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The relationship between sexual function and emotional intelligence and its components based on fertility status in women referring to health centers in Yazd

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Abstract:

BACKGROUND: Sexual function is affected by many psychological factors and emotions. The impact of emotion management varies in different fertility situations. This can affect women's sexual function. Therefore, the aim of this study was to investigate the relationship between sexual function and emotional intelligence and its components based on fertility status in women referring to health centers in Yazd.

MATERIALS AND METHODS: The present study is a correlational study that was performed on 165 women with inclusion criteria and referred to 4 selected health centers in Yazd in 2017. The study tools include demographic questionnaire, Female Sexual Function Index sexual function, and Bar-On emotional intelligence. The fertility status of women in the present study included a history of infertility, number of children, and history of abortion. The analysis was performed using descriptive statistical methods and analytical tests with SPSS software version 18.

RESULTS: The mean score of all components of emotional intelligence except the components of self-expression, independence, and emotional self-awareness and also the total score of emotional intelligence infertile people was significantly higher than fertile people ($P < 0.05$). Regarding the relationship between emotional intelligence and sexual function in terms of fertility variables, a significant correlation was observed between the mean scores of all components of emotional intelligence except interpersonal relationships, flexibility, responsibility, empathy, and self-expression with sexual performance score in fertile individuals. ($P = 0.000$).

CONCLUSION: As a result, it is suggested that the institutions in charge of women's affairs try to increase emotional intelligence and improve women's sexual function by holding workshops and classes for women, especially in women with infertility, childlessness, and history of abortion.

Keywords:

Emotional intelligence, fertility, sexual function, women

Introduction

Sexual desire is a phenomenon that is realistically important and it is impossible to ignore it. Because, like other human instinctual desires, it has existed since the birth of the child and changes and flourishes in proportion to his development,

and actually appears in human beings in the form of "sexual function."^[1] Any disorder that leads to incoherence and as result dissatisfaction with sex can lead to sexual dysfunction.^[2] It can also cause severe personal discomfort and affect interpersonal communication.^[3] Sexual dysfunction is the most common psychological problem in the general population, affecting 41% of

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women of childbearing age and 31% of men all over the world.^[4] In Iran, the study of Hosseini *et al.* (2016) aimed to investigate the prevalence of sexual dysfunction in Iran showed that the lowest prevalence is 31% and the highest prevalence is 64.6%. The overall prevalence of sexual dysfunction in Iran was 44%.^[5,6] One of the main causes of sexual dysfunction is communication-anxiety-emotional problems in the marital relationship.^[7,8] "Sex is an emotion and should be treated as an emotion," says. Sex not only evokes emotion but also influences the ways in which couples react to negative and positive events in the relationship.^[9] Emotions and how people cope with them are part of a person's personality and can affect people's health. Recently, conceptualizing the role of emotions in the field of marital satisfaction in the form of the emerging term emotional intelligence has become widespread.^[10] Mayer and Salovey developed a new concept that developed emotional intelligence based on Gardner's theory of individual talent into teachable abilities in five areas: (1) Recognition of personal emotions. (2) Proper use of emotions. (3) Self-motivation (4) Recognizing the emotions of others (5) Maintaining communication.^[11] Davarnia *et al.* Regarding the role of emotional intelligence in couples' relationships showed that emotional intelligence has a significant relationship with the dimensions of love in couples. Emotional intelligence is a factor that creates motivation and hope in a person when he/she fails due to not achieving the goal.^[12] Couples with higher emotional intelligence can communicate more effectively with each other, manage and resolve their conflicts, and manage their emotions.^[13] Although it is a vital opportunity to develop emotional intelligence in the first years of life, this ability continues to be more limited throughout life.^[11] Emotional intelligence has an acquired aspect and its origin is social. In Bar-On view, emotional intelligence is a group of non-cognitive and acquired skills, talents, and abilities that increase the ability of individuals to cope with environmental pressures and requirements.^[14] Regarding the acquisition of emotional intelligence, the study of Milani *et al.* Showed that teaching the components of emotional intelligence to couples increases marital satisfaction and the quality of sexual function.^[15] Mayer and Salovey (1990) believe that the most basic ability to affect emotional intelligence is to receive and accurately recognize emotions.^[11,12]

Fertility and reproduction are one of human abilities that show a symbol of immortality and desire for life in him. This type of behavior has a lasting effect on human personality and society. Fertility comes in many forms, including abortion, number of children, and infertility.^[16] According to the above, emotional intelligence is acquired and can be promoted over the years of life. It should also be noted that the most important part of a woman's sexual function is her

Table 1: Frequency distribution of fertility variables in the study participants

| Variable | | Number | Percentage |
|-----------------------|-------------------|--------|------------|
| Infertility | yes | 29 | 17.3 |
| | no | 139 | 82.7 |
| Number of pregnancies | 0 | 49 | 29.2 |
| | 1 | 37 | 22 |
| | 2 | 42 | 25 |
| | 3 and more than 3 | 40 | 23 |
| Number of children | 0 | 43 | 25.6 |
| | 1 | 46 | 27.4 |
| | 2 | 47 | 28 |
| | 3 and more than 3 | 32 | 19 |
| Number of abortions | 0 | 108 | 64.3 |
| | 1 | 28 | 16.7 |
| | 2 and more than 2 | 32 | 19 |

reproductive age. Based on reviewing different texts that these two variables can be affected in different fertility situations, so this study has investigated the relationship between sexual function and emotional intelligence and its components based on fertility status in women.

Materials and Methods

Study design and setting

This research is a descriptive-correlation study.

Study participants and sampling

The researcher went through the following steps to select the desired health centers for sampling: 1-Receiving a list of all health centers from the Deputy of Health of Yazd Province, 2-Selecting 4 health centers with inclusion criteria by the simple random method based on a table of random numbers. Then, the required number of samples from all selected health centers was determined in proportion to the population covered by them. Inclusion criteria for selecting health centers were: All urban health centers with a population of more than 3000 people (based on the inquiry of the Deputy of Health of Yazd Province). The number of samples in this study according to similar articles and according to the following formula with $r = 0.3$ and test power of 90, at least 158 people were obtained. Considering the probability of sample loss, 165 people were selected as the final sample size. Due to the possibility of sample loss, 3 more people were selected from each center.

After determining the number of required samples in each of the health centers, the researcher referred to the selected health centers. After presenting the letter of introduction and explaining the objectives of the research to the officials of the mentioned centers, based on the number of samples, a number of household files of those centers were randomly selected based on the table of random numbers. Then, by contacting people

Table 2: Average score of emotional intelligence and sexual function components according to fertility status

| Components of emotional intelligence | Infertility | SD±mean | Median (IQR) | P* |
|--------------------------------------|-------------|--------------|--------------|-------|
| Problem solving | Yes | 19.4±72.77 | 21 (5.5) | 0.02 |
| | No | 21.4±93.09 | 22 (5) | |
| Happiness | Yes | 20.5±37.38 | 20 (8.5) | 0.04 |
| | No | 22.4±41.8 | 23 (6) | |
| Independence | Yes | 17.4±03.41 | 18 (6) | 0.051 |
| | No | 19.4±02.93 | 19 (6) | |
| Self-expression | Yes | 14.4±27.17 | 14 (3.5) | 0.000 |
| | No | 17.4±64.53 | 18 (5) | |
| Tolerance of stress | Yes | 18.4±82.67 | 19 (6) | 0.003 |
| | No | 21.4±56.35 | 22 (5) | |
| Self-actualization | Yes | 19.4±17.43 | 19 (4) | |
| | No | 20.4±46.09 | 20 (5) | |
| Emotional self-awareness | Yes | 16.4±73.40 | 17 (5) | |
| | No | 18.3±48.91 | 19 (5) | |
| realism | Yes | 20.5±86.06 | 22 (5.5) | |
| | No | 22.4±72.75 | 23 (6) | |
| Interpersonal relationships | Yes | 19.4±58.61 | 20 (4) | |
| | No | 21.4±87.36 | 22 (6) | |
| Optimism | Yes | 19.4±55.95 | 21 (6) | |
| | No | 21.4±56.29 | 22 (5) | |
| Self-esteem | Yes | 14.6±13.19 | 14 (12) | |
| | No | 16.5±60.03 | 16 (8) | |
| Self-control or impulse control | Yes | 16.5±65.51 | 16 (7) | |
| | No | 18.4±49.03 | 19 (5) | |
| Flexibility | Yes | 21.5±34.07 | 22 (5) | |
| | No | 23.3±83.85 | 24 (4) | |
| Social responsibility | Yes | 22.5±34.73 | 24 (3.5) | |
| | No | 23.4±96.04 | 24 (3) | |
| Sympathy | Yes | 16.4±55.43 | 16 (4.5) | |
| | No | 16.02±47.89 | 16 (3) | |
| Function | Yes | 56.27±24.05 | 16 (24.50) | |
| | No | 61.19±92.11 | 66 (22) | |
| Emotional intelligence | Yes | 255.56±61.84 | 288 (41.50) | |
| | No | 307.45±07.45 | 308 (53) | |

*Mann-Whitney U. IQR=Interquartile range, SD=Standard deviation

and reviewing the inclusion criteria, people were invited to complete the questionnaire. Inclusion criteria were: Their wives and husbands must be Iranian and Muslim, women in the reproductive age range (15–45 years), people’s willingness to participate in this study, non-pregnancy and breastfeeding at the time of the study, according to the individuals themselves, not having debilitating diseases According to the people themselves who are not able to participate in this research, do not use drugs that interfere with sexual function (including: Drugs used in psychotherapy, antihypertensive drugs, anticancer drugs. Non-use of these drugs was evaluated as self-reported), no drug addiction, no history of sexual abuse in any period of life, no severe family disputes in recent months, natural and safe sex (self-declaration), have at least a basic education and read and write literacy. Exclusion criteria were people’s dissatisfaction with answering questions. Then,

the samples were selected in the study environments by considering the criteria for entering and obtaining people’s satisfaction and ensuring the confidentiality of information. Inclusion criteria were assessed in person according to the available facilities and conditions through a questionnaire. After explaining the objectives of the research, how to complete the questionnaire was explained by the research units.

Data collection tool and technique

The data collection tool was a questionnaire. The first part of the questionnaire was related to personal or demographic characteristics of individuals (including: Age, period of marriage, number of children, level of education, occupation, age of spouse, level of education of spouse, occupation of the spouse). The second part of the questionnaire was related to the study of sexual function. The Female Sexual Function Index (FSFI)

Table 3: Average score of emotional intelligence components and sexual function by number of pregnancies

| Components of emotional intelligence | Number of pregnancies | SD±mean | Median (IQR) | P* |
|--------------------------------------|-----------------------|------------|--------------|-------|
| Problem solving | 0 | 19.5±97.36 | 20 (6) | 0.000 |
| | 1 | 21.3±62.36 | 22 (6.5) | |
| | 2 | 23.3±73.58 | 24 (6) | |
| | 3 and more than 3 | 21.3±12.32 | 21.5 (4) | |
| Happiness | 0 | 22.6±7.15 | 24 (6.5) | 0.052 |
| | 1 | 21.4±94.44 | 22 (7.5) | |
| | 2 | 22.4±5.06 | 22.5 (5) | |
| | 3 and more than 3 | 20.4±8.53 | 21 (5) | |
| Independence | 0 | 17.5±34.61 | 17 (6) | 0.12 |
| | 1 | 18.4±72.47 | 18 (6) | |
| | 2 | 20.5±11.06 | 20 (8) | |
| | 3 and more than 3 | 18.3±75.73 | 19 (5.75) | |
| Self-expression | 0 | 16.5±34.3 | 16 (6.5) | 0.22 |
| | 1 | 16.4±72.3 | 17 (5.5) | |
| | 2 | 18.4±3.33 | 19 (4.5) | |
| | 3 and more than 3 | 16.4±95.28 | 16 (6) | |
| Tolerance of stress | 0 | 20.5±4.93 | 22 (8) | 0.37 |
| | 1 | 21.3±54.5 | 21 (5.5) | |
| | 2 | 22.4±04.42 | 22.5 (7) | |
| | 3 and more than 3 | 20.3±52.17 | 21.5 (5) | |
| Self-actualization | 0 | 19.5±83.39 | 20 (6) | 0.53 |
| | 1 | 20.3±56.41 | 21 (4) | |
| | 2 | 20.3±92.54 | 21.5 (4.5) | |
| | 3 and more than 3 | 19.3±7.7 | 20 (3.75) | |
| Emotional self-awareness | 0 | 17.4±89.57 | 19 (3) | 0.25 |
| | 1 | 18.3±83.13 | 20 (5) | |
| | 2 | 18.4±78.45 | 19.5 (7) | |
| | 3 and more than 3 | 17.3±35.55 | 17 (5) | |
| Realism | 0 | 21.5±53.9 | 21 (75) | 0.2 |
| | 1 | 21.4±72.72 | 23 (5.5) | |
| | 2 | 23.3±71.47 | 24 (5.25) | |
| | 3 and more than 3 | 22.4±72.56 | 23 (6.5) | |
| Interpersonal relationships | 0 | 20.5±57.27 | 21 (5) | 0.16 |
| | 1 | 21.3±64.95 | 22 (7) | |
| | 2 | 22.3±76.94 | 23 (6.25) | |
| | 3 and more than 3 | 21.4±1.22 | 22 (5) | |
| Optimism | 0 | 20.5±22.83 | 21 (6.5) | 0.07 |
| | 1 | 21.3±13.87 | 22 (6) | |
| | 2 | 22.3±76.68 | 23 (4.25) | |
| | 3 and more than 3 | 20.3±87.36 | 22 (4.75) | |
| Self-esteem | 0 | 16.6±46.6 | 17 (10) | 0.01 |
| | 1 | 15.4±59.45 | 15 (7) | |
| | 2 | 17.4±92.85 | 17 (7) | |
| | 3 and more than 3 | 14.4±52.21 | 14 (4.75) | |
| Self-control or impulse control | 0 | 17.5±79.7 | 18 (8) | 0.27 |
| | 1 | 18.4±10.10 | 18 (8) | |
| | 2 | 19.3±3.71 | 19 (7) | |
| | 3 and more than 3 | 17.3±52.08 | 18 (4) | |
| Flexibility | 0 | 22.5±34.69 | 23 (4.5) | 0.21 |
| | 1 | 23.3±75.23 | 24 (4) | |
| | 2 | 24.3±38.62 | 25 (3.25) | |
| | 3 and more than 3 | 23.3±35 | 24 (3.75) | |

Contd...

Table 3: Contd...

| Components of emotional intelligence | Number of pregnancies | SD±mean | Median (IQR) | P* |
|--------------------------------------|-----------------------|--------------|--------------|-------|
| Social responsibility | 0 | 22.5±75.69 | 24 (4.5) | 0.44 |
| | 1 | 23.3±89.63 | 24 (4.5) | |
| | 2 | 24.4±35.01 | 25 (4.25) | |
| | 3 and more than 3 | 23.3±92.48 | 24 (2) | |
| Sympathy | 0 | 15.4±59.13 | 16 (4) | 0.17 |
| | 1 | 16.2±54.81 | 17 (3.5) | |
| | 2 | 16.2±88.66 | 17 (5.25) | |
| | 3 and more than 3 | 17.2±12.51 | 17 (3) | |
| Sexual function | 0 | 64.18±95.24 | 66 (21) | 0.07 |
| | 1 | 62.14±1.81 | 65 (19) | |
| | 2 | 61.23±9.57 | 69 (24.5) | |
| | 3 and more than 3 | 53.23±95.86 | 58.5 (23.75) | |
| Emotional intelligence | 0 | 291.67±89.96 | 297 (49) | 0.051 |
| | 1 | 302.37±37 | 303 (67.5) | |
| | 2 | 318.39±52.95 | 315.5 (47) | |
| | 3 and more than 3 | 291.67±89.96 | 297 (49) | |

*Kruskal-Wallis test. IQR=Interquartile range, SD=Standard deviation

Table 4: Relationship between mean sexual function score and emotional intelligence score and its components in study participants in terms of infertility, number of children and number of abortions

| Components of emotional intelligence | Variable | | | | | | | | | | | | | | | | | |
|--------------------------------------|-------------|------|------|-------|--------------------|-------|------|-------|-------|-------|-------------------|------|---------------------|-------|-------|-------|--------|------|
| | Infertility | | | | Number of children | | | | | | | | Number of abortions | | | | | |
| | Yes | | No | | 0 | | 1 | | 2 | | 3 and more than 3 | | 0 | | 1 | | 2 | |
| | r | P | r | P | r | P | r | P | r | P | r | P | r | P | r | P | r | P |
| Problem solving | -0.01 | 0.92 | 0.24 | 0.004 | 0.29 | 0.05 | 0.38 | 0.008 | 0.08 | 0.59 | 0.2 | 0.2 | 0.2 | 0.03 | 0.001 | 0.99 | 0.26 | 0.14 |
| Happiness | 0.22 | 0.24 | 0.29 | 0.27 | 0.27 | 0.07 | 0.32 | 0.02 | 0.48 | 0.001 | 0.49 | 0.01 | 0.38 | 0.00 | 0.33 | 0.08 | 0.44 | 0.01 |
| Independence | -0.11 | 0.54 | 0.25 | 0.002 | 0.4 | 0.008 | 0.28 | 0.055 | 0.2 | 0.17 | -0.07 | 0.7 | 0.23 | 0.01 | 0.06 | 0.74 | 0.2 | 0.26 |
| Self-expression | 0.15 | 0.43 | 0.28 | 0.001 | 0.47 | 0.001 | 0.26 | 0.07 | 0.36 | 0.01 | -0.01 | 0.94 | 0.28 | 0.002 | 0.17 | 0.38 | 0.28 | 0.11 |
| Tolerance of stress | 0.21 | 0.25 | 0.23 | 0.006 | 0.24 | 0.11 | 0.3 | 0.03 | 0.26 | 0.07 | 0.08 | 0.63 | 0.25 | 0.008 | 0.03 | 0.87 | 0.31 | 0.08 |
| Self-actualization | -0.03 | 0.86 | 0.33 | 0.000 | 0.4 | 0.007 | 0.31 | 0.03 | 0.4 | 0.005 | -0.002 | 0.99 | 0.23 | 0.001 | -0.04 | 0.81 | 0.4 | 0.02 |
| Emotional self-awareness | -0.1 | 0.57 | 0.22 | 0.008 | 0.18 | 0.23 | 0.41 | 0.004 | 0.19 | 0.19 | -0.14 | 0.44 | 0.29 | 0.002 | -0.02 | 0.89 | -0.003 | 0.98 |
| Realism | -0.02 | 0.89 | 0.1 | 0.23 | 0.25 | 0.09 | 0.04 | 0.75 | 0.19 | 0.19 | -0.06 | 0.71 | 0.09 | 0.3 | 0.01 | 0.92 | 0.16 | 0.36 |
| Interpersonal relationships | 0.27 | 0.14 | 0.2 | 0.01 | 0.31 | 0.041 | 0.14 | 0.32 | 0.32 | 0.02 | 0.22 | 0.21 | 0.2 | 0.03 | 0.04 | 0.81 | 0.35 | 0.04 |
| Optimism | -0.01 | 0.92 | 0.23 | 0.005 | 0.11 | 0.45 | 0.16 | 0.26 | 0.37 | 0.01 | 0.17 | 0.34 | 0.21 | 0.02 | -0.05 | 0.78 | 0.25 | 0.16 |
| Self-esteem | 0.12 | 0.51 | 0.24 | 0.003 | 0.3 | 0.04 | 0.33 | 0.02 | 0.2 | 0.17 | 0.05 | 0.74 | 0.24 | 0.01 | 0.01 | 0.95 | 0.24 | 0.18 |
| Self-control or impulse control | 0.07 | 0.68 | 0.16 | 0.05 | 0.19 | 0.21 | 0.2 | 0.18 | 0.12 | 0.41 | 0.22 | 0.21 | 0.18 | 0.08 | 0.02 | 0.88 | 0.15 | 0.4 |
| Flexibility | -0.2 | 0.29 | 0.09 | 0.27 | 0.29 | 0.057 | 0.16 | 0.26 | -0.03 | 0.82 | -0.08 | 0.65 | 0.12 | 0.19 | -0.41 | 0.03 | 0.08 | 0.66 |
| Social responsibility | 0.04 | 0.81 | 0.09 | 0.27 | 0.3 | 0.047 | 0.14 | 0.34 | 0.02 | 0.88 | -0.25 | 0.15 | 0.06 | 0.51 | -0.13 | 0.48 | 0.11 | 0.54 |
| Sympathy | 0.29 | 0.12 | 0.06 | 0.44 | -0.01 | 0.91 | 0.05 | 0.71 | 0.24 | 0.1 | 0.23 | 0.19 | 0.06 | 0.52 | 0.5 | 0.006 | 0.12 | 0.49 |
| Emotional intelligence | 0.13 | 0.5 | 0.34 | 0.000 | 0.47 | 0.001 | 0.34 | 0.02 | 0.38 | 0.008 | 0.09 | 0.62 | 0.34 | 0.00 | 0.01 | 0.93 | 0.38 | 0.02 |

standardized questionnaire was used to assess women’s sexual performance. The questionnaire consisted of 19 questions that were scored in a 5-point Likert scale and assessed the state of sexual desire, arousal, orgasm, sexual pain, vaginal moisture, and sexual satisfaction Scores <28 are considered sexual dysfunction and scores <3.6 are considered satisfaction disorders.^[15] The reliability and validity of this questionnaire have been confirmed in several studies. The validity of the Sexual Function Questionnaire was determined using the

research of Mohammadi³ The reliability of scales and subscales by calculating Cronbach’s alpha coefficient in all subjects was 70%.^[4] To determine the reliability of the standardized FSFI questionnaire (FSFI) in the present study, the internal consistency method and Cronbach’s alpha were used. The questionnaire was given to 20 participants and then Cronbach’s alpha coefficient was calculated. The reliability of the questionnaire was determined to be $\alpha = 0.79$.

The third part includes the BAR-ON emotional intelligence questionnaire. Emotional intelligence based on the “Bar-On” model includes 15 subscales that are summarized in 5 second-ranked scales, which are also included in a general factor called emotional intelligence.

This questionnaire has 90 questions. The total score of emotional intelligence is equal to the sum of the scores obtained from the total questions. This score can be in the range between a minimum of 90 and a maximum of 450.^[17] The psychometric properties of this questionnaire were studied by Golparvar *et al.* Who reported the Cronbach, Spearman alpha, and retest coefficients of this questionnaire as 0.93, 0.90, and 0.85, respectively^[18] The reliability coefficient of this questionnaire was first assessed by Dehshiri *et al.*, Which was reported to be 0.74 by the test-retest method.^[19] Furthermore, the reliability of the test in the research of Hammerli with Cronbach’s alpha method has been reported to be 0.93.^[20] Therefore, studies on the face and content validity of the test indicate good validity of the questionnaire.^[21] To determine the reliability of the standardized Bar-On Emotional Intelligence Questionnaire (BAR-ON) in the present study, internal consistency was determined by Cronbach’s alpha method. Therefore, the questionnaire was given to 20 people in the study community and then Cronbach’s alpha coefficient was calculated. The reliability of the questionnaire was determined to be $\alpha = 0.86$.

Ethical consideration

This research has an approved code from the ethics committee of Shahid Sadoughi University of Medical Sciences, Yazd, number 4627, and with the ethics code IRSSU.REC.1395.8 in 2017. Data collection was cross-sectional.

In order for people to participate in the research, the goals were clearly described. Conscious written consent was obtained from all participants in the study.

Individuals were assured that their information would be completely confidential and that their names or details would not need to be mentioned in the questionnaires, and that they could leave the survey whenever they did not wish to participate in the survey.

Finally, after collecting data, the analysis was performed using descriptive and analytical statistical tests (Mann–Whitney U and Kruskal–Wallis test) with a significance level of 0.05 and using SPSS (Statistical Package for the Social Sciences) software version 16 (IBM, USA, 2007).

Results

The mean age of participants in the present study was 31.30 ± 0.5 . Regarding fertility variables, the findings

showed that 17.3% of the participants had infertility problems. About 29.2% of the subjects had no history of pregnancy. About 35.7% of the participants had one or more abortions.

In the field of fertility variables, the mean score of all components of emotional intelligence except the components of self-expression, independence, and emotional self-awareness and also the total score of emotional intelligence infertile people was significantly higher than infertile people ($P < 0.05$) [Table 1]. Furthermore, women’s sexual function in the two groups (with infertility and no infertility) was not significantly different ($P > 0.05$).

Regarding the number of pregnancies, the mean scores of the problem-solving component and the self-control component were significantly higher in people who had two pregnancies than in other individuals ($P < 0.05$). The mean score of the happiness component was significantly higher in people who did not have children than people with children ($P = 0.04$) [Table 2].

In relation to other fertility variables, the mean score of self-control in people who did not have an abortion was significantly higher than those who had an abortion ($P = 0.04$). There was no statistically significant relationship between the mean scores of other components of emotional intelligence and sexual function of individuals with the number of abortions ($P > 0.05$) [Table 3].

Regarding the relationship between emotional intelligence and sexual function in terms of fertility variables, the mean score of all components of emotional intelligence except the components of interpersonal relationships, flexibility, responsibility, empathy and self-expression was significantly correlated with the score of sexual function in fertile individuals. Also about numbers of their children and having abortion results in Table 4 mentioned.

Discussion

According to the results, the mean age of participants in the present study was 31.30 ± 0.5 . In Jafaryazdi’s study, which examined the relationship between emotional intelligence and marital adjustment, the average age of participants was 35.5 years.^[22] In the field of fertility variables, the results showed that the mean scores of problem-solving components, happiness, stress tolerance, self-fulfillment, realism, interpersonal relationships, optimism, self-esteem, self-control or impulse control, flexibility, social responsibility, Empathy, and total emotional intelligence score were significantly higher in fertile people than in infertile

people. In this regard, the study of Rasti, Jafarkhani, and Gana is in line with the results of the present study. In their study, Rasti *et al.* Compared personality traits and happiness between fertile and infertile women and concluded that happiness is significantly lower in infertile women.^[23] Jafarkhani's study also showed that there is a significant difference between the two groups of fertile and infertile women in terms of empathy, and fertile women have more empathy than infertile women. They also showed that positive and negative emotions are different in the two groups of fertile and infertile women and the component of happiness in infertile women is significantly less than infertile women.^[17] Ghana *et al.* Also showed that infertile people who are under the stress of pregnancy have emotional problems and defects in emotion regulation.^[24] Regarding the role of emotional intelligence infertility, it seems that people who have defects in the regulation of their emotions, in the face of stressful events such as infertility, are not able to reduce their negative emotions.^[25] Failure to regulate emotion leads to numerous psychological problems in women with fertility problems. Therefore, regulating emotions and presenting strategies to increase the emotional intelligence of individuals is one of the key components in adapting to the experience of infertility.^[20]

Regarding the number of pregnancies, the mean scores of the problem-solving component and the self-control component were significantly higher in people who had two pregnancies than in other people. The mean score of the happiness component was significantly higher in people who did not have children than in those who had children. Also, the mean score of self-control in people who did not have an abortion was significantly higher than people who had an abortion. In this regard, the results of the Golmakani study were contrary to the results of our study, which showed that there is no significant relationship between the number of pregnancies and emotional intelligence. However, their study did not investigate the relationship between emotional intelligence components and the number of children. This study reported only the overall score of emotional intelligence in this regard.^[21] The study of Dadmehr *et al.*, Which was done as a meta-analysis, agreed with our results. They emphasized the results of the present study. As a result, they stated that to influence emotional intelligence on the components of marital satisfaction, including sexual function, the role of other factors such as the number of children should be considered.^[26] In our study, there was no statistically significant relationship between the mean scores of other components of emotional intelligence and sexual performance of study participants with the number of abortions. In individuals who had a miscarriage, the scores of the components of responsibility and self-expression had a statistically significant correlation with the score of

sexual function. In this regard, the study of Golmakani *et al.*, Which examined the role of emotional intelligence in enduring grief caused by abortion, showed that there is a significant negative relationship between emotional intelligence, grief after miscarriage, and mourning. They also recommended that programs be considered to improve women's emotional intelligence to deal with life stresses, including failed pregnancies and abortions.^[21] In this regard, it seems that emotional intelligence is associated with appropriate emotional regulation and is a good protective factor against daily stress.^[27] The results also showed that the mean scores of the components of problem-solving, happiness, independence, stress tolerance, self-fulfillment, emotional self-awareness, realism, optimism, self-esteem and self-control, and impulse control were significantly correlated with the score of sexual function infertile individuals. The study of Barghi^[28] and Maidani^[29] was in line with the results of our study. The study of Barghi *et al.* Confirms that emotional malaise, difficulty in describing emotions and thinking has a significant predictive effect on sexual function in infertile women. In other words, they showed that there is an inverse relationship between sexual function and emotional malaise that can be justified by external orientation with sexual function in infertility.^[28] Therefore, not paying attention to emotions in these women reduces the likelihood of infertility treatment.^[30-32] According to the study of Maidani emotional processing significantly predicts sexual satisfaction inversely and negatively. In other words, with increasing problems in emotional processing, sexual satisfaction decreases.^[29] In people who had a child, the mean score of sexual function was significantly correlated with the components of problem-solving, happiness, self-fulfillment, emotional self-awareness, realism, self-control, and emotional intelligence. Thus, the results of their study showed that fertile couples with children have more empathy and stated that having children causes more friendship, love, and solidarity in the family center. These things increase the friendship and love between couples and can improve interpersonal relationships.^[19] Therefore, it seems that an important step can be taken in managing their conflicts by considering emotional intelligence training for infertile couples. The most important strength of the present study is the study of all components of emotional intelligence separately in relation to the fertility status of women. This can show the relationship between emotional intelligence components and fertility status more accurately and clearly.

Limitation and recommendation

The present study had limitations, the most important of which were the lack of evaluation in couples. This can have stronger results to examine the relationship between these two variables in the field of fertility variables. Failure to investigate the cause of infertility

in the study participants was another limitation of the study, which seems to require more comprehensive studies. Therefore, it is suggested that studies be conducted to investigate the sexual function and emotional intelligence in couples. Also, studies should be conducted to evaluate the emotional intelligence and sexual function of couples referring to infertility centers with an emphasis on the cause of infertility.

Conclusion

The results of the present study showed that in the field of the relationship between sexual function and emotional intelligence based on fertility variables, fertile women had a significant relationship with sexual function in the majority of emotional intelligence components. The number of children in this field had a significant relationship in the majority of emotional intelligence components.

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Conflicts of interest

There are no conflicts of interest.

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