

ORIGINAL RESEARCH

Evaluation of Emotional Divorce in Male Patients with Urethral Distraction Defect in a Referral Center

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Abstract: **Introduction:** Emotional divorce is the first stage of divorce in which the marital relationship deteriorates and the couple's relationship lacks love and affection. Given that the family is one of the foundations of the society, emotional divorce can have devastating effects on society and negative effects on family members. Therefore, it is essential to study this issue.

Methods: Patients with Pelvic Fracture Urethral Distraction Defect (PFUDD) admitted consecutively to Shohada-e-Tajrish Hospital (Tehran, Iran) from May 2020 to May 2021 were enrolled in the study. In this study all patients were evaluated by two questionnaires: Gottman emotional divorce questionnaire to assess the patient's marital status, and the International Index of Erectile Function (IIEF-5) questionnaire to assess the patient's sexual situation.

Results: The mean score for the IIEF-5 scores in the case and control groups were 18.32 and 21.04, respectively. The mean Gottman Scores in the case and control groups were 3.84 and 2.12, respectively. There was no significant difference between IIEF-5 and Gottman Scores between the two groups.

Conclusions: Considering the lack of differences between the two groups, it can be inferred that the effect of the spiritual and emotional dimension in strengthening marriage was more than the physical dimension. When a man encounters a physical problem, his wife will play a supportive role and seek to strengthen relationship and solve problems.

Keywords: Divorce; Emotional bonds; Urethral diseases

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1. Introduction

Emotional divorce is the first stage of divorce in which the marital relationship deteriorates and the couple's relationship lacks love and affection. In emotional divorce, instead of supporting each other, the spouses seek to find fault. In an emotional divorce, spouses may be good with each other in the social environment but not share each other's feelings in private. (1) Emotional divorce is mainly seen in Asian coun-

tries including Iran, because of cultural barriers. (2) Emotional divorce is one of the most important cultural problems in the society. Given that the family is the basis of the society, emotional divorce can have devastating effects on society and negative effects on family members. Therefore, it is essential to study this issue. (3) Divorce has more negative effects on women. (2)

Usually, divorce is not formalized due to its psychological burden, society's pressure, cultural issues. (4,5) The divorce rate has increased in recent decades, with about half of all marriages leading to divorce. (6) In Iran, in recent decades, in addition to increasing the rate of legal divorce, emotional divorce is also increasing and it can even be said that the rate of emotional divorce is about twice the rate of legal divorce.

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(7,11) Those who have experienced divorce have a 23 percent higher mortality rate, but in general, most people cope well after a while. Divorce will reduce a person's function at work. (8) The causes of divorce are generally divided into three categories: socio-cultural, familial, and individual. Also, the causes of divorce are divided into smaller subgroups, such as family interventions, sexual dissatisfaction, infidelity in marital relationships, addiction, etc. (9) Factors such as social and cultural restrictions, economic problems, forced marriages, fear of being left alone, and violence, can prevent couples from officially separating, leading to emotional divorce. The effects and consequences of emotional divorce are more obvious than legal divorce. (10) In another study, ignoring the needs, opinions, and expectations of women, the main causes of emotional divorce are introduced. (12) One of the most important causes of emotional divorce is physical and sexual problems. The rate of urethral damage is increasing in developing countries due to traumas such as car accidents. (13) Urethroplasty is the gold standard treatment for patients with urethral stricture. (14) Urethral distraction defect means disconnection of the urethra, which can be associated with simultaneous sexual disorders. The time interval between urethral injury and urethroplasty surgery is at least 3 months and the patient will have a cystostomy during this time. (15) Erectile Dysfunction (ED) in men following trauma leading to Pelvic Fracture Urethral Distraction Defect (PFUDD) is common. ED in these cases is caused by neurovascular injury. (16) The link between a number of urological and psychiatric illnesses has been established. (17) Considering that few studies have been conducted in the field of emotional divorce in Iran and most of the existing studies have not examined the physical dimension of individuals, in this case, we needed to investigate emotional divorce in patients who have urethral distraction defects. Because these patients will have problems in marital relationships due to having a cystostomy or erectile dysfunction and restrictions on sexual intercourse as a result, as well as injuries to the genital area following trauma.

2. Methods

This study is a Case-Control study. Patients with PFUDD consecutively admitted to Shohada-e-Tajrish Hospital (Tehran, Iran) from May 2020 to May 2021 were enrolled in the study. Patients were candidates for urethroplasty surgery. In the same period, patients who admitted to the urology department for reasons other than urethral distraction defect were selected as the control group. This group includes diseases that do not impair the patient's sexual function, including urinary tract stones and hernias. 104 patients became candidates for urethroplasty during this period and

were admitted to the Urology department in Shohada-e-Tajrish Hospital. According to the inclusion criteria and exclusion criteria, finally, 25 patients were included in the study. 25 patients were considered as the control group, considering type 1 error 0.05 with power 80% and an equal proportion of two groups, the sample size was calculated with SPSS software.

Inclusion criteria were as follows: male sex, being married, having cystostomy due to urethral distraction defect, age between 18 to 65 years. The exclusion criteria were: patients taking drugs that have sexual side effects, substance use, incomplete filling of the questionnaire, unwillingness to respond to the questionnaire items, patients who got divorced during the study period, and having a history of previous divorce (because of its possible effects on a person's life).

In this study all patients were evaluated by two questionnaires: Gottman emotional divorce questionnaire to assess the patient's marital status, and the International Index of Erectile Function (IIEF-5) questionnaire to assess the patient's sexual situation.

Gottman questionnaire includes 24 Yes/No questions and the scores will vary from 0 to 24. A score of 0-8 means the probability of separation in life is low. A score of 8-16 indicates moderate probability of separation in life. A score of 17-24 means the possibility of separation in life is strong. If the total score is 8 or higher, the person is at risk of separation in married life and certainly, at this stage, consultation with psychologists or psychiatrists can prevent divorce to some extent. In fact, this step can be an alarm to ask for help in solving marital problems. The Gottman questionnaire was validated in the Persian version. Cronbach's alpha was 0.94 and the correlation coefficient was -0.74. (18)

The IIEF-5 questionnaire includes five questions. The possible scores for the IIEF-5 range from 5 to 25, and ED was classified into five categories based on the scores: severe (5-7), moderate (8-11), mild to moderate (12-16), mild (17-21), and no ED (22-25). (19)

Other variables in this study included age, physical comorbidities, psychological comorbidities, having a steady job, number of children, and the number of years elapsed since the patient's marriage.

The obtained data were analyzed with SPSS statistical for windows version 23. Quantitative and qualitative variables were described using Mean±SD and frequency (percent), respectively. The Chi-Square test was used for comparing data between the two groups. $P < 0.05$ were considered statistically significant.

The study was approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences (IR.SBMU.RETECH.1400.181), and informed consent was obtained from all patients according to the hospital's guidelines. Written and signed informed consent was obtained

from all patients.

3. Results

One hundred and four patients initially were enrolled in the study who were candidates for urethroplasty surgery. Due to the exclusion criteria, 79 patients were excluded from the study. Finally, 25 patients were included. A control group of 25 patients was selected randomly from patients in the urology ward. Study variables included: age, Gottman Score, IIEF-5 Score, physical comorbidities, psychological comorbidities, having a steady job, Number of children, and the number of years that have elapsed since the patient's marriage time. Group statistics for Age, IIEF-5 Score, and Gottman Score are shown in table 1.

The minimum age of the participants in the study was 19 years and the maximum age was 65 years. The mean age of the participants was 40 years. Levene's test for equality of Variances and t test for equality of Means was done. The mean IIEF-5 Scores in the case and control groups were 18.32 and 21.04, respectively. The mean Gottman scores in the case and control groups were 3.84 and 2.12, respectively. The results showed no significant difference in IIEF-5 and Gottman Scores between the two groups (Table 2).

The mean number of children in the case and control groups was 1.28 and 1.48, respectively. The average number of years since the marriage began in the case group was 13.32 and in the control group, it was 15.08. Statistical analysis showed no significant difference between the two groups in terms of these variables (Table 3).

Other variables examined in this study included physical comorbidities and psychological Comorbidities.

Physical comorbidity includes diabetes mellitus (DM), hypertension (HTN), ischemic heart disease (IHD), hyperlipidemia (HLP), and thyroid disease. Psychological comorbidity includes depression, obsessive compulsive disorder (OCD), and bipolar mood disorder (BMD).

Seven patients in the case group and eight patients in the control group had physical comorbidities. Chi-square tests were done and the results showed no significant difference between the two groups in terms of physical comorbidities (Table 4).

Seven patients in the case group and six patients in the control group had psychological comorbidities. Chi-square tests were done and the results showed no significant difference between the two groups in terms of psychological comorbidities (Table 5).

Another variable examined in this study was job stability. 18 patients in the case group and 17 patients in the control group had steady jobs. Chi-square tests were done and the results showed that no significant difference between the two groups in terms of having a steady job (Table 6).

4. Discussion

Family is the basis of the society. Emotional divorce can have devastating effects on society in addition to negative effects on family members. In this study, we examined the effect of physical problems on the development of emotional divorce in patients with urethral distraction. We used IIEF-5 and Gottman questionnaires and also examined variables such as age, physical comorbidities, psychological comorbidities, having a steady job, number of children, and the number of years elapsed since the patient's marriage. According to our results, these variables were not significantly different between the two groups and did not have a significant effect on emotional divorce.

Firouzaei and colleagues found that variables such as age, age at marriage, family income, personal education, and spouse education are effective in emotional divorce. (20) But this study did not examine the aspect of physical problems. The results of this study were inconsistent with the results of our study. According to our study, factors such as age and level of education were not effective in creating an emotional divorce.

In another study, Parvin and colleagues described the role of physical/mental health problems and sexual issues in creating emotional divorce in Tehran, Iran. This study also examined the role of religion in creating or not creating emotional divorce. (21) The results of our study showed that the underlying physical and mental disorders had no effect on the development of emotional divorce and also had no effect on the satisfaction of both parties in sexual relations. These findings contradict the mentioned study.

Shahabadi and colleagues found that age difference, educational level difference, duration of marriage, and type of marriage (forced or unforced) were effective in emotional divorce. This study also showed that the number of children plays an important role in preventing emotional divorce. (22) The results of this study were different from our study and the mentioned factors were not significantly different between the two groups.

According to the analysis done in our study, important physical defects such as urethral rupture did not impair sexual relations and sexual satisfaction, as well as reducing the couple's emotional relationship, which could indicate the prominence of the psychological and emotional dimension in a successful marriage. Also, another important factor in maintaining the relationship during the creation of a physical defect is the role of female support, which has led to the proper continuation of the relationship. Our study showed that couples, after creating physical problems, tried to solve the problem by improving and strengthening their emotional relationships.

One of the reasons that the results of the two groups were



not statistically significant can be that the control group was also selected from urology patients. The drawback of this research design could be that the Gottman questionnaire was filled by men and not completed by the patient's spouse. Considering that few studies have been done in the field of emotional divorce in Iran, there will definitely be a need for more studies examining more variables.

5. Conclusion

Considering the lack of differences between the two groups, it can be inferred that the effect of the spiritual and emotional dimension in strengthening marriage was more than the physical dimension. When a man encounters a physical problem, his wife will play a supportive role and seek to strengthen relationship and solve problems.

6. Appendix

6.1. Acknowledgment

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6.2. Conflict of interest

The authors declare no conflict of interest.

6.3. Funding support

None.

6.4. Author's contributions

All the authors had the same contribution.

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Table 1: Group statistics for Age, IIEF-5 Score and Gottman Score.

	Case group – control group	N	Mean	Std. Deviation
Age	Case	25	38.48	13.217
	Control	25	41.52	14.740
IIEF	Case	25	18.32	6.890
	Control	25	21.04	4.402
Gottman	Case	25	3.84	4.896
	Control	25	2.12	2.682

Table 2: Independent samples test for Age, IIEF-5 Score, and Gottman Score.

	Leven's Test for Equality of Variances				t-test for Equality of Means				
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Age									
Equal variance assumed	0.787	0.379	-0.768	48	0.446	-3.040	3.959	-11.001	4.921
Equal variance not assumed			-0.768	47.440	0.446	-3.040	3.959	-11.003	4.923
IIEF									
Equal variance assumed	8.898	0.004	-1.663	48	0.103	-2.720	1.635	-6.008	0.568
Equal variance not assumed			-1.663	40.791	0.104	-2.720	1.635	-6.008	0.583
Gottman									
Equal variance assumed	5.869	0.019	1.540	48	0.130	1.720	1.117	-0.525	3.965
Equal variance not assumed			1.540	37.213	0.132	1.720	1.117	-0.542	3.982

Table 3: Statistical analysis in terms of the Number of children and the number of years that have elapsed since the patient's marriage.

	Leven's Test for Equality of Variances				t-test for Equality of Means				
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Number of children assumed									
Equal variances	0.018	0.894	-0.530	48	0.598	-200	377	-0.958	0.558
Equal variance not assumed			-0.530	47.660	0.598	-200	377	-0.958	0.558
Number of years that have elapsed since the patient's marital assumed									
Equal variance	0.014	0.906	-0.474	48	0.638	-1.760	3.716	-9.232	5.712
Equal variance marital not assumed			-0.474	47.953	0.638	-1.760	3.716	-9.232	5.713

Table 4: Physical comorbidities in the two groups.

Chi-Square Tests	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.095a	1	.758		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.095	1	.758		
Fisher's Exact Test				1.000	0.500
Linear-by-Linear Association	.093	.760			
N of valid Cases	50				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.50.

b. Computed only for a 2x2 table

Table 5: Psychological comorbidities in the two groups.

Chi-Square Tests	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.104a	1	.747		
Continuity					
Correction ^b	.000	1	1.000		
Likelihood Ratio	.104	1	.747		
Fisher's Exact Test				1.000	0.500
Linear-by-Linear Association	.102	.750			
N of valid Cases	50				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.50.

b. Computed only for a 2x2 table

Table 6: Linear regression for the studied parameters affecting total serum testosterone values.

Variable	Serum total testosterone (ng/ml)		
	B	SE	P-value
Age (years)	0.010	0.015	0.526
Duration of diabetes (years)	-0.005	0.022	0.817
BMI (kg/m ²)	-0.230	0.026	<0.001
HbA1c (%)	-0.169	0.101	0.097
uACR (mg/g)	-0.004	0.002	0.048

B: Unstandardized co-efficient, BMI: Body Mass Index, HbA1c: Glycosylated hemoglobin, SE: Standard Error, uACR: urine Albumin to Creatinine Ratio.

