Emotional Divorce and Difficulties in Emotion Regulation among Married Women: Effect of Sexual Satisfaction and Family Role Performance

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Abstract

The most frequent outcomes of marital dissatisfaction are emotional divorce and emotion regulation difficulties, which cause psychological distress for one or both partners. The association between emotional divorce and challenges in regulating emotions is greatly impacted by sexual satisfaction and family roles. The study aimed to explore the effect of sexual satisfaction and role of family performance on emotional divorce and difficulties in emotion regulation among married women at Zagazig University. This descriptive correlational study was conducted on 262 worker women. Data were collected through four tools: Socio-demographic data sheet, the difficulties in emotion regulation scale - short form, the emotional divorce scale, family role performance scale and sexual satisfaction scale. The results indicated that less than half of women had moderate to severe levels of emotional divorce (44.2%) and 51.5% had moderate to severe levels of emotional regulation difficulties. Women emotional divorce and emotion regulation difficulties are positively correlated with each other ((r=0.382) and negatively correlated with sexual satisfaction, husband role performance and wife role performance. The study concluded that, emotional divorce and difficulties in regulating emotions are significantly predicted negatively by sexual satisfaction and the performance of the roles of the wife and husband. The study recommended that women and their husbands might participate in psychosocial intervention programs and counseling sessions to prevent emotional divorce and to promote emotional regulation and sexual satisfaction.

Keywords: Emotional Divorce, Emotion Regulation, Role Performance & Sexual satisfaction

Introduction

Stability and satisfaction in a marriage can influence positively on a couple's longevity, health, and happiness (Whisman, et al., 2018). The term "emotional divorce" refers to a phase in a relationship in which the pleasant sentiments of love and affection are replaced by growing feelings of resentment, contempt, and hatred along with the conviction that these feelings are gone forever. The characteristics that first drew the pair together become less important when these negative feelings are prevalent (Sarani et al., 2019).

According to Shabanlou & Latifi, (2016) the harmful emotional feelings that become present instead of healthy ones between the emotionally divorced couples makes the family construction appears outwardly cohesive but empty and cracked from the inside. When there is a lack of love and respect in the marriage, emotionally divorced partners act negatively toward one another in an effort to discredit, harm, and destroy one another (Amr & Fahad, 2020) and if partners live together due to necessity; they live without any love feelings and true participation (Ebrahimi et al, 2022).

The emotions quality is considered a significant factor in the couples' relationship; it can predict the marital satisfaction (Molajafar, 2015). Difficulties in emotions regulation are defined as the occurrence of problems in awareness, understanding and accepting emotions as well as a difficulty to manage conduct under intense emotional threats or a lack of access to adaptive solutions for dealing with various emotions (Jarrett, 2019) & (Bardeen, 2016).

Emotional regulation refers to the ability to control one's own tendency, impulses and behavior while modifying them to meet certain standards for desired outcomes. The methods by which individuals control their emotions and tool usage are referred to as emotional regulation. The capacity to control one's emotions in response to unique circumstances is a crucial aspect of human quality. (Jarrett, 2019). Difficulties in regulation of the emotions can result in the use of maladaptive strategies for responding to emotions (Short, 2018).

Sexual satisfaction refers to satisfaction with sex (Luk, 2015). It includes verbal exchanges and dialogue with the spouse, including feedback on sex couples' efforts to adjust to their spouse's sexual needs and feelings, women's anxiety about their husbands because of sexual issues and their spouses' relationships with other people. (Chattopadhyay, 2019) & (Moradi et al., 2019).

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Additionally, women's personal pleasure and peace of mind may be hindered by their anxiety about sexual issues and how they affect other areas of their lives. (Roshan, et al., 2014). As a result, couples who do not try to assist their partners in experiencing orgasm and who do not engage in timely, high-quality sex will face issues in their marriages, including emotional divorce. The association between emotional divorce and problems regulating emotions is significantly influenced by sexual satisfaction (Ghazanfari et al., 2021).

Performance of family role indicates the achieved results of expected and obligated roles of individuals' participation in family activities (Chen, 2014) & (Derks, 2016). Some conceptions of family role performance center on dynamic structures including interpersonal relationships and family chores. As social structures shift, the shift from traditional to modern family structures may cause roles in the family to shift and men and women may take on roles that differ from what they initially thought they would play (Mahne & Huxhold., 2015). If the family members fulfill their family roles successfully, it contributes to the promotion of social values. On the other hand, failure performance may result in behavior deviation and need for resocialization (Joksić & Rajaković., 2020).

In order to restore their composure and focus on their relationship; couples need to learn how to defuse tense situations. They also have to learn how to control their strong feelings in a variety of difficult situations. (Omidi & Talighi., 2017). Thus, the emphasis on how emotion regulation might reduce marital disputes (Molajafar et al., 2015).

Significance:

Numerous studies have shown that emotional divorces have a more detrimental emotional impact on all family members, particularly children, than legal divorces (Shiri & Ghanbaripanah., 2016). Couples who struggle with emotional regulation spend little time working through their emotional issues and instead spend a lot of time fighting and avoiding their spouses, which prolongs the problem. Inhabitants of emotional divorce require emotional and cognitive adaptive strategies (Besharat & Shahidi., 2014). In addition, sexual satisfaction also plays a significant role in the relationship between emotional divorce and emotional regulation issues.

Moreover, if family members struggle to adjust to new duties or are unable to carry out their existing responsibilities, this will eventually affect their level of satisfaction and quality of life (Titze et al., 2014) & (Mahne & Huxhold., 2015). So, the existing study aims to explore the effect of sexual satisfaction and role of family performance on emotional divorce and

difficulties in emotion regulation among married women at Zagazig University.

Aim of study:

Was to explore the effect of sexual satisfaction and role of family performance on emotional divorce and difficulties in emotion regulation among the married women at Zagazig University through the following objectives:

- 1- Determine the level of emotional divorce among married women.
- 2- Discover the level of sexual satisfaction among married women.
- 3- Assess the difficulties in emotion regulation among married women.
- 4- Investigate the relationship between emotional divorce and difficulties in emotion regulation among married women.

Research questions:

- 1. What is the level of emotional divorce among married women?
- 2. What are the level of sexual satisfaction and difficulties in emotion regulation among married women?
- 3. Is there a relationship between emotional divorce and difficulties in emotion regulation among married women?
- 4. Does sexual satisfaction and role of family performance have effect on emotional divorce and difficulties on emotion regulation among married women?

Subjects and Methods: Study Design and Setting:

At Zagazig University, a descriptive correlational study design was employed. Every married woman was working from the practical and theoretical faculties took part in the research.

Subjects:

A purposive sample of 262 married women was chosen from the previously described environment, using the following inclusion criteria: Age range from 25–60 years old; enrolled in Zagazig University's faculties during the study period; consent to take part in the research. While; exclusion criteria included unmarried, widowed women and those who refuse participation in research.

Sample size:

According to **El Salamony et al., (2023),** 25% of Egyptian married women experienced a moderate emotional divorce. With 2950 employed women overall at Zagazig University, the sample size was determined to be 262 using Epi Info version 7.2.5.0 at a 95% confidence level.

Study Tools:

Four tools in a self-administered questionnaire were used to gather the needed data to meet the study's goals. The researchers designed these tools in simple Arabic language.

Tool (I): Sociodemographic data & Difficulties in Emotion Regulation Scale-Short Form (DERS-SF):

A sociodemographic data sheet for employed married women and their spouses. It included information on residence, age, income, education, working status, and occupation. Concerns about the length of the marriage, the husband's job, chronic illnesses, and any mental or nervous problems were also included in this tool.

Difficulties in Emotion Regulation Scale-Short Form (DERS-SF): This is adapted from Kaufman et al., (2015) in an English language to examine a relative absence of the following abilities, which point to the existence of emotional regulation difficulties: Recognition and understanding of the emotion, acceptance of it, the ability to modify it in accordance with the intended goal, the ability to control one's behavior when confronted with negative emotions and the flexibility in applying contextappropriate emotion regulation techniques to modulate emotional reactions. It consists of 18 items separated into six subscales. The six sub-themes are as follows: lack of emotion awareness (awareness), which emphasizes the inability to pay attention to emotional reactions; lack of clarity regarding the nature of emotions (clarity); lack of acceptance of emotions (non-acceptance); lack of access to effective methods for controlling emotions (strategies); incapacity to participate in goal-oriented activities during negative activities/emotions (goals); and incapacity to control impulses during negative emotions (impulse).

Scoring system:

A 5-point Likert scale, ranging from 1 (nearly never) to 5 (almost usually), is used to evaluate the responses. The DERS-SF's overall score and the scores of each subscale can be found; a score of 1-2.59 denotes a low level, a score of 2.60-3.39 a moderate level, and a score of 3.40-5 a high level. Greater difficulty in regulating emotions is indicated by higher values.

Tool (II): The Emotional Divorce Scale:

It developed in an Arabic language by **(Shawashra & Abdel-Rahman., 2018)**to assess having a tendency toward emotional divorce. A 5-point Likert-type scale is used to grade each item on the 37-itemof, 1 = never, 2 = seldom, 3 = sometimes, 4 = high, and 5 = often. The total possible score can range from 37 to 185 points. Using the following formula, emotional divorce is categorized into three levels: high, medium and low.

Scoring system:

Highest response -lowest response $= -5^{-1} - = -4^{-1} = 1.33$

Number of categories

3 3

As a result, scale scores are categorized as follows: mild emotional divorce (less than 2.33), moderate emotional divorce (between 2.34 and 3.67), and high emotional divorce (more than 3.68).

Tool (III): Family Role Performance Scale by (Chen et al., 2014): Eight items make up the scale in an English language, which is further divided into two subscales: "task accomplishment and relationship-related performance." The scale's subscales measuring "task accomplishment and relationship-related performance" had Cronbach's alpha values of 0.70 and 0.91, respectively.

Scoring system:

Five points make up the Likert scale, where 1 represents absolutely inappropriate and 5 represents completely appropriate. First, determine the average score for the entire group. Following that, this score was divided into three groups: low (1-2.59), moderate (2.60-3.39) and high (3.40-5).

Tool (IV): Sexual Satisfaction Questionnaire (SSQ):

Participants completed the 10-item Sexual Satisfaction Ouestionnaire (SSO) to indicate how satisfied they were with their sexual lives. It designed by (Nomejko & Doli'nska-Zygmunt., 2014 in an English language), use a Likert-type scale with four points: 1 representing "not at all satisfied" and 4 representing "extremely satisfied" The two categories of items are questions that assess good feelings associated with sexual satisfaction (e.g., "I find my sexual life fulfilling") and negative feelings (e.g., "My sexual life frustrates me"). Studies have verified the validity and reliability of the answers to the items on this scale.

Scoring system:

The total mean score is calculated by first reversing the categories that indicate negative sexual satisfaction. Second, this score was separated into three categories: Low (1–1.74), intermediate (1.75–3.24) and high (3.25–4). Higher sexual satisfaction is indicated by higher scores.

Pilot study:

To validate the instruments, a pilot research involving 10% of the women (27 cases) was carried out prior to the main study. The final form of the tools was obtained and the time required to complete each tool was estimated. The cases of the pilot study were later omitted from the main study sample.

Content validity and reliability:

The researchers employed the translation and backtranslation technique when translating the study tools into Arabic in order to preserve their original validity. Five faculty members with expertise in psychiatric and mental health nursing and community health nursing from Zagazig University's Faculty of Nursing were invited to assess the content validity of the instruments. After that, they made revisions to the tools to improve their applicability, clarity, comprehensiveness, relevance, understandability and simplicity of use. They assessed the legitimacy of the tools' faces and content. Their advice and recommendations were taken into consideration.

Reliability

Scale	Cronbach's Alpha
- Difficulties in Emotion Regulation	0.874
- Emotional divorce	0.976
- Sexual satisfaction	0.855
- Husband Family Role Performance	0.909
- Wife Family Role Performance	0.845

Administrative design:

A formal approval to conduct this study was obtained by submitting an official letter from the Dean of the Faculty of Nursing at Zagazig University to the Deans of the faculties explaining the purpose of the study.

Ethical considerations:

The Human Research Ethics Committee at Zagazig University's at Faculty of Nursing granted permission conduct this study, with code detailed (ID/ZU.Nur.REC#:0191). There were directions on how to fill out the questionnaire. It was established that the gathered information would be kept private and utilized exclusively for scientific study. They were told that they could stop filling out the information at any time.

Field Work:

Once the necessary permits to conduct the study were obtained, the researchers visited with the general managers of each college. They sought their cooperation and consent to collect data by outlining the purpose of the study. They then proceeded to meet with the married ladies who satisfied the inclusion requirements and explained the goal of the study as well as the forms used to gather data. Clear instructions on how to complete these instruments were provided to the women once they verbally consented to participate in the study. Prior to filling out the data collecting forms, participants received instructions on how to reply and were cautioned against influencing one another. in order to guarantee that they answer the scale truthfully, completely and honestly. The women completed the data gathering tools in roughly thirty to forty minutes. From October 2023 to the end of April 2024, data were still being gathered.

Statistical design

All data were collected, tabulated and statistically analyzed using IBM SPSS Statistics for Windows Version 25. Quantitative data were expressed as the mean ± SD and qualitative data were expressed as absolute frequencies (number)& relative frequencies (percentage). Paired t-test was used to compare between two dependent groups of normally distributed variables. Marginal homogeneity was used to compare between two dependent groups of categorical data. Pearson correlation coefficient was calculated to assess relationship between study variables. Multiple linear regression (step-wise) was also used to predict factors which affect the total scores of all variables of the study.

Results:

Table (1): Socio-demographic characteristics of studied women (n=262)

Characteristics	No.	%
Wife age:		
- 25-<30	30	11.5
- 30-<45	166	63.4
- 45-60	66	25.2
Mean± SD	40.00±6.71	
Husband age:		
- 30-<45	163	62.2
- 45-60	99	37.8
Mean± SD	43.95±7.26	
Wife education:		
- Secondary	49	18.7
- University	161	61.5
- Post	52	19.8
Husband education:	52	->.0
- Basic education	5	1.9
- Secondary	67	25.6
- University	175	66.8
- Post	15	5.7
Residence:	10	3.7
- Urban	134	51.1
- Rural	128	48.9
Income:	120	,
- Not enough	105	40.1
- Enough	157	59.9
Husband occupation:	10,	C , . ,
- Professional	152	58.0
- Freelance	73	27.9
- Another	37	14.1
Wife chronic diseases:	3,	1 1.11
- Yes	31	11.8
- No	231	88.2
Husband chronic diseases:	231	00.2
- Yes	36	13.7
- No	226	86.3
Duration of marriage:	220	00.5
- ≤20	188	71.8
- >20	74	28.2
Husband mental or nervous problem:	/ -	20.2
- Yes	13	5.0
- No	249	95.0
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Table (2): Distribution of the studied women according to difficulties in emotion regulation levels and its subscales (n=262)

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	Difficulties in Emotion Degulation subscales	L	ow	M	oderate	High	
	Difficulties in Emotion Regulation subscales	No	%	No	%	No	%
_	Strategies	151	57.6	51	19.5	60	22.9
-	Non-Acceptance	133	50.8	76	29.0	53	20.2
-	Impulse	112	42.7	73	27.9	77	29.4
-	Goals	118	45.0	53	20.2	91	34.7
-	Awareness	81	30.9	78	29.8	103	39.3
-	Clarity	189	72.1	52	19.8	21	8.0
Total		127	48.5	92	35.1	43	16.4

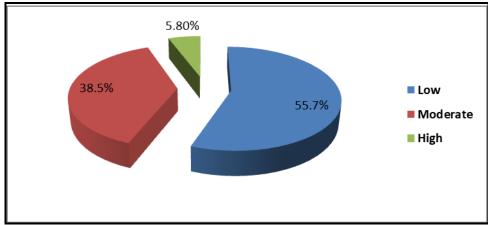


Figure (1): Levels of emotional divorce among the participated women (n=262).

Table (3): Distribution of the studied women according to Levels of family role performance and its domains (n=262)

Family Role	The wives' opinion about husband							The wives' opinion about themselves					
Performance	Low		Moderate		High		Low		Moderate		High		p-value
	No	%	No	%	No	%	No	%	No	%	No	%	1
- Task accomplishment	187	71.4	45	17.2	30	11.5	3	1.1	13	5.0	246	93.9	<0.001**
- Relationship-related performance	66	25.2	102	38.9	94	35.9	9	3.4	20	7.6	233	88.9	<0.001**
Total	117	44.7	100	38.2	45	17.2	1	0.4	12	4.6	249	95.0	<0.001**

MH: Marginal homogeneity,

**: statistically highly significant (p<0.01)

Table (4): Levels of sexual satisfaction and its domains among the studied women (n=262)

Sexual satisfaction		Low	Mod	lerate	Hi	igh	Mean± SD	
	No	%	No	%	No	%	Wieali± SD	
-Positive	62	23.7	181	69.1	19	7.3	11.64± 3.56	
-Negative	26	9.9	106	40.5	130	49.6	15.32 ± 4.67	
Total	30	11.5	177	67.6	55	21.0	26.96± 6.67	

Table (5): Correlation matrix between the study variables.

Study variables	En	culties in notion gulation	Emotional divorce			nd Family Role ormance		Family ble mance	Sexual satisfaction	
	r	р	r	р	r	р	r	р	r	р
Difficulties in Emotion Regulation										
Emotional divorce	0.382	<0.001**								
Husband Family Role Performance	0.159	0.010**	0.622	<0.001**						
Wife Family Role Performance	0.194	0.002**	0.046	0.459	0.045	0.471				
Sexual satisfaction	-0.556	<0.001**	-0.557	<0.001**	0.404	<0.001**	-0.004	0.947		

r: correlation coefficient,

**: statistically highly significant (p<0.01).

Table (6): Step wise multiple linear regression for predicting factors affecting the difficulties in

emotion regulation.

Model	Unstandardized Coefficients		Standardized Coefficients		C: a	95.0% Confidence Interval for B		
Wiodei	В	Std. Error	Beta	l	Sig.	Lower Bound	Upper Bound	
(Constant)	44.942	11.097		4.050	.000	23.088	66.795	
- Emotional divorce score	.194	.028	.480	6.917	0.001**	.139	.249	
 Wife Family Role Performance 	569	.151	206	-3.776	0.001**	866	272	
- Total Sexual satisfaction	368	.119	209	-3.093	0.001**	602	134	
- Residence (Urban)	-3.654	1.316	156	-2.777	0.001**	-6.245	-1.063	
 Husband education 	-3.069	1.153	162	-2.662	0.001**	-5.339	799	
- Husband mental or nervous problem	6.970	3.413	.129	2.042	0.042*	.248	13.691	

^{*:} statistically significant (p<0.05),

R-square=0.256, ANOVA: F= 14.586, P<0.001, variables entered and excluded: wife age, husband age, wife education, live with whom, income, type of children, husband occupation, wife chronic diseases, husband chronic diseases, duration of marriage, history of previous divorce, husband has another wife, and husband family role performance.

Table (7): Step wise multiple linear regression for predicting factors affecting the emotional divorce.

Model	Unstandardized Coefficients		Standardized Coefficients	4	C:a	95.0% Confidence Interval for B		
iviodei	В	Std. Error	Beta	ι	Sig.	Lower Bound	Upper Bound	
(Constant)	246.194	27.381		8.991	0.001**	192.272	300.116	
- Husband Family - Role Performance	-1.493	.197	333	-7.573	0.001**	-1.881	-1.105	
 Total Sexual satisfaction 	-1.875	.185	431	-10.139	0.001**	-2.239	-1.511	
 Difficulties in Emotion Regulation 	.643	.093	.260	6.881	0.001**	.459	.827	
- Wife chronic diseases	17.882	3.709	.199	4.821	0.001**	10.578	25.186	
- Husband mental or nervous problem	-41.155	12.855	123	-3.201	0.001**	-66.471	-15.839	

**: statistically highly (p<0.01).

R-square=0.649, ANOVA: F=78.497, P<0.001, variables entered and excluded: wife age, husband age, wife education, husband education, residence, live with whom, income, type of children, husband occupation, husband chronic diseases, duration of marriage, history of previous divorce, husband has another wife, and wife family role performance.

Table (1): Displays socio-demographic characteristics of the participants. It was found that about two- thirds of both wives and husbands were from 30 to less than 45 years old (63.4% &62.2%) respectively, had university education (61.5%, 66.8%), and high percentage of both wives (88.2%) and husbands (86.3%) did not have chronic diseases. More than half of the participants were urban residents (51.1%), had enough income (59.9%) and married for less than twenty years (71.8%) with a mean \pm SD of 16.97 \pm 7.03. Moreover, highest percent of husbands had professional occupation (58%) and didn't have mental or nervous problems (95%).

Table (2): Illustrates that women's emotion regulation difficulties were variables. Thus, 39.3% of studied women had high level of difficulty in emotion awareness ,34.7% had high level of difficult engaging in goal-directed behaviors and 29.4% had high level of impulsive behavior. Conversely, only 8.0% had a high level of difficult in emotion clarity. Also, it shows that 35.1% of studied women were having

overall moderate emotion regulation difficulties. Meanwhile, 16.4% were having high emotion regulation difficulties.

Figure (1): Shows the levels of emotional divorce as reported by the participants. It was found that more than half of the participants (55.7%) had low level of emotional divorce compared to (38.5%) and (5.8%) had moderate and high scores respectively.

Table (3): Indicates levels of family role performance and its domains as reported by participants. It was found that according to the wives' opinion about themselves, highest percent of them had high levels regarding task accomplishment (93.9%), relationship-related performance (88.9%) and total score of family role performance (95%). While according to the wife's opinion about the husbands, 71.4% and 44.7% of their husbands had low levels regarding task accomplishment and total score of family role performance respectively. While 38.9% of their husbands had moderate score regarding relationship-related performance. The difference between the

^{**:} statistically highly significant (p<0.01).

wives' opinion about themselves and about their husbands was high statistically significant (p<0.01).

Table (4): Clarifies the levels of sexual satisfaction and its domains as reported by participants. It was found the high percent of women (49.6%) had high negative sexual satisfaction. While, only 7.3% reported high positive sexual satisfaction. As for total scores 67.6% had moderate sexual satisfaction. While 21% had high sexual satisfaction.

Table (5): Illustrates that difficulties in emotion regulation was highly statistically significant and positively correlated to emotional divorce(r=0.382) and negatively correlated to husbands and wives score of family role performance(r=-0.159,r=-0.194)) respectively and sexual satisfaction(r=-0.556). While, emotional divorce was highly statistically significant and negatively correlated to husband score of family role performance(r=-0.622) and sexual satisfaction(r=-0.557).

As for, women sexual satisfaction was highly statistically significant and positively correlated to score of husband family role performance (r= 0.404) **Table (6):** Shows that emotional divorce score and husband mental or nervous problems were statistically significant independent positive predictors. While, wife family role performance, total sexual satisfaction, residence (urban) and husband education were negative predictors for women' difficulties in emotion regulation. The model explains 25.6% of the variation in emotion regulation score.

Table (7): Demonstrates that difficulties in emotion regulation and wife chronic diseases were statistically significant independent positive predictors. While, husband family role performance, total sexual satisfaction, and husband mental or nervous problems were negative predictors for women' emotional divorce.

Discussion:

Less than one-half of the women who took part in the current study experienced emotional divorce that ranged from moderate to severe. This may be due to the most of participated women had higher educational level, clarity regarding the nature of their emotions, and low difficulties in control their emotion which enhancing their abilities, perception and attitudes that led to satisfied marital life. The results of this study are in agreement with a study conducted by Alkhawaldeh & Alqatawneh in 2022, which concluded that the participants had a moderate emotional divorce score. Additionally, Sadeghzadeh et al.'s study in 2023 revealed that more than onethird of its participants experienced an emotional divorce. In contrast to the present findings, ALshahrani & Hammad., (2023) discovered that most of the subjects in their study had emotional divorce levels ranging from average to severe (61.4 moderate and 17% high). Also, in the study by El Salamony et al., (2023), the majority of mothers experienced high emotional divorce. Different role responsibilities, communication styles, life stress levels, psychological toughness can all help to explain it. According to the current study findings, half of the women who took part had moderate to severe difficulties in emotional regulation, in particular toward the domains of difficulty in awareness and understanding of emotions, engaging in goal-directed behaviors and avoiding impulsive behaviors during negative emotional experiences. This illustrates the women's emotional instability and life stress increases the probabilities of women to engage in risky behavior that may led to marital disagreements and increase the tension. In light of the above findings, Leone et al., (2016) confirmed that impulsive behavior control issues, a subset of emotion regulation issues, may be a predictor of violence among female participants. In a similar vein, Delhomet al.'s study in2021, revealed that there were notable gender-based disparities in emotional control areas, with men exhibiting lower levels than women. In addition, Alenezi et al., (2023) discovered that women's emotional regulation was moderate for eighty percent of them and high for 10.4% of them. Also, the current study results indicated that, the majority of the participated women were unsatisfied about their husbands' family role in particular regarding the tasks performance. Their conceptions of life involvement and their perceptions of men's roles at home, which are shaped by their upbringing and society's culture, may be the cause of this lack of husbands performing their roles. Dillip et al., (2018) concurred with the current findings and noted that gender roles in domestic chores are influenced by local cultural circumstances. In the same vein, Lundh., (2022) demonstrated that women are typically living in subordination to men and that there is still an unjust division of domestic responsibilities between the sexes. Additionally, the Tyler et al., (2023) study found that most women's husbands performed averagely well at home chores and poorly in taking care of their children.

The majority of women who took part in this study had a moderate level of sexual satisfaction. The fact that most of them have been married for ten years or longer may be the cause. The current finding is corroborated by **Younis et al.**, (2019), who found that after the first 5 years of marriage, sexual pleasure rises before gradually declining as the length of marriage increases. In keeping with the current findings, **Gelashe et al.**, (2023) discovered that almost half of women were only somewhat satisfied with their sexual lives, and that most of them only

had sex to satisfy their partners rather than their own needs.

Concerning to the association between difficulties in emotion regulation and emotional divorce; and the effect of sexual satisfaction and role of family performance on women's emotional divorce and difficulties in emotion regulation; the existing study discovered a high statistically significant positive correlation between difficulties in emotion regulation and emotional divorce. The multivariate analysis confirms this in the current study which reflects the difficulties in emotion regulation, is associated with various interpersonal problems that contribute to marital conflict. As well as the important role of use cognitive and emotional regulation strategies in marital life. According to Shabankare (2021), emotional and cognitive adaptive inhibitory techniques are needed for emotional divorce. Individuals who have trouble controlling their emotions spend more time arguing and avoiding their partners than they do addressing emotional problems in their marriages. These couples therefore have a higher chance of going through an emotional divorce. Abdolmaleki et al.'s study findings in 2021. indicated a strong correlation between emotional divorce and cognitive emotion regulation techniques. They came to the conclusion that emotional regulation plays a mediating role in the association between emotional divorce and marital burnout. Similarly, the findings of Roslan et al., (2023) showed a strong and positive correlation between marital satisfaction and emotional regulation, particularly the awareness domain.

Moreover, emotional regulation difficulties were significantly positively predicted by the husband's mental and psychological issues. One possible explanation is that cohabitating with a spouse who has mental or nervous issues expose the wife to ongoing stress and anxiety, which affects the ability to control and regulate her emotions. This interpretation is corroborated by **Ragenet al.**, (2016), who noted that chronic stress situations have been frequently associated with deficiencies in emotional regulation.

Among the women who participated in the current study, living in an urban area and having a husband with a high level of education were negative predictors of emotional regulation difficulties. These results may be explained by the correlation between urbanization and higher education, which is linked to greater mental flexibility and breadth, clarity, and freedom of expression of feelings and emotions, all of which offer a lot of opportunities for productive dialogue and constructive contact. According to a study by **Gherghinescu & Glăveanu.**, (2015), there was a statistically significant correlation between the

partners' educational levels and their conjugal communicational styles. The study found that partners with lower levels of education tended to use a style that was focused on conflict and disapproval, while the majority of partners with higher levels of education used a style that was focused on rational negotiation. Additionally, **Hasani Moghadam et al.**, (2021) discovered a substantial positive link between mutually constructive communication patterns in men and women and marital satisfaction (P = 0.001). Similarly, a recent study by **Lafontaine et al.**, (2024) discovered that the partners' own relationship happiness over time was significantly predicted by their negative communication.

As regarding the effect of sexual satisfaction and role of family performance on women's emotional divorce and difficulties in emotion regulation, the present study indicated the husband's family role performance was a substantial negative predictor of emotional divorce and had a negative link with emotional regulation difficulties. It can be because the husband's household duties or responsibilities are completed, which can reduce the women's stress and demonstrate qualities of gratitude, cooperation, involvement, lead to increased intimacy and marital pleasure. The current findings are consistent with EL-Sherbini's study (2015), which found a substantial positive association between the family's obligations and overall satisfaction for both individuals and the family. Additionally, Newkirk et al., (2017) noted that husband-wife relationships may suffer if there is a perception of an uneven family load.

In addition, emotional divorce was significantly predicted to be negatively correlated with sexual satisfaction. This illustrates how sexual relationships can create feelings of intimacy, love, care, and containment while also lowering marital stress. Shabankare et al., (2021) revealed a direct and negative association between emotional divorce and sexual pleasure, which aligns with the current research findings. Additionally, Maroofi et al., (2021) noted that the sexual pleasure experienced from a fulfilling sexual relationship obscures many everyday issues and marital disputes, which lowers the risk of an emotional divorce. Similarly, Eslami & Sheibani., (2022) discovered that while divorcing couples scored higher than normal couples in emotional divorce, the couples who were requesting for divorce scored lower in sexual satisfaction.

Furthermore, the present-day study explored that, sexual satisfaction was a significant negative predictor with difficulties of emotional regulation. This finding is congruent with that of **Rendina et al.**, (2017), who discovered that emotional dysregulation was linked to worse outcomes for sexual health and that emotional regulation issues were linked to bad

outcomes for sexual relations in terms of both functionality and satisfaction. Additionally, **Connor et al., (2020)** discovered that decreased sexual satisfaction was predicted by ruminative thinking, a maladaptive method of emotional control. Moreover, after reviewing 27 studies, **Fischer et al., (2022)** came to the conclusion that issues with emotion regulation were linked to worse outcomes for sexual health, issues with the sexual response cycle, and decreased levels of overall sexual satisfaction.

Also, the results of the current study showed a strong positive relationship between the participating women's sexual satisfaction and their husbands' performance of their family tasks. It could be explained by the husband's family duties or responsibilities being completed, which lessens the wife's physical and mental strain and load and shows love and involvement, strengthening the bond and fostering intimacy. According to Lankveld et al., (2018), higher degrees of closeness are associated with higher levels of sexual desire in both male and female partners, which in turn are associated with higher likelihoods of partnered sexual activity. Additionally, the recent research of **Fenget al.** (2021) discovered a significant correlation between sexual satisfaction and relationship intimacy, individuals who had strong family function exhibiting a higher level of closeness than those with severe family dysfunction.

According to the current findings, among the participating women, emotional divorce was negatively predicted by the husband's mental or nervous issues. These findings may be explained by the existence of other positive personality traits in the spouse, such as commitment, generosity, kindness, empathy, and agreeableness, which strengthen the marriage. In keeping with this interpretation, Suri, (2025) noted that agreeableness, warmth, and empathy are important personality traits that influence how partners support one another during trying times. high agreeableness people are more likely to provide consolation and understanding, making their partners feel appreciated and cared for. Strong bonds and increased relationship satisfaction are fostered by this emotional support. In contrast to the current finding, the research by O'Neal &Wickrama, (2021) & Fitzgerald & Esplin., (2022) demonstrated that marital problems were more common among both men and women with mental health issues.

Lastly, presence of chronic disease was a significant positive predictor of emotional divorce among the participated women of the current study, it can be linked to the negative effects of disease that impair women's capacity to meet their husbands' physical and sexual demands, thereby widening the emotional and physical distance between them. In keeping with

the current findings, **Bilal et al.**, (2021) discovered that the type and severity of chronic disease significantly reduced the level of sexual satisfaction between spouses. They came to the conclusion that chronic disease contributes to lower marital satisfaction by lowering sexual satisfaction and marital commitment. Additionally, **İnceoğlu &Zayman.**, (2023) reported that among those with chronic illnesses, there was a slight correlation between marital adjustment and satisfaction. and came to the conclusion that chronic illnesses have been shown to significantly affect married couples' relationships.

Conclusion:

Based on the current findings it can be concluded that:

Nearly half of women in the study were suffering from emotional divorce and emotion regulation difficulties. Majority of them had moderate level of sexual satisfaction. Wife and husband role performance and sexual satisfaction were significant negative predictors of emotional divorce and emotion regulation difficulties. Emotional divorce and difficulties in emotion regulation were positively correlated with each other. The husband education, urban residence, husband mental or nervous problems and wife chronic disease were the main factors influencing emotional divorce and emotion regulation difficulties.

Recommendations:

- Psychosocial intervention programs to prevent emotional divorce and to promote emotional regulation and sexual satisfaction.
- Counseling sessions for couples that help to resolve marital conflict and promote communication style and satisfaction.
- Further study to investigate the effect of mindfulness and emotion regulation training on emotional divorce.

Limitation:

A large number of women refused to participate in the study, as they had difficulties to discuss their marital issues with others and were embarrassed to expose their marital relationship. This posed a dilemma for the researchers and led to a long period of data collection.

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References:

- **Abdolmaleki, M. Dokaneifard, F. & Behdodi, M** (2021): Causal explanation of emotional divorce of married women: the role of cognitive emotion regulation strategies and marital burnout, Journal of Women Psychology, Vol. (2), No. (3), doi.org/10.61838/.
- Alenezi, A. Hamed, W. Elhehe, I. & El-Etreby, R (2023): Association between Facebook Addiction, Depression, and Emotional Regulation among Women, J of Healthcare, Vol. (11), Issue. (12), P.1701, doi.org/10.3390/healthcare11121701.
- Alkhawaldeh, M. & Alqatawneh, Y (2022):
 Emotional Divorce and its Relationship with
 Psychological Stress among Married Nurses
 Working at Jordan University Hospital, J of
 Dirasat: Educational Sciences, Vol. (49), No. (4),
 Pp.335–347. doi.org/10.35516/edu.v49i4.3344.
- AL-shahrani, H. Hammad, M (2023): Impact of emotional divorce on the mental health of married women in Saudi Arabia, J of PLOS ONE, 18(11),doi.org/10.1371/journal.pone.0293285

 November 10
- Amr, A. & Fahad, N (2020): Investigating the Relationship between Emotional Divorce, Marital Expectations, and Self-Efficacy among Wives in Saudi Arabia, Journal of Divorce & Remarriage, Vol. (62), Issue. (1), doi.10.1080/10502556.2020.1833290
- Bardeen, J. Fergus, T. & Hannan, S. (2016):
 Addressing psychometric limitations of the
 Difficulties in Emotion Regulation Scale through
 item modification. J of Pers Assess, 98(3),
 Pp.298-309.doi:
 10.1080/00223891.2015.1091774.
- Besharat, M. & Shahidi, V (2014): Mediating role of cognitive emotion regulation strategies on the relationship between attachment styles and alexithymia, Eur.J.Psychol.10(2), Pp.352-62.doi:10.5964/ejop.v10i2.671.
- Bilal, A. Muhammad, K. & Riaz, S (2021): Marital Commitment and Marital satisfaction in Patients of Chronic Diseases: Mediating role of sexual satisfaction, Rawal Medical Journal, 46(1), Pp.189-193
 - https://www.researchgate.net/publication/3811565 23.
- **Chattopadhyay, S (2019):** The responses of health systems to marital sexual violence—a perspective from Southern India, Journal of Aggress Maltreat

- Trauma, 28(1), Pp.47-67. doi: 10.1080/10926771.2018.1494235.
- Chen, Y. Shaffer, M. & Westman, M. (2014): Family role performance: scale development and validation, Journal of Applied Psychology: An International Review, 63(1), Pp.190-218. doi.org/10.1111/apps.12005
- Connor, J. Haviland, M, & Brady, S. (2020):
 Psychosocial factors influence sexual satisfaction among women with vulvodynia, Journalof Sex and Marital Therapy, Vol. (46), issue. (6), Pp.589–598.
 doi:10.1080/0092623X.2020.1766611
- **Delhom, I. Melende, J. & Satorres, E (2021):** The regulation of emotions: Gender differences, J of Eur Psychiatry, (13):64 (Suppl 1):S836. doi: 10.1192/j.eurpsy.2021.2209
- **Derks, D. Bakker, A. Peters, P. & Van-Wingerden, P** (2016):Work-related smartphone use, workfamily conflict and family role performance: the role of segmentation preference, Journal of Human Relation, (69), Pp.1045–1068. doi: 10.1177/0018726715601890
- Dillip, A. Mboma, Z. Greer, G. & Lorenz, L (2018): 'To be honest, women do everything': understanding roles of men and women in net care and repair in Southern Tanzania, Journal of Malaria, Vol. (17), No. (459),doi: 10.1186/s12936-018-2608-7
- **Ebrahimi, L. Parvaz, Y.Saadat, S. & Mousavi, S** (2022): Demographic predication of couples' emotional divorce. Journal of Health Research, 7(2), 96-105.
- El-salamony, A. Zewiel, M. & Elsayes, H (2023):
 Association between Emotional Divorce,
 Mother's Psychological Hardiness and Child's
 Psychological Wellbeing, International Egyptian
 Journal of Nursing Sciences and Research,
 Vol.(3), (2). doi:10.21608/EJNSR.2023.278180
- **EL-Sherbini, R** (2015): The role of the husband's towards family responsibilities as perceived by Wives and its correlation to life satisfaction. Journal of Home Economics. Volume.(25), Issue.(4),P. 153.
 - Doi:10.21608/MKAS.2015.173768.
- Eslami, P. & Sheibani, F. (2022): Comparing Sexual Satisfaction and Emotional Divorce Between Couples Going Through Divorce and Normal Couples Living in Bandar Abbas, Iran. Journal ofofMEJDS,(12), P.101 URL: http://jdisabilstud.org/article-1-2858-ep.html
- Feng, Y. Fan, Y. & Su, Z. (2021): Correlation of Sexual Behavior Change, Family Function, and Male-Female Intimacy Among Adults Aged 18-44 Years During COVID-19 Epidemic, Journal of

- Sexual Medicine, Vol. (9), Issue. (1). doi.org/10.1016/j.esxm.2020.100301.
- Fischer, V. Andersson, G. & Billieux, J. (2022): The Relationship Between Emotion Regulation and Sexual Function and Satisfaction: A Scoping Review, Sex Med Rev, 10(2), Pp.195–208. doi.org/10.1016/j.sxmr..11.004.
- **Fitzgerald, M. & Esplin, J** (2023): Marital quality as a mechanism linking childhood abuse to mental health, Journal of Family Issues, Vol. (44), No. (6), Pp.1488 1507.doi:10.1177/0192513X211059831.
- Gelashe, T. Teklehaymanot, A. & Worku, B (2023): Sexual Satisfaction among Married Women in TiroAfeta District: A Cross-sectional Study, Ethiop J Health Sci, 33(4), Pp.657-670. doi: 10.4314/ejhs.v33i4.12.
- **Ghazanfari, M. Alireza, H. Behnam, M. Fatemeh, S** (2021): The relationship of mindfulness and difficulties in emotion regulation with emotional divorce through sexual satisfaction among married university students in Ahvaz, Iran. Journal of Shahrekord University of Medical Sciences, 23(1):7-13. doi:10.34172/jsums.2021.02 2021;
- Gherghinescu, R. & Glăveanu, S (2015): The educational level and the style of in-couple communication, J of Procedia Social and Behavioral Sciences, 187 (2015), Pp. 67–71. doi: 10.1016/j.sbspro.2015.03.013
- HasaniMoghadam, S. Jila, G. Hamid, S. Mohsen, A. & Soghra, K (2021): Communication Patterns and Related Factors among Iranian Couples: A Cross-sectional Study," Sudan Journal of Medical Sciences, vol. 16, Issue. (1), Pp. 43–55. Doi: 10.18502/sjms.v16i1.8936.
- **İnceoğlu, F. & Zayman, P. (2023):** Moderator Effect of Chronic Disease on The Relationship Between Marriage Adjustment and Satisfaction in Married Couples, European Journal of Therapeutics, 29(3), Pp.459–468. doi.org/10.58600/eurjther1722.
- Jarrett, N. Yamane, D. Gildner, D. & Pickett, S (2019): The Indirect Effect of Sleep Quality on Emotional Exhaustion through Emotion Regulation Difficulties and Perceived Stress in a Sample of U.S. Medical Students. J of Sleep.42(Suppl_1):A87. doi: 10.1093/sleep/zsz067.211.
- Joksić, I. & Rajaković, V (2020): Family as a factor of socialization and resocialization, J of Pravoteorija i praksa 37(4), Pp. 42–54 LAW theory and practice No. 4. UDK: 159.922.8 Review article,doi: 10.5937/ptp2004042J.
- Kaufman, E. Xia, M. & Fosco, G. (2015): The difficulties in emotion regulation scale short form (DERS-SF): Validation and replication in adolescent and adult samples. Journal of

- Psychopathology and Behavioral Assessment, 38(3).doi:10.1007/s10862-015-9529-3
- Lafontaine, J. Brassard, A. & Lussier, Y (2024):
 Which comes first? Associations between communication patterns and relationship satisfaction in couples over a 1-year period. Canadian Journal of Behavioural Science 56(1), Pp.70–80. doi.org/10.1037/cbs0000342.
- Lankveld, J. Jacobs, N. & Thewissen, V. (2018):
 The associations of intimacy and sexuality in daily life Temporal dynamics and gender effects within romantic relationships. J of Social and Personal Relationship, 35(4), Pp.557–576.doi: 10.1177/0265407517743076
- **Leone, R. Crane, C. Parrott, D.Eckhardt, C** (2016): Problematic drinking, impulsivity, and physical IPV perpetration: a dyadic analysis, Psychol Addict Behav; 30 (3), Pp.356-366.
- **Luk, B. & Loke, A (2015):** The impact of infertility on the psychological well-being, marital relationships, sexual relationships, and quality of life of couples: a systematic review. J of Sex and Marital Therapy, 41(6), Pp.610-25.doi: 10.1080/0092623x.2014.958789.
- **Lundh, O. (2022):** Gender roles in households. A case study on gender roles in households in northern Tanzania. Jonkoping University School of Education and Communication International Work Bachelor Thesis Global Studies Spring 2022
- Mahne, K. & Huxhold, O (2015): Grandparenthood and subjective well-being: moderating effects of educational level, Journal of Gerontology: Social Sciences,70(5),782-792. doi.org/10.1093/geronb/gbu147
- Maroofi, B.rahimi, M.Fathi, L. & Afrasiabi, F (2021): Social and Cultural Factors Affecting the Tendency Toward Emotional Divorce (Case Study: Couples Referring to Counseling Centers in Tehran), Quarterly Journal of Woman and Society, 12(45), Pp.179-194. doi.org/10.30495/jzvj.2021.4573
- Moradi, I. Fatehizade, M. Ahmadi, A. & Etemadi, O (2019): Wives' perception of sexual relationship with narcissistic men: results of a qualitative thematic analysis with Iranian women. J Shahrekord University of Medical Science, 21(3), Pp.137-43.doi: 10.34172/jsums.24.
- Molajafar, H. Mousavi, S. & Lotfi, R. (2015): Comparing the effectiveness of mindfulness and emotion regulation training in reduction of marital conflicts. J Med Life.8(Spec Iss 2):111-6.
- Newkirk, K. Perry-Jenkins, M. & Sayer, A (2017): Division of household and childcare labor and relationship conflict among low-income new

- parents, J of Sex Roles, Vol. (76), No. (5), Pp.319–333. doi: 10.1007/s11199-016-0604-3
- Nomejko, A. & Doli'nska-Zygmunt, G (2014): The sexual satisfaction questionnaire—Psychometric properties, Polish J of applied psychology Appl, 12 (3): Pp.105–112.
- Omidi, A. & Talighi, E (2017): Prediction couple's marital satisfaction based on emotion regulation. Int J EducPsychol Res, Vol. (3), no. (3), Pp.157-62. doi: 10.4103/2395-2296.204120.
- O'Neal, C. & Wickrama, K (2021): The Contribution of Stressful Marital Interactions to Loneliness and Health across Mid-life and Later Adulthood. Journal of family issues, 42(3), Pp.553–570, doi.org/10.1177/0192513x20921927
- Ragen, B. Alexandra, R. & Chollak, C. (2016): Chronic Stress, Regulation of Emotion, and Functional Activity of the Brain. In book: Stress: Concepts, Cognition, Emotion, and Behavior, Handbook of Stress Series Vol. (1), Pp. 241-249, Chapter: 29 Publisher: Burlington: Academic Press. Editors: G. Fink. DOI:10.1016/B978-0-12-800951-2.00029-7
- Rendina, H. Gamarel, K. & Pachankis, J. (2017): Extending the minority stress model to incorporate HIV-positive gay and bisexual men's experiences: a longitudinal examination of mental health and sexual risk behavior, journal of Ann Behav Med, Vol. (51), No. (2), Pp.147–158. doi: 10.1007/s12160-016-9822-8.
- Roshan, C. Mirzaei, S. & Nikazin, A (2014): Validity and reliability of multidimensional sexual satisfaction scale for women (SSSW) in one sample of Iranian women, Journal of Clinical Psychology and Personality, Vol. (12), No. (1), Pp.129-40.
- Roslan, S. Hoesni, S. & Khatib, A (2023):
 Relationships Between Emotional Regulation and
 Marital Satisfaction, International Journal of
 Academic Research in Business and Social
 Science, Vol. (13), Issue. (12),
 doi:10.6007/IJARBSS/v13-i12/19780.
- Sadeghzadeh, Z. Ghodssi-ghassemabad, R. & Hamdieh, M. (2023): The assessment of the related factors of emotional divorce among Iranian people during the Covid-19 pandemic: a descriptive study, BMC Psychol, Vol. (11), No. (360). doi: 10.1186/s40359-023-01395-w
- Sarani, A. Azhari, S. Mazlom, S. & Sherbaf, A (2019): The Relationship between Psychological Hardiness and Stress Coping during Pregnancy, Journal of Midwifery and Reproductive Health, Vol. (3), Pp.408-417.
- Shabankare, M. Heidari, A. Makvandi, B. & Marashian, F (2021): The relationship of mindfulness and difficulties in emotion regulation

- with emotional divorce through sexual satisfaction among married university students in Ahvaz, Iran, J ShahrekordUniv Med Sci, Vol. (23), No. (1), Pp.7-13.
- doi: 10.34172/jsums.2021.02
- **Shabanlou, K. & Latifi, F (2016):** Factors affecting emotional divorce, International Journal of Advanced Biotechnology and Research (IJBR), Vol. (7), No. (2), Pp.763–772.
- Shawashra, O. & Abdel-Rahman, W(2018): Emotional separation and its relationship to irrational thoughts among married couples, Jordanian J Educational, Vol. (14), No. (3), Pp. 01–13.
- Shiri, M. & Ghanbaripanah, A (2016): Predict marital conflicts and emotional divorce based on the character strengths among spouses. International Journal of Fundamental Psychology and Social Sciences (IJFPSS), Vol.(6), No. (2), Pp.15–22. doi.org/10.14331/ijfpss.2016. 33005
- Short, N. Boffa, J. Clancy, K. & Schmidt, N(2017): Effects of emotion regulation strategy use in response to stressors on PTSD symptoms: an ecological momentary assessment study, J Affect Disord, vol.(230), Pp.77-83. doi: 10.1016/j.jad.2017.12.063.
- Suri, R. (2025): Role of Personality Traits in Marriage. At https://www.talktoangel.com/blog/role-of-personality-traits-in marriage#:. Accessed at 19-1-2025
- Titze, K. Schenck, S. Logoz, M., & Lehmkuhl, U (2014): Assessing the quality of the parent-child relationship: Validity and reliability of the child-parent relationship test, Journal of Child & Family Studies, vol.(23), Pp.917-933. doi.org/10.1007/s10826-013-9749-7
- Tyler, C. Wendy, C. Lori, L. & Man, H (2023):

 Doing it all: Effects of Family Responsibilities and Marital Relationship Quality on Mothers' Ambulatory Blood Pressure, Journal of Ann Behav Med, Vol.(58), No. (1), Pp.67–78. doi: 10.1093/abm/kaad058.
- Whisman, M. Gilmour, A. & Salinger, J (2018): Marital satisfaction and mortality in the United States adult population, Health Psychology journal, Vol. (37), No. (11), Pp. 1041-1044.
- Younis, I. El-Habbaq, D. Al-Awady, M. & Mostafa, A. (2019): Sexual satisfaction in women and its predictors, Human Andrology Journal, Vol. (9), No. (1), Pp. 14-20. doi:10.21608/ha.2019.12272.1043.

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