical differences of misconceptions towards traditional medicine among infertile women due to the variables of the educational level, age, and place of residence.

Significance of the study

The significance of this study is evident by focusing on a topic of great importance in society and an issue that needs to be addressed. The current study focuses on the topic of treatment with traditional medicines, especially for infertile women, and the misconceptions that revolve around it among women in the Jordanian society. Therefore, this study and its results contribute to human knowledge by providing a theoretical and practical conceptual enrichment of this phenomenon. Likewise, the current study gives a comprehensive picture of the reality of traditional medicines treatment for infertile women in the Jordanian society. This contributes to increasing the knowledge of officials in the Ministry of Health and hospitals about the aspects of misconceptions to change their picture among women. It also contributes to spreading sound health culture and awareness about modern official medicine and its role in the proper treatment of infertility compared to the negative effects resulting from the use of traditional medicines in treatment. The results of the research will be a valuable tool for the government of Jordan, researchers, policymakers, and practitioners to make effective practices, plans, and policies in the future to demonstrate the value of modern official medicine in treating infertility compared to traditional medicines.

Method

Research Design

This study used the descriptive-survey method. A questionnaire was administered to the study sample to achieve its objectives.

Sample of the Study

A purposive sample of (162) women who attended the IVF-Center at King Abdullah University Hospital in the Hashemite Kingdom of Jordan in April, May, and June 2022 was selected. After taking consent to participate in answering the study instrument. The study sample was distributed on demographic variables (age, educational level, and place of residence). Table 1 shows the data and characteristics of the study sample.

Table 1
Distribution of the study sample according to variables

Variable	Category	No.	%
Age	20-30 years	62	38.3
	31-40 years	83	51.2
	More than 40 years	17	10.5
Educational level	High school or less	55	34.0
	University	107	66.0
Place of residence	Countryside	66	40.7
	City	84	51.9
	Desert	12	7.4
Total		162	100

Data collection

For data collection, the study instrument (questionnaire) was prepared concerning the theoretical literature and previous studies that addressed misconceptions about medication using traditional medicine. The instrument consisted of two sections. The first section included information about the educational level, age, and place of residence. The second part consisted of (14) items that measure misconceptions about medication using traditional medicine among infertile women. To interpret the responses to the second part of the instrument, a four-point Likert scale was used (highly agree, medially agree, little agree, disagree), and the scores (3, 2, 1, 0) were given to calculate the test scores.

The validity of the content of the study instrument was verified by presenting it in its initial version to five experts who are specialists in medicine and public health from faculty members in some medical and health faculties in Jordanian universities. They were asked to ensure the suitability of the instrument to achieve the objectives of the study. The experts confirmed the validity of the instrument for what it was prepared to measure. Accordingly, the instrument was approved in its final version and consisted of (14) items. Also, the reliability of the instrument was verified by calculating the reliability coefficient following the test-retest method. The instrument was applied to an exploratory sample that was selected from outside the study sample and consisted of (20) women. Then, the instrument was re-applied to the same sample two weeks later. After that, the Pearson correlation coefficient was calculated between the two applications, and the reliability coefficient of the instrument was (0.82), which is an appropriate coefficient for the reliability of the instrument and results.

Methods of the study

First, the study problem and its components were identified. Next, the previous studies related to the topic of the study were reviewed and scrutinized, and the items suitable for the study instrument (the questionnaire) were extracted. Then, the study instrument was prepared in its initial version. After that, the indications of validity and reliability were confirmed, and ethical approvals were obtained for the application of the study instrument from the Deanship of Scientific Research at Jordan University of Science and Technology and the administration of the Founder King Abdullah University Hospital to facilitate the researcher's task data collection. Then, the sample was selected purposefully from the women who attend the IVF- Center at the King Abdullah University Hospital in the Hashemite Kingdom of Jordan. After that, the questionnaire was applied in a paper-based manner and face to face with the study sample. The data were collected and checked for completeness. The data were corrected, checked, and entered into the computer, and the Social Statistical Analysis Package (SPSS) program was used to analyze the data. Finally, the results were extracted, then discussed and interpreted, and recommendations were written.

Results

Results of the first research question

What are the misconceptions towards traditional medicines for infertile women?

To answer this question, the following grading of the degree of verification of items and the total degree was adopted to determine the degree of agreement using the equation of the range according to Table 2.

Table 2
Criteria for interpreting the values of means according to the quadruple estimation scale

Degree of agreement	Not agree	Low	Medium	High
Means	0,00 إلى 0.75	Greater than 0.75-1,50	Greater than 1,50- 2.25	Greater than 2.25-3

The researcher has calculated the means, standard deviations, and ranks of misconceptions towards treatment using traditional medicines among infertile women. Table 3 shows the results.

Table 3
Descriptive statistics of misconceptions towards treatment using traditional medicines among infertile women

N	Items	Means	Standard deviations	Rank	Degree
8	I think traditional medicines is available and easy to get	1.64	1.11	1	Medium
10	Free traditional medicines from chemicals increases its demand	1.57	1.09	2	Medium

9	I find that traditional medicine is more economical than modern official medicine	1.56	1.16	3	Medium
5	I think that if traditional medicines does not help me, it will not harm me	1.36	1.11	4	Low
3	I think herbal medicine is useful in treating infertility	1.10	.970	5	Low
4	I believe that traditional medicine is complementary to modern official medicine	1.09	.980	6	Low
11	The large number of medical errors in modern official medicine makes more demand for treatment with traditional medicines	1.06	1.06	7	Low
13	The ease of procedures in traditional medicines makes it the best	.950	1.03	8	Low
14	I see that traditional medicine is the legacy of ancestors and must be preserved	.940	1.04	9	Low
1	I think that treatment with traditional medicines for infertility is more effective than treatment with modern official medicine	.840	1.02	10	Low
12	Folk medicine has faster curative results	.830	1.00	11	Low
2	I resort to herbalists or what is known as “sidewalk pharmacies” to obtain prescriptions for infertility treatment	.750	.970	12	Not agree
7	I see that treatment with traditional medicines is important to adhere to the customs and traditions of the Jordanian society	.740	1.06	13	Not agree
6	traditional medicine must be used to treat infertility	.650	1.02	14	Not agree
	Total	1.08	.630		Low

Table 3 shows that the total degree of misconceptions towards traditional medicines for infertile women reached a mean of (1.08), a standard deviation of (0.63), and a small degree. Table 3 also shows that the most beliefs and practices, which came to a medium degree, respectively, from high to low according to the means: item (8), “I think traditional medicines is available and easy to get,” and item (10), “Free traditional medicines from chemicals increases its demand.” and item (9), “I find that traditional medicine is more economical than modern official medicine.” The least beliefs and practices came in item (6), “Traditional medicine must be used to treat infertility,” and item (7), “I see that treatment with traditional medicines is important to adhere to the customs and traditions of the Jordanian society,” and item (2), “I resort to herbalists or what is known as “sidewalk pharmacies” to obtain prescriptions for infertility treatment.”

Results of the second research question

Are there statistically significant differences in the misconceptions towards traditional medicines treatment among infertile women due to the variables of the educational level, age, and place of residence?

The question was answered according to each variable as follows:

First: variable of the educational level

The t-test was used to show the significant differences in the means of the misconceptions towards traditional medicines treatment among infertile women attributed to the educational level. Table 4 depicts the results.

Table 4
T-test for the significant differences of the means of the misconceptions towards traditional medicines treatment among infertile women attributed to the educational level

Domain	Educational level	No.	Means	Standard deviations	t	df	Sig (2-tailed)
The total degree of misconceptions towards the treatment with traditional medicines among infertile women	High school or less	55	1.11	0.57	.518	160	.605
	University	107	1.06	0.65			

Table 4 shows no statistically significant differences at (0.05) between the means of misconceptions towards treatment with traditional medicines among infertile women due to the educational level variable.

Second: variable of age

The researcher used one-way ANOVA analysis to show the significant differences in the means of misconceptions towards traditional medicine treatment among infertile women according to age. Table 5 displays the results.

Table 5
One-way ANOVA analysis for the significant differences of the means of the misconceptions towards traditional medicines treatment among infertile women according to age

Source	Sum of squares	df	Means squares	f	Sig.
Between groups	2.538	2	1.269	3.290	.040
Within groups	61.316	159	.386		
Total	63.854	161			

Table 5 shows statistically significant differences at (0.05) between the means of misconceptions towards treatment with traditional medicines among infertile women due to the age variable. To show the statistically significant differences, LSD for dimensional comparisons was used as shown in Table 6.

Table 6
LSD for dimensional comparisons for the statistically significant differences of misconceptions towards treatment with traditional medicines among infertile women due to the age variable

Age (I)	Age (J)	Mean difference	Sig.
20-30 years	31-40 years	.227*	.031
	More than 40 years	.086	.615

Table 6 shows statistically significant differences in the misconceptions towards the treatment with traditional medicines among infertile women due to the age variable between the age group of 20-30 years and the age group of (31-40) years. The results came in favor of the age group of 20-30 years.

Third: variable of the place of residence

The researcher used one-way ANOVA analysis to show the significant differences in the means of misconceptions towards traditional medicine treatment among infertile women according to their place of residence. Table 7 shows the results.

Table 7
One-way ANOVA analysis for the significant differences of the means of the misconceptions towards traditional medicines treatment among infertile women according to residence

Source	Sum squares	df	Means of squares	f	Sig.
Between groups	.817	2	.408	1.030	.359
Within groups	63.037	159	.396		
Total	63.854	161			

Table 7 shows no statistically significant differences at (0.05) between the means of misconceptions towards treatment with traditional medicines among infertile women due to the variable of residence.

Discussion

The results showed that the total degree of misconceptions towards traditional medicines among infertile women scored a means of (1.08) and a small degree. It follows from this result that there is awareness among women in the Jordanian society not to resort to traditional medicines for infertility as a result of scientific and medical development in Jordan and the development of medical services and clinical practices concerning the treatment of infertility. Also, the availability of

qualified national medical staff in the field of infertility treatment and modern medical equipment has helped to increase the ability of doctors in the initial medical examination and diagnosis and determine the most appropriate modern treatment for infertility. In addition, the spread of education and awareness in Jordan has had a great impact on the Jordanian society and culture (Bardaweel et al., 2013). The Kingdom has made tremendous progress in recent years in the field of treating women and mothers and expanding and improving its health and medical infrastructure (Avitsian, 2020). All of this helped in the keenness of women in the Jordanian society to move towards treatment with modern official medicine, which led to the abandonment of the old beliefs of traditional medicines for infertility.

The results showed some misconceptions towards infertility treatment with traditional medicines. It was found that the most misconceptions towards treatment with traditional medicines among infertile women from their point of view are because traditional medicine is available and easy to obtain and free of chemicals, which contributes to the demand for it (Bardaweel et al., 2013). Also, traditional medicine is more economical in terms of money than modern official medicine. In addition, they believe that if treatment with traditional medicines does not benefit the patient, it will not harm her. This indicates that there is a small percentage of infertile women in Jordanian society who still have beliefs and faith in the treatment with traditional medicines. This may be due to some things, including the ease of procedures in obtaining treatment and medication using traditional medicines. Alternatively, it is cheaper and more economical in comparison to official and modern medicine, especially in light of the poor economic situation that some members of the Jordanian society suffer from. It may require some to seek sources of financial support from others or to resort to banks and loan institutions to obtain financial facilitation. This would incur additional financial burdens on spouses (Kochhar et al., 2017).

The results showed no statistically significant differences between the means of misconceptions towards traditional medicines among infertile women due to the variables of the educational level (high school or less, university) and place of residence (countryside, city, desert). This may be attributed to the spread of culture, awareness, and education in Jordan and the possibility of accessing medical information as a result of technical development in social media. This may have contributed to a significant impact on the Jordanian society and led to some groups abandoning the old beliefs of treating infertility using traditional medicines. Science has several very different effects. There are direct mental effects, such as the invalidation of several traditional beliefs about the treatment of infertility and the adoption of other beliefs because of the success of the scientific method and the development in modern official medicine related to infertility and reproduction.

The results showed statistically significant differences for the misconceptions towards treatment with traditional medicines among infertile women due to the age variable in favor of the age group 20-30 years. This result may be related to the incorrect belief among women in this age group that traditional medicines is easy to obtain, has no side effects and its results are quick. Therefore, they resort to it to preserve the husband, the home, and stability in marriage, especially since they were newly married to avoid divorce. Women in this age group may seek treatment using traditional medicine for fear of society's view of them as a result of not having

children or delaying childbearing. This facilitates their exploitation by traditional medicines practitioners or those who claim the ability to achieve their dream of pregnancy and childbearing.

Recommendations

In light of the results of the study, it is recommended that the responsible units in the Ministry of Health in Jordan adopt educational and awareness programs directed at women that focus on strengthening the orientation towards correct medical practices for the treatment of infertility. Work must also be done to modify misconceptions about infertility treatment with traditional medicines and indicate its risks and negative effects on humans, in general, and women who suffer from infertility. Additionally, a national project should be adopted to develop medical programs led by the Ministry of Health hospitals to highlight the importance of modern official medicine and its development and role in treating infertility.

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