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Emotional Intelligence and Fear of Childbirth among Pregnant Women: A Correlational Study

Rania Abouzaid Embaby[1], Wafaa Ahmed Abu Hashem[2], Esraa Mohammed Abd El Aziz[3], Fatma Zaghloul Mahmoud[1*]

[1]Lecturer of Maternal and Newborn Health Nursing, Faculty of Nursing, Cairo University, Egypt
[2]Lecturer of Psychiatric Health Nursing Department, Faculty of Nursing, Cairo University, Egypt
[3]Lecturer of Community Health Nursing- Faculty of Nursing- Zagazig University- Egypt

* **Corresponding author:** fatmazaghloul@cu.edu.eg

ABSTRACT

When fear of childbirth (FOC) is considered as an obstetrical barrier and hurts women's overall health, having an adequate level of emotional intelligence (EI) among pregnant women can play a pivotal role in controlling these fears. **Aim:** to investigate the relationship between emotional intelligence and fear of childbirth among pregnant women. **Research design:** A descriptive correlational design was used. **Setting:** outpatient clinics in Obstetrics and Gynecology Hospitals affiliated with Cairo University Hospitals. **Sample:** A convenience sample of 100 pregnant women in their third trimester of pregnancy was selected. **Tools:** Three tools were used. 1) Personal Data Sheet 2) Emotional Intelligence Inventory 3) Fear of Childbirth Questionnaire **Results:** nearly two-thirds (64.0%) of women had an average level of emotional intelligence, and 62.0% of them had a moderate level of fear of birth, while 17.0% had a high level. In addition, a significant negative correlation was found between pregnant women's level of emotional intelligence and fear of birth (r= -0.46, p= 0.00). Moreover, there were positive statistical correlations between EI with work status (r= 0.34, p=0.001) and gestational age (r= 0.22, p= 0.02). Conversely, negative statistical correlations were found between fear of birth with both work status (r= -0.3, p= 0.002) and gestational age (r= -0.25, p= 0.009). **Conclusion:** It was determined that a negative correlation with highly statistically significant differences was found between the total EI scores of the pregnant women and their FOC. **Recommendations:** Emotional intelligence skills should be integrated as a part of educational sessions conducted for pregnancy-related fears.

Key words: Fear of Childbirth, Pregnant Women, Emotional Intelligence

Introduction

Childbirth is a unique event that affects every aspect of a woman's life. It is considered a multifaceted experience that includes physical, emotional, psychological, developmental, social, cultural, and spiritual elements. The happiest moments in a parent's life are thought to be childbirth. However, fear of childbirth (FOC) is

prevalent in all three trimesters of pregnancy. Pregnant for who are first primigravida, which is defined as primigravida, are more likely to suffer unfavorable pregnancy outcomes and to be afraid of giving birth than those who have delivered before (**Osman, El-Adham, & Elrefaey, 2021; Huang et al., 2021**).

Childbirth fear affects women's health and is considered an obstetric hindrance. It can be defined as a group of unstable emotions and thinking patterns associated with the experience of a woman's previous delivery. It is characterized by an attitude of childbirth avoidance, called tokophobia, which is the term used to describe the increased fear of delivery and classified as primary when it occurs in women who give birth for their first time or secondary when it occurs in women who have exposed to negative situations or accidents in previous births. It can show up as somatic symptoms, panic attacks, nightmares, difficulty focusing at work, and other symptoms that seriously impair a pregnant woman's life and prompt her to request a Caesarean section (CS). The fear of pain and previous delivery problems are the main causes of fear of childbirth itself (**Dal Moro et al., 2023**).

Emotional intelligence (EI) is the individual's ability to be aware of own and others' feelings and to apply this knowledge in real-world situations. These are all components of it, which derive from the connection between emotions and intelligence (**Ozer & Erkek, 2021**). One of the emotional intelligence models that focuses on both emotional and social skills is the Bar-On mixed model, which is a process-oriented model and composed of five main components: (1) intrapersonal competence, which refers to self-awareness and expression and can be observed in the person's self-esteem, assertiveness, independence, emotion recognition, and finally self-actualization. (2) Interpersonal competence, which refers to the person's skills of how to deal with others, the ability to put oneself in the shoes of others, and responsibility for social roles. (3) Adaptability, which indicates the ability to solve problems, to cope with change, and to be flexible. (4) Stress management as measured by impulse control and stress tolerance. And (5) general mood in terms of positive emotions such as happiness and optimism (**Bar-On, 1997**).

Pregnancy brings about changes in a woman's picture of herself and her fetus's future, which in turn prompts the creation of new representations about these aspects of herself. A pregnant woman may experience a range of emotions, from powerful and long-lasting negative ones like worry or misery to primarily happy, hopeful feelings. Even in circumstances where a person desires and perceives pregnancy positively, different opposing and fluctuating emotions may be present. These divergent changes that occur during the pregnancy period also include body image as a crucial concern that affects the pregnant woman's acceptance of herself (**Carpinelli & Savarese, 2022**).

Bar-On hypothesized that EI can be developed through specific programs and practice, and persons who possess greater levels of

emotional intelligence are more able to meet demands of the environment and cope with stressors; in addition, it offers an indicator of the person's ability to pass through his/her life (**Bar-On, 2002**). Pregnant women with high emotional intelligence can manage stressors and environmental effects during the dynamic and ever-changing process of pregnancy. It also gives expectant mothers the chance to build relationships that are compatible with their surroundings. Therefore, high levels of emotional intelligence in pregnant women help them to recognize and express their own emotions appropriately, manage their disturbing emotions, and have a safe and reassuring birth experience (**Kaydirak et al., 2023**).

Significance of the Study

Fear of childbirth is a common barrier to a secure obstetrical birth experience. FOC can affect both nulliparous and multiparous women, leading to many fetal problems as arrhythmias, low birth weight, and increased fetal mortality near birth. In many pregnant women, FOC is highly correlated with physical complaints as increased feelings of pain and prolongation of the delivery process, in addition to negative psychological consequences that cannot be neglected as mood disturbances (e.g., depression or anxiety) (**Khalesi, 2022**).

It has been reported that EI is a crucial skill for enhancing women's well-being and quality of life in women of reproductive age (**Thapa et al., 2024**). In addition, Ozer & Erkek (2021) reported that women who achieved high scores on emotional intelligence during their pregnancy have an easier time identifying the feelings they experience, getting over any fear or anxiety they may have, have positive birth experiences, and giving birth to their child securely and confidently.

There are scarce studies about the role of EI in pregnancy, especially in Egypt. As a result, this current study will be the first study in Egypt that connects these two concepts. Therefore, the current study will add research value by investigating the role of emotional intelligence among pregnant women in controlling their childbirth fears. Additionally, it will help both health care providers and midwives to build therapeutic, trusting relationships with pregnant women based on the principles of EI to achieve positive pregnancy outcomes that are free of any negative experiences related to the childbirth process. For future research, it will provide research evidence for building training programs to improve EI skills among pregnant women for a more satisfying childbirth experience.

Aim of the study

This study aimed to investigate the relationship between emotional intelligence and fear of childbirth among pregnant women.

Research Questions

There are three research questions were formulated as follows:

1- What is the level of emotional intelligence among pregnant women?

2- What is the level of fear of childbirth among pregnant women?
3- What is the relationship between emotional intelligence and fear of childbirth among pregnant women?

Research Design

A descriptive correlational design was employed in this study.

Setting

The current study was conducted at the Obstetrics and Gynecology outpatient clinics affiliated with Cairo University Hospitals. It is a university-affiliated hospital that provides free obstetrics and gynecology health services, including antepartum, intrapartum, and postpartum care for low-risk and high-risk pregnant women and counseling for family planning. Also, it provides care for women compiling of gynecological problems. The antenatal outpatient is divided into two floors; the first is for antenatal care, which includes two clinics for follow-up, a room for ultrasonography of pregnant women, a room for high-risk pregnancy, and a room for cardiotocography (CTG). The second floor is for gynecologic care, which includes two clinics for gynecology, one clinic for infertility, and a room for ultrasonography for non-pregnant women.

Study Sample

A convenience sample of 100 pregnant women was selected for participation in the current study. The investigators determined the population size by identifying the total number of pregnant women who visit the outpatient obstetrics and gynecology clinics at Cairo University Hospitals for one month (4000 women), then calculating the sample size(100) in the period of data collection according to the following statistical formula:

$$\mathbf{n}=\frac{z^2 * p * (1-p)/e^2}{1+\frac{z^2 * p * (1-p)}{e^2 * N}}$$

n=100

z standard normal value with confidence level 95%

p percent in population 0.5

Margin of error 0.05

N population size is 4000

The investigators recruited participants who were available, accessible, and met the inclusion criteria: pregnant women in the third trimester, primigravida and multigravida, free from a psychiatric diagnosis, and low-risk pregnancy (having no current or previous complications, free from medical diseases, having adequate fetal growth, and normal laboratory results and screening tests throughout the pregnancy).

Tools of Data Collection

There are three tools used in this study:

1. **Personal Data Sheet:** This tool was developed by the researchers after extensive review of recent and relevant literature (**Thapa et al., 2024; Özer, & Erkek, 2021**), and it consisted of two parts: 1) demographic characteristics such as age, place of residence, educational qualifications, and working condition; and 2) data related to the obstetric history as gestational age and history of pregnancy.

2. Emotional Intelligence Inventory (Bar-on & Parker, 2000):

It is a self-reporting measuring tool of EI for individuals aged 16 years and over. The original measure was developed by Bar-on & Parker (2000) to assess the level of emotional and social intelligence. It is a widely used inventory as it was applied to thousands of people around the world (USA, Canada, Germany, India, Nigeria, South Africa, and Argentina). The original version is composed of one hundred and thirty-three items with a Likert scale of five points. The original measure had high internal consistency as the alpha coefficients of its components ranged from 0.60 to 0.82. In addition, its reliability was accepted at 0.8 with Cronbach's alpha.

This study adopted the Arabic version developed by Rezk-Allah (2006). It consisted of 60 items divided into six subscales, which are intrapersonal skills (ability to recognize own emotions, own self, and express it), interpersonal skills (ability to relate to others and understand them), stress management (ability to manage stressors), adaptability (capacity to adapt to life stressors), general mood (dominant emotions during pregnancy period)), and positive impression. It is a 4-point Likert scale with the following scoring: to a high degree (4), to a great extent (3), to a moderate degree (2), to the least degree (1). Regarding consistency of the Arabic version, the test-retest method indicated significant statistical correlation at $p<0.01$, and Cronbach's alpha test was 0.671, which indicates high consistency (**Geagea & Mansour, 2015**).

Scoring system: The total score range (60-240) and the highest score indicate a higher degree of emotional intelligence. Levels of emotional intelligence in the total score or sub-domains were calculated as the following: low emotional intelligence (<60%, score: less than 144), average emotional intelligence (60% - <75%, score: 144-179), and high EI (75% or over, score: 180 or over).

3: Fear of Childbirth Questionnaire (FCQ) (Slade et al., 2021)

This tool was adapted from the original questionnaire that was developed by Slade et al. (2021) to measure how much anxiety and terror women are experiencing regarding the upcoming birth, introducing new 20-items to assess the fear of birth among pregnant women. It is composed of 20 items using a 4-point Likert scale. The tool was translated into Arabic, the new versions were back-translated into the original English language again by bilingual experts, and the necessary modifications were made by the investigators to overcome discrepancies. A modification was also done by merging the Likert scale into a point scale, only ranging from "agree" with a score of 3, "neutral" with a score of 2, and "disagree" with a score of 1. Content validity of the tools was checked by three experts in obstetric nursing, and necessary modifications were made. The Cronbach's alpha test of the translated version was 0.84. Scoring system ranging from 20 to 60, with a score below 30 indicating low fear, 30 to 39 as moderate fear, and more than 39 as severe fear.

Ethical Consideration

An official ethical approval was obtained from the ethical committee of the Faculty of Nursing, Cairo University (**Code 1-1-2024**). Moreover, official permission to conduct the proposed study was received from the hospital administrators in the selected setting for data collection. At the initial interview, each potential woman was informed about the purpose, procedure, and benefits of the study, in addition to the tools used to collect data. Confidentiality and anonymity were granted for each woman. Women's approval for participation in the study was guaranteed by a signature on a written consent form. Each participant was also assured that participation in this study was voluntary and that they had the right to withdraw from the study at any time without affecting the health care services that she was receiving.

Procedure of Data Collection

At the beginning, the investigators had reviewed the related and recent literature extensively and selected the appropriate measuring tools. After obtaining the official permissions to conduct the study from the research ethics committee of the faculty of nursing, Cairo University and the administrators of outpatient obstetrics and genecology clinics at Cairo University hospitals, the investigators determined the sample size then interviewed the eligible participants at the antenatal outpatient clinics clarifying the purpose and benefits of the study to them by using a simple language. Written consent was obtained from each pregnant woman before data collection. Each pregnant woman was interviewed individually in a structured interview that lasted from 25 to 35 minutes, as each woman was allowed to read the questionnaires and record the responses by herself. For women who had difficulty with reading and writing abilities, the questionnaire items were read, and responses were recorded by the investigators.

Statistical Design

Collected data were statistically analyzed using the Statistical Package for Social Science (SPSS) version 22. A descriptive statistical analysis was utilized as continuous and categorical data were presented by using frequency, percentage, mean, and standard deviation. A Pearson correlation (r) test was used to study the correlation between study variables, it was also used for the correlation between socio-demographic data and scores of studied variables. Results were considered significant if $p < 0.05$ and highly significant if $p < 0.01$.

Results

Table 1: Shows that (42%) of the pregnant women were in the age group from 25 to less than 30 years old, and only (1%) of them were above the age of 40 years, with a mean age of 28.2±5.4. Concerning the place of residence, slightly more than one-third of women (36%) were living in rural areas. Regarding educational level, more than one-third of the pregnant women (35%) had a university education, compared to 9 % of them who couldn't read or write. In addition, less than one quadrant (22%) of women had a job or free work. In the field of their obstetric data, nearly

one-half of the women (48%) were in the weeks 36 to 40 of their pregnancy, and 80% of them had previous childbirths.

Table 2 shows that the total emotional intelligence level was 80.6% among the studied sample. Regarding domains of emotional intelligence, general mood occupied the highest mean percent (77.1%) among pregnant women, followed by interpersonal competence (75.1%). Additionally, adaptability and stress management competency were represented by similar percentages among the studied women, 68.9% and 68.2%, respectively. Moreover, the lowest score of the emotional intelligence domains among the studied sample was intrapersonal competence, with a mean percent of 60.7%. The table also reveals that the overall level of fear of birth among pregnant women was moderate, with a mean percent of 73.7%.

Figure (1): Reveals that approximately two-thirds (64.0%) of the studied sample had an average level of emotional intelligence, compared to 21.0% of them having a high level, while 15.0% of the studied women had a low level of emotional intelligence.

Figure 2 reveals that 48.0% of the pregnant women had poor intrapersonal competence compared to 16% at the high level. Regarding interpersonal competence, 51% of the studied women had average skills compared to 31% at the poor level. Considering the stress management ability of the studied women, 40% of them had poor stress management skills. Also, 34% of them had poor coping abilities, while 46% had a high level of positive mood. In addition, this table clarifies that 44% of the studied women had poor positive impression skills.

Figure (3): Reveals that nearly two-thirds (62.0%) of the pregnant women had a moderate level of fear of birth, while 17.0% of them had a high level.

Table (3) clarifies a significant statistical negative correlation between pregnant women's emotional intelligence and their fear of birth (p=0.00). In terms of EI domains, there were highly statistically negative correlations between pregnant women's fear of birth and stress management competence, adaptability, general mood, and positive impression at (p value) = (0.00, 0.00, 0.001, and 0.00), respectively. Controversy, there was a highly significant positive statistical correlation between the intrapersonal skills of pregnant women and their fear of birth at (p = 0.002).

Table 4, there was no correlation between emotional intelligence or fear of birth of pregnant women with their age, education, and history of pregnancy. The same table also reveals that there was a highly statistically positive correlation between the emotional intelligence of pregnant women and their working conditions (p-value = 0.00). In addition, there is also a positive statistical correlation between the emotional intelligence of pregnant women and their working conditions and their gestational age (p-value = 0.00 and 0.02). In the same direction, there were highly significant

statistical negative correlations between pregnant women's fear of birth with both their working condition and gestational age at (p value) = (0.002 & 0.009) respectively.

Table (1): Socio-demographic and Obstetrics Data of the Studied Sample (n=100)

Demographic data	No.	%
Age(Years)		
18-<25	26	26.0
25-<30	42	42.0
30-<40	31	31.0
40+	1	1.0
Mean± SD 28.2±5.4		
Residence		
Urban	64	64.0
Rural	36	36.0
Education		
Can’t read or write	9	9.0
Primary	19	19.0
Secondary	37	37.0
University	35	35.0
Working Condition		
Not working	78	78.0
Working	22	22.0
Gestational Age(weeks)		
28-<32	7	7.0
32-<36	44	44.0
36-40	48	48.0
>40	1	1.0
Mean ± SD 35.7±2.5		
History of Pregnancy		
Primi-gravida	20	20.0
Multi-gravida	80	80.0

Table (2): Total Scores of Studied Variables (Emotional Intelligence and its Dimensions, and Fear of Birth) among Studied Sample (n=100)

Dimensions	Mini	Max	Mean± SD	Mean percent
Intrapersonal competence	6	24	14.57±4.02	60.7
Interpersonal competence	19	42	31.55±5.24	75.1
Stress management competence	17	44	30.01±6.57	68.2
Adaptability	16	40	27.56±6.16	68.9
General mood	26	54	41.62±6.29	77.1
Positive impression	9	23	15.03±3.22	65.3
Total emotional intelligence	115	203	163.64±19.28	80.6
Total Fear of Birth	20	51	37.63±7.68	73.7

Figure (1): levels of Emotional Intelligence among the Studied Sample (n=100)

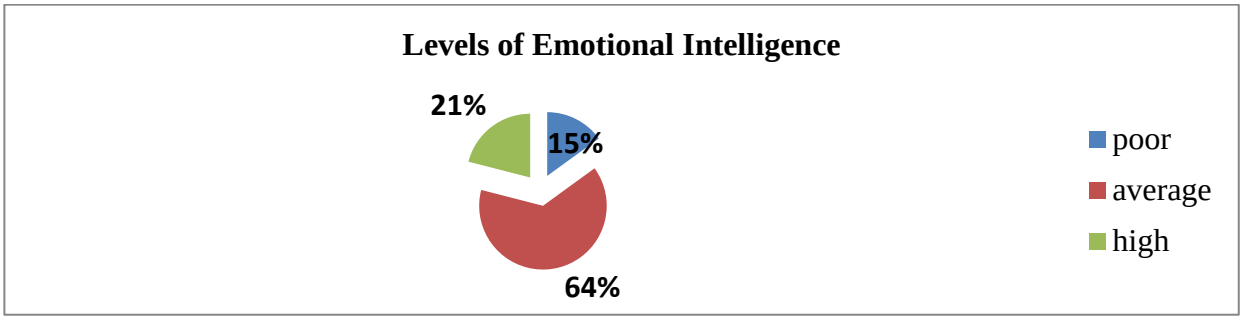

Figure (2): Levels of Emotional Intelligence Dimensions among the Studied Sample (n=100).

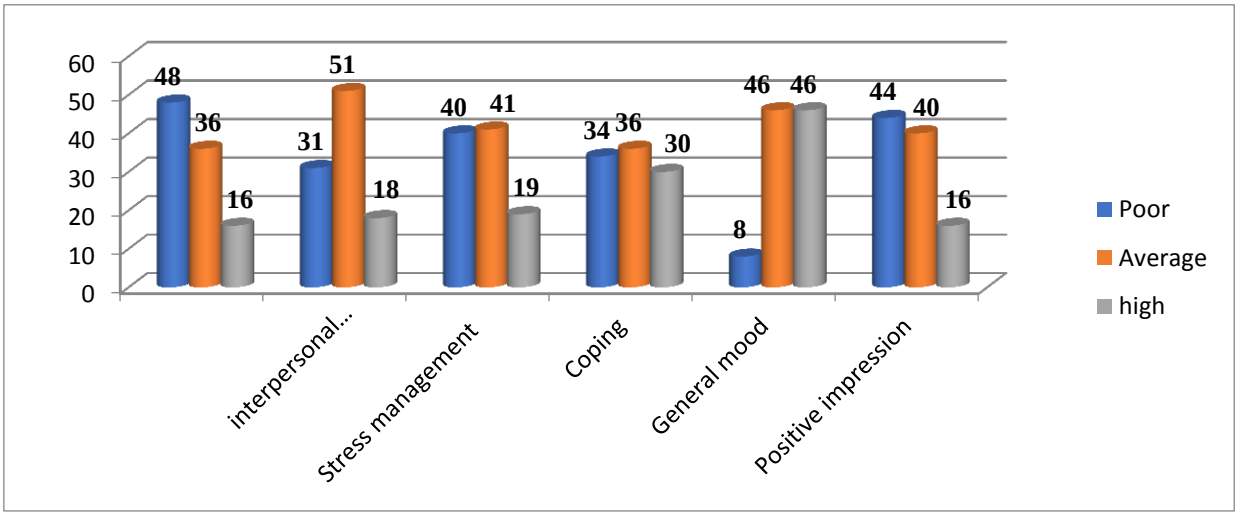

Figure (3): levels of Fear of Birth among the Studied Sample (n=100)

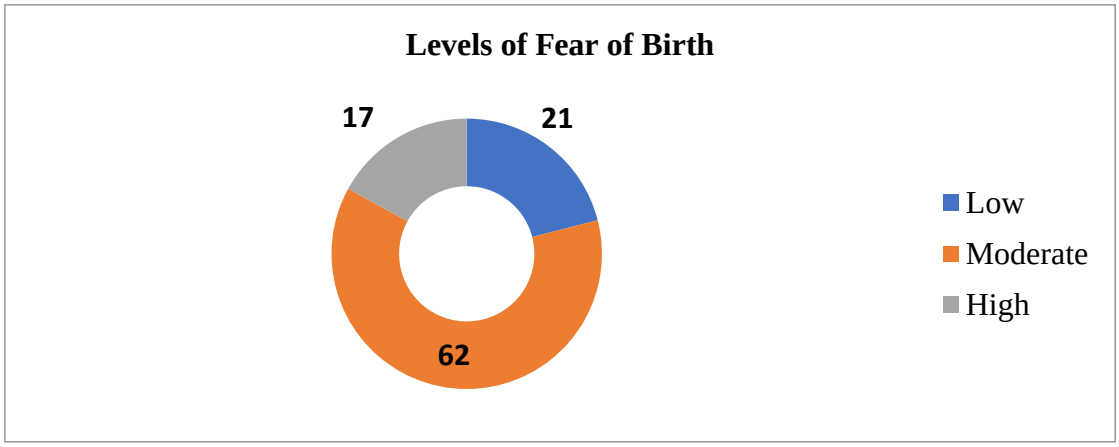

Table (3): Correlation between Emotional Intelligence and Fear of Birth among the Studied Sample (n=100).

Dimensions	Fear of birth	
	r	P
Intrapersonal competence	0.3	0.002**
Interpersonal competence	-0.17	0.08
Stress management competence	-0.37	0.00**
Adaptability	-0.53	0.00**
General mood	-0.33	0.001**
Positive impression	-0.42	0.00**
Total emotional intelligence	-0.46	0.00**

*significant at p-value<0.05 **highly significant at p-value<0.01

Table (4): Correlation Between Studied Variables (Emotional Intelligence& Fear of Birth) with Personal Data among Studied Sample (n=100).

Demographic data	Total emotional intelligence		Fear of birth	
	r	p	r	p
Age(Years)	-0.01	0.85	-0.14	0.14
Education	-0.002	0.98	-0.19	0.06
Work condition	0.34	0.00**	-0.3	0.002**
Gestational age(weeks)	0.22	0.02*	-0.25	0.009**
History of pregnancy	-0.04	0.66	0.04	0.68

*significant at p-value<0.05 **highly significant at p-value<0.01

Discussion

Even though giving birth is a normal stage of women's life, some pregnant women with FOC may view it as a hardship (**Sharifzadeh et al., 2024**). Emotional intelligence (EI) is effective in reducing labor-related stress and helps expectant mothers notice and manage negative labor-related emotions, stress, and set aside worries during pregnancy and childbirth (**Özer & Erkek, 2021**). Therefore, the purpose of the present study was to investigate the relationship between EI and FOC among pregnant women.

In our study, it was determined that the total level of EI among pregnant women was high. According to emotional intelligence levels, about two-thirds of pregnant women reported an average level, one-fifth of them reported high emotional intelligence, and one quadrant had a low level of EI. Similar to these findings, **Kay et al (2023)** found that pregnant women with both healthy and risky pregnancies had higher levels of emotional intelligence. In contrast to this finding, **Ozer and Erkek (2021)** reported that one-half of the studied women had a low level of emotional intelligence, approximately one-third had a normal level, and 18.8% of them had a high level.

This contradiction in results may be explained by the cultural differences as postulated by **Yang et al (2025)**, that the adaptive or appropriate emotional intelligent behaviors are defined differently from one culture to another. Each culture has its values (e.g., power distance and individualism) that guide the behaviors of its people, which results in cultural bias when EI measures are used from one culture to another. The Egyptian culture embraces the values of social connectedness, family relationships, and social support. It also puts a huge burden on the shoulders of Egyptian women to be always competent to cope with and manage different life stressors for the well-being of their families, which all reflected in higher scores of total emotional intelligence among pregnant women in the present study.

When the sub-dimensions of the EI scale were examined in this study, it was found that the intrapersonal sub-domain of EI was at the borderline of the average level. Approximately one-half of women reported a low level of intrapersonal skills as they were unable to recognize their own emotions, understand themselves, or express them. In the **Ozer and Erkek (2021)** study, the levels of intrapersonal skills were similar to current levels despite using a different scale for measuring EI; slightly less than one-half of their sample had poor self-awareness, more than half had low self-management abilities, and also more than half of pregnant women had poor self-motivation skills. In Saudi Arabia, a study by **Ghamri et al. (2024)** reported that self-esteem, as an essential intrapersonal skill, among the examined women was at an average score, despite it decreasing significantly between 28 and 40 weeks of pregnancy than in the early weeks (1–13). Another study by **Meireles et al. (2022)** presented different results, as they found no differences in self-esteem between pregnant women in their second and third trimesters in

comparison to non-pregnant women. They also found that the studied women in late pregnancy had higher self-esteem scores in comparison to women in the first trimester. In addition, the same study found that body image perception, which is a part of self-understanding among pregnant women, was higher in the second and third trimesters than in the first trimester for pregnant or non-pregnant women.

Explanation of the difference in results may be due to the measured variables as intrapersonal skills on Bar-On's scale of EI that employed in the current study is a comprehensive concept that includes many skills as self-awareness, self-esteem, emotional awareness and management, assertiveness, independence, and self-actualization, while **Meireles et al. (2022)** examined merely self-esteem. In addition to the adoption of a comparative approach that contrasts pregnant women themselves at different times of their pregnancy or compares pregnant and non-pregnant women in the same culture.

As regards the interpersonal domain of EI. It was at a high level among pregnant women. As one half of the sample had an average ability to relate to others and understand them, more than one quadrant had high ability, while one-third of them had poor social skills. On the same line, **Kaydiark et al. (2023)** found average and above average levels of social competency among pregnant women by scores of 72.5% and 76.7% for managing relationships and empathy, respectively. In contrast to our findings, **Ozer and Erkek (2021)** found that (47.2%) and (47.5%), respectively, pregnant women had low levels of social awareness and empathy. This opposition in results may be due to cultural differences.

In our study, it was observed that the level of stress management competence was average (68.2%) among pregnant women. As two-thirds of the studied women had an average or high ability to manage their stressors, compared to more than one quadrant having poor stress management skills. This result is compatible with **Thongsomboon et al. (2020)**, who observed a low prevalence (23.6%) of perceived stress among pregnant women in Thailand. A study by **Abera et al. (2023)** presented a contrast finding as they reported high levels of stress among the Ethiopian pregnant women (84.8%) and (4.3%), respectively, had moderate and average stress compared to 11% with low levels. Another study by Pascal et al. (2023) found high stress levels reported in 23.1% of pregnant women in their third trimester. Additionally, **Ajini, Kumuk, & Prusad (2023)** reported high levels of maternal stress among 14.36% of pregnant women. **Kowalska et al. (2022)** also found that 80.4% of pregnant women in Poland had high levels of stress, and 88.2% of them had state anxiety compared to 63.7% who had anxiety as a trait.

The difference in results between this study and other studies may be related to some factors, as most of the pregnant women in our study were multiparous, and approximately two-thirds of them had low or middle education, which contributes to low stress levels. This explanation is supported by a recent systematic review by **Pais and Pai (2018),**

who proved a significant correlation between perceived stress and primiparous and high levels of education. Another reason may be related to the place of residence, as a portion of our sample can't be neglected (36%) were living in rural areas where fewer stressors were found and more social support was received from the joint family and surrounding others. This assumption was supported by **Koendjbiharie et al. (2022)**, who found that rural pregnant women perceive less stress than urban women due to sociocultural and geographical factors.

In this study, the pregnant women had an average level (68.9%) of adaptability as a sub-domain of EI. (36%) and (30%), respectively, of women had an average and high capacity to adapt to life stressors, while more than one-third of them had poor coping abilities. In line with this result, **Ajini, Kumuk, & Prusad (2023)** found that mothers had a good amount of pregnancy coping skills, with a representation at levels different from our study, as they reported (13.57%) had low scores of coping and (17.55%) had high scores. In similar findings, **Ozer and Erkek (2021)** observed that Turkish pregnant women had an average level of coping (68%), indicating a partially effective attitude in adapting to stressors. In another study by Yu et al. (2020), Chinese pregnant women reported more use positive coping styles, with mean scores of 2.03±0.50 and 1.21±0.50, respectively, for positive and negative coping.

In contrast to this result, A cohort study of nulliparous women in Brazil conducted by **Alves et al. (2023)** revealed low resilience levels among most women, which reflects poor coping capacity in addition to higher levels of perceived stress. This oppositeness in results may be explained as our study measured the adaptation competence of the pregnant women in terms of being flexible, solving problems, and/or adjusting perceptions to reality, while the Brazilian study measured the coping ability in terms of the concept of resilience, which encompasses adjusting to many physical, socio-demographic, and psychosocial factors.

Regarding the general mood sub-domain of EI, current results demonstrated high representation among pregnant women, as most of the studied women had average (46%) or high (46%) mood levels. **Zheng et al. (2022)** presented similar results as they found that the Swedish pregnant women felt positive emotions as joy, strength, and security, with low levels of shame and anger. **Carpinell & Savarese (2022)** also emphasized that those positive emotions as enthusiasm, happiness, excitement, pride, and aspiration, increase constantly during pregnancy, while negative emotions as anger, shame, fear, sadness, and anxiety, are not persistent during pregnancy.

Concerning fear of birth (FOC) among pregnant women, the current study findings indicate that FOC among the studied women was within the average level (73.7%). About two-thirds of pregnant women had a moderate level of FOC; 21% of them had a low level, while a minority had severe fears. These results are consistent with an **Elsharkawy et al. (2024)** study that examined the prevalence of FOC among Egyptian pregnant

women and reported that 70.4% of women showed some degree of fear, and 11.3% reported severe FOC. Moreover, Osman, El-Adham, & Elrefaey (2021) also reported that nearly one-half of the participants had a moderate level of fear. Additionally, the similarity matched with different cultures was reported by **Huang et al. (2021)**, who found that the prevalence of FOC among Chinese women was 67.1 percent, with 54.4 percent having mild fears, 19.5% experiencing moderate fears, and the minority (2.2%) of them suffering severe fears. Furthermore, a study carried out in Kenya by **Onchonga et al. (2020)** revealed that the majority of studied pregnant women (40.4%) showed moderate FOC (22.1%) had high fears, and 8% experienced severe fears.

Conversely, **Erbil (2022)** studied 104 pregnant women in Turkey and found that approximately one-half (49%) of participants had a clinical level of FOC, and 18.35% of them reported severe fears. This discrepancy may have been caused by numerous factors, including the use of different measurement tools for FOC, cultural differences, or history of previous births, as about one-half (50%) of Turkish pregnant women were primiparous compared to 20% in the present study. This explanation was supported by **Onchonga et al. (2020)**, who clarified that FOC was higher in primigravida than in multigravida.

It was found that there was a strong negative correlation (p-value<0.01) between the total and sub-dimension scores (stress management, coping, general mood, first impression) among pregnant women with their fear of birth. This finding is consistent with **Erdemoglu, Altiparmak, & ozsahin (2019)**, who found that FOC was higher in pregnant women who are anxious, pessimistic, dissocial, or have negative thoughts about their labor; in addition, they observed a negative correlation between coping ways among women and their levels of FOC. In the Iranian context, **Abdollahpour and Khosravi (2018)** indicated a negative association between spiritual intelligence and feeling of happiness with FOC. Additionally, **Ayala et al. (2023)** reported that low control over labor and higher rates of cesarean sections were significantly correlated with women's low dispositional optimism. A contrary finding was presented by **Ozer & Erkek (2022)**, who determined a statistically positive correlation between the EI total score and mean scores of readiness for childbirth, childbirth fear, and coping with stress among Turkish pregnant women. Ozer and Erkek rationalized this oppositeness of results in their study by the motivating role of stress that affects positively readiness for labor, while the presence of partial coping increases fear of birth.

On the other hand, current results indicated a positive correlation between the intrapersonal skills sub-domain of EI and FOC. This result is in line with **Ozer & Erkek (2022)**, who observed that the increased efforts of pregnant women to find social support while being self-confident and optimistic resulted from their increased FOC. In the present study, it is also noticed that there is no correlation between interpersonal (social) competence of EI and fear of birth. This result appears to be in line with **Hamama-Raz et al.**

(2017), who found that the intrapersonal factors of attitudes toward pregnancy, self-esteem, and body image are more associated with fear of birth than interpersonal factors represented in relationship satisfaction and receiving social support.

The study revealed that there were highly statistically negative correlations between fear of birth among participants and both their work status and gestational age. These findings are similar to **Eren & Büyükbodur's (2023)**, who denoted that working women reported fewer FOC than non-working ones because they were more adept at interpersonal communication and self-assured. Moreover, **Laursen, Hedegaard, and Johansen (2023)** reported that FOC was higher in unemployed pregnant women. Regarding gestational age, **Laursen et al. (2023)** also agreed with the current study as they proved that FOC levels decline from the second to the third trimester in their cohort study. This was contradicted by another study by **Huang et al. (2021)**, who reported that with more advanced gestational age, the higher the level of fear predicted. We propose that the reason may lie in the fact that most participants in current study had previous childbirth experiences which result increased psychological readiness for childbirth and decreased fears, another reason may be related to received social support and the presence of optimistic positive mood in late pregnancy as supported by **Carpinelli and Savarese (2022).**

On the other hand, there was also a positive statistical correlation between the emotional intelligence of pregnant women and work status. This finding is congruent with **Ali and Farah (2023)**, who concluded that working women had higher emotional intelligence than housewives. A significant difference in emotional intelligence between working and non-working women was also reported by **Kaushal (2022)**. In the same vein, **Shirali (2022)** indicated that working women are better than non-working women in terms of self-awareness, self-esteem, initiation, achievement orientation, and leadership, despite there being no difference in total scores of EI between the two groups. Current results also revealed a positive correlation between EI and gestational age. In line with this result, **Carpinelli and Savarese (2022)** indicated a constant increase in positive emotions with the gestational age among pregnant women. In the same context, **Bergeron et al. (2024)** revealed that pregnant women perceive less pregnancy-related and general stress in the third trimester compared to the second trimester.

Conclusion

The current study concluded that nearly two-thirds of pregnant women had a moderate level of EI, whereas less than two-thirds of them had a moderate level of FOC. In addition, significant negative correlations were proven between total scores of EI and its domains of stress management, adaptability, general mood, and positive impression with FOC among pregnant women. Moreover, there were negative correlations between fear of birth among pregnant women with their work status and gestational age.

Recommendations

- These findings provide evidence about the importance of providing training to pregnant women on key skills of emotional intelligence to prevent fear of birth.
- To provide a positive birth experience, training sessions can be conducted for the midwives to help them integrate the components of emotional intelligence interventions within their practice.
- We also recommend implementing similar research studies considering some socioeconomic variables as relationship with the spouse, economic level or income, type of family, presence of previous childbirth negative accidents/or situations, as all these factors may have a significant effect on women's FOC.

Limitations

There are some limitations in the current study:

- Self-reporting bias because some participants may respond to questionnaires with sociably desirable answers.
- It's possible that the study only included a small number of individuals, which limits how broadly the results may be generalized.

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