

Research Paper

Measurement the Self-efficacy Among Infertile Women in Al-Hilla City, Iraq



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ABSTRACT

Objectives: This study aims to measure the self-efficacy among women who have infertility in Al-Hilla City, Iraq.

Methods: We conducted a cross-sectional study in Al-Hilla City, Iraq, to measure the self-efficacy among infertile women. Using the non-probability purposive sampling method, 107 (Mean±SD age: 28.81±6.306 years) women with infertility were recruited. The study data were collected from the study samples using the infertility self-efficacy scale questionnaire. It is scored on a 3-point Likert scale to measure self-efficacy among infertile women.

Results: The results show that the overall self-efficacy of infertile women is low. Also, there is a significant association between the self-efficacy of infertile women with all study parameters ($P<0.05$) except the age and level of education.

Discussion: The highest percentage of the study samples were less than 30 years and lived in the urban area. The overall self-efficacy among infertile women was low, and the correlation between self-efficacy and their demographical data was significant except for the age and level of education.

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Highlights

- The highest percentage of infertile women were within the age of 26 to 30 years.
- The infertile women living in al-Hilla City, Iraq, had a low self-efficacy.

Plain Language Summary

Infertility in women is a condition in which women cannot become pregnant after one year, even after recurrent sexual intercourse or six months if the woman is 35 years old or older. The current study sample consisted of 107 women with infertility history to measure their self-efficacy. The results showed a decrease in self-efficacy among infertile women participating in this study.

1. Introduction

Infertility refers to the inability to have a child. In women, infertility refers to the incapability to become pregnant after one year despite repeated attempts (or sometimes six months if the woman is 35 years old or more) [1]. Sometimes women can get pregnant, but they cannot carry the fetus, so this condition is also expressed as infertility. In the United States, infertile women's ages range from 15 to 44 years, at an estimated rate of 10% (1.6 million women) [2]. From the psychological point of view, infertile women may experience many difficulties adapting to reality during the diagnosis and treatment phase of the disease because of their feelings of fear or perhaps failure. Therefore, these women may suffer from psychological problems, such as anxiety, depression, a sense of isolation, a sense of loss, low self-efficacy, and poor self-confidence [3].

According to Bandura's theory, self-efficacy is a positive social behavior based on self-confidence and belief in one's abilities. Therefore, personal competence is the most important aspect of a person's belief in the ability to succeed in a particular situation. For this reason, Bandura stated that these beliefs could play a positive role in people's thought, behavior, and feelings [4]. Numerous studies have shown that self-efficacy has a significant positive role in enhancing health and the desired results. The researchers also showed that self-efficacy sterility has an overlapping relationship with measures of health behavior. The results show that infertile women with higher self-efficacy toward infertility demonstrate fewer symptoms of depression and anxiety [5].

According to global statistics, every year, 60-80 million couples complain of infertility. In Canada, the rate of infertility is estimated at 11.5% to 15.7%. One out

of seven couples in England experience infertility. The number of infertile couples has risen from 42.0 million in 1990 to 48.5 million in 2010. On the other hand, there are differences in infertility rates according to gender around the world. The estimate refers to about 35%-40% of the infertile man and about 35%-40% of the infertile woman. Finally, about 20%-30% of infertile cases are caused by a combination of other factors [6].

The rate of infertility in Iraq has increased from 2000 to 2016. Iraq's exposure to various events such as war, terrorism, and migration left a negative impact on people's life. Also, various factors had unfavorable effects, such as exposure to stress, lifestyle, smoking, bad eating behavior, nature of the occupation, and hereditary. The rising sterility rate in Iraq may be related to an increase in malignancy and the spread of infectious diseases [7].

According to Arab and Iraqi customs and traditions, fertility and childbearing are a great blessing from God. Therefore, infertility is an undesirable condition, and a woman often bears the brunt of this matter if she has infertility; occasionally, it is deemed a stigma in the social milieu because their role in marriage is to bear children due to paramount importance in the continuation of family offspring [8]. That is why infertility is considered a disease that leaves a negative psychological impact on affected people [9]. A meta-analysis of the reasons for infertility among the patients referred to infertility clinics in Iran showed that 78.4% of the couples experience primary infertility while 21.6% suffer from secondary infertility. Overall, the causes of infertility were attributed to men in 34% of cases, to women in 43.5%, and to both in 17% of cases. However, in 8.1% of cases, no particular cause was found [10].

In the past years, researchers have paid much attention to the psychological aspect of couples, which is often

negatively affected by infertility, the methods of treatment used, and the extent of the success of the treatment experience and access to childbearing [11]. The stress of the inability to have a biological child often causes an unfavorable or expected experience of infertility stress for each of the partners or both as a unit [12]. Many infertile couples try to adapt to their current health condition in several ways, but many cannot succeed in this matter and suffer from many psychological and emotional problems. Some may develop into more difficult cases that reach anxiety and depression [13]. In those cases, treatment results are not encouraging and may lead to discontinuation of treatment and thus failure to conceive [14]. This current study aims to measure the self-efficacy among women in the Al-Hilla City, Iraq, who have infertility, considering that self-efficacy is an essential factor in regulating life and controlling its quality among these women.

2. Materials and Methods

We used a quantitative cross-sectional research design to assess the self-efficacy among infertile women living in Al-Hilla City who were referred to the Maternal Outpatient Department in Babylon Maternal and Children Teaching Hospital. The study data were collected from January 15 to July 2, 2021. Official approvals to conduct this study were obtained from the Training and Human Development Center in Babylon Governorate/Al-Hilla City. The research project was submitted to the official authorities, and then the researcher pledged to abide by all provisions related to research ethics and maintain the confidentiality of data and the privacy of the study samples.

Using the non-probability purposive sample method, we recruited 107 infertile women chosen randomly from the Maternal Outpatient Department. The inclusion criteria included infertile women who were present during the conduct of this study after obtaining their consent, while women who refused to participate or whose relatives refused to participate in this study were excluded. The obtained data were collected using the Infertility Self-Efficacy (ISE) scale [15], consisting of two parts (demographic and self-efficacy items). The data were gathered from the study samples by self-report, and the time consumed with each was about 8-13 minutes.

The researchers explained the purpose of the study to the samples and committed to maintaining the confidentiality of their data, using them only for this study. All study samples had the right to leave the study whenever they wanted.

The statistical analysis included the descriptive and inferential statistics performed in SPSS software v. 24. The descriptive analysis involved frequency, percentage, mean and standard deviation, which the researcher adopted to sort out the results from the data of study samples. The inferential statistics involved the Chi-square test in identifying the correlation between demographic characteristics of infertile women and their self-efficacy. In the part of the study discussion, the researcher will discuss the results of the current study by comparing them with the findings of previous studies on the same or similar subject.

3. Results

Table 1 presents the demographic data of the infertile women who participated in the study. Regarding age, the higher percentage of the samples (44%) were between 26 and 31 years old, and most (31%) were unable to read and write. About 44% of women were homemakers, and 60% lived in an urban area. The family monthly income of 42% was somewhat adequate. Finally, most samples were married for more than 11 years (43.5%).

Table 2 presents the average self-efficacy among infertile women related to their response rate depending on the mean score, where the higher percentage was 50.0% at low assessment and with a mean score of 1.59. Table 3 presents the relationship between the self-efficacy of infertile women and their demographical data; the results in this table were significant in all parameters ($P < 0.05$), except the age and level of education ($P > 0.05$).

4. Discussion

The demographic data of the study sample (Table 1) shows that the highest percentage of infertile women were between 26 and 31 years old. Also, the highest percentage belonged to infertile women who could not read and write and were homemakers. These results are consistent with another study [16] that reported that the highest percentage of infertile women belonged to 26 and 31 years old, illiterate, and homemakers.

Based on the current results, the highest age group affected by the infertility was the young group, so this matter has a negative impact on the lifestyle of these women and may develop into a more complex matter in the future and affect their quality of life. Most of these women are not able to read and write at an educational level, and they are also housewives. This condition makes it more challenging to deal with infertility or find appropriate ways to transact with their health condition and

Table 1. Demographical characteristics of study samples

Parameters	No. (%)	Mean±SD
Age (Y)	Less than 20 years	17(16)
	From 20 to 25 years	21(19.5)
	From 26 to 31 years	47(44)
	More than 32 years	22(20.5)
	Total	107(100)
Level of education	Not read and write	31(29)
	Primary School	18(17)
	Secondary School	28(26)
	Diploma and more	30(28)
	Total	107(100)
Occupation	Housewife	44(41)
	Student	27(25.5)
	Employer	36(33.5)
	Total	107(100)
Residence	Rural	43(40)
	Urban	64(60)
	Total	107(100)
Family monthly income	Enough	33(31)
	Somewhat adequate	45(42)
	Not enough	29(27)
	Total	107(100)
Marriage duration	1 to 5 years	27(25)
	6 to 11 years	34(31.5)
	More than 11 years	46(43.5)
	Total	107(100)

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avoid the negative effects of infertility, whether social or psychological.

The study showed that the percentage of infertile women living in urban areas is the highest. This result corresponds with the result of another study [17], where the result shows the highest rate of infertile women living in cities. Housing in urban areas is considered somewhat

positive in this regard, so the people in an urban environment are more willing to search for different treatment methods for infertility and overcome the unpleasant effects of this condition for affected people (males and females alike). Also, the highest percentage of these people have adequate monthly family income. This result agrees with another study [14]. Finally, the results showed that the highest percentage of the study sample

Table 2. Measurement of self-efficacy among study samples

Self-Efficacy Domains	Scale	No. (%)	SD	MS	Assessment
Overall self-efficacy among infertile women	High	21(19.5)	1.857	1.59	Low
	Moderate	32(30.0)			
	Low	54(50.5)			
	Total	107(100)			

No.: frequency; MS: mean score.

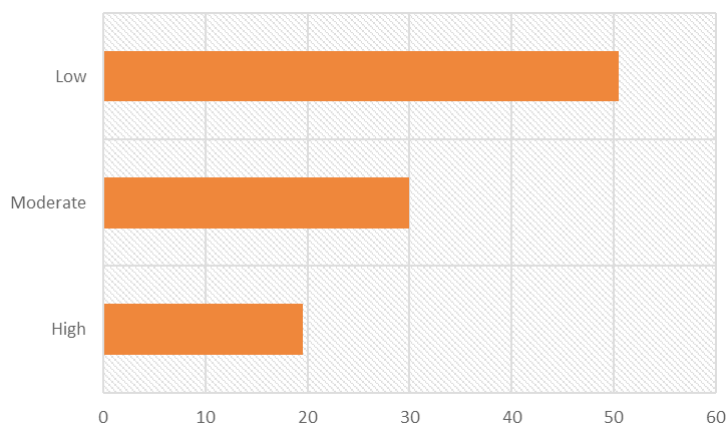
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Cut-off point (0.66); Low (mean of score between 1 and 1.66), Moderate (mean of score between 1.67 and 2.33), High (mean of score between 2.34 and 3).

regarding the duration of marriage is more than 11 years old, and this result is similar to the result of another study [18] where their result indicates the period of marriage for infertile women was more than 8 years.

Self-efficacy is one of the critical values in every person, whether he is healthy or sick. Table 2 presents the overall self-efficacy rate of infertile women in Al-Hilla

City (Figure 1). The results show a decrease in the general rate of self-efficacy (mean score=1.59) among infertile women who participated in the study. This finding is a negative factor that must be paid attention to and addressed. These results are consistent with another study [19], where results indicate lower self-efficacy, lower life satisfaction, more depression, and feeling more guilt among infertile women in Iran.

**Figure 1.** Overall status of self-efficacy among infertile women

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Table 3. Relationship between the self-efficacy of infertile women and their demographical data

Demographical Data	χ^2	df	P	Assessment
Age (y)	9.390	2	0.625	NS
Level of education	2.630	6	0.854	NS
Working	14.049	5	0.030	S
Living address	14.045	5	0.025	S
Family monthly income	15.050	6	0.019	S
Marriage duration	13.044	4	0.052	S

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According to the researcher, infertility plays a prominent role in deteriorating the self-efficacy of infertile women because society considers infertility a real problem and shortcoming that affects the woman in particular and a kind of inability to achieve the requirements of the role assigned to women.

It seems that the absence of the child from the family's life and the delay in childbearing will deepen the state of dissatisfaction with the wife and may increase the manifestations of fear from the reactions of the husband or family. This condition may increase the severity of psychological and social effects. Females are always considered to suffer more than males from the psychological and social repercussions resulting from the problem of infertility. They are negative in their self-perception in the event of incomplete natural ability to conceive and bear children.

On the other hand, the results of this study are not consistent with the result of a study [21] conducted in Iran to measure the effectiveness of the educational package on the self-efficacy of infertile women, where the rate of self-efficacy of women was high after attending to the educational program sessions. Therefore, it is essential to hold educational workshops or seminars for women who have infertility to improve their level of self-efficacy and guide them to the correct methods or mechanisms that help them in adapting to their health condition and lead to a more productive life.

Table 3 presents the correlation between the self-efficacy of infertile women and their demographical data; the results in this table indicate significant associations of four demographic parameters of occupation, residence, family monthly income, and marriage duration with self-efficacy, while two parameters of age and level of education did not correlate with self-efficacy. These results correspond with a study conducted at Fatemeh Zahra Infertility and Reproductive Health Research Center [5].

A woman who has a job and her economic or living standard is acceptable can resort to all different and modern methods of treatment to address infertility problems, modern methods such as in vitro fertilization or intracytoplasmic sperm injection. As for the place of residence, there is a positive relationship between self-efficacy and living in the city or the countryside regarding the impact of customs, traditions, and social and economic culture on women's lives and health problems. Furthermore, the results showed no relationship between age and level of education with the self-efficacy among infertile women because self-efficacy is not necessarily affected by age and educational level as some women have infertility in

their prime of youth and have a poor educational level. However, they run an ordinary life and communicate with society, while other women cannot adapt to infertility, as they suffer from depression, anxiety, and loss of self-confidence at the same age group and level of education.

The current study is limited to measuring the self-efficacy of infertile women in Al-Hilla City without addressing the other factors that may affect the efficacy rate. Future studies are suggested to highlight the factors that affect the self-efficacy rate of that group of women, as well as conducting studies that include providing education and support to infertile women to raise their self-efficacy and self-confidence.

5. Conclusion

The current study indicated that most infertile women had a low self-efficacy level; most were young and living in urban areas and could not read and write. Therefore, it is essential to improve the level of self-efficacy of these women to overcome the embarrassments they are exposed to due to their inability to have children by organizing educational seminars and workshops to stimulate their self-confidence and avoid the adverse effects of this health problem.

Ethical Considerations

Compliance with ethical guidelines

In this study, all ethical principles and rules were observed. Also, we informed the study participants about the purpose of the research and its implementation steps.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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