



# Statistical Analysis for the Most Influential Reasons for Divorce between Men and Women in Erbil-Iraq

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Divorce and marital separation hurt families and might be the most unpleasant event experienced in life. Therefore, the motivation behind this investigation is to distinguish the factors influencing divorce between men and women in Erbil-Iraq. Data was collected using a self-questionnaire form with 28 questions that were randomly distributed to people who were divorced in the city of Erbil. Chi-square test and factor analysis were used to investigate the most influential reasons that people get divorced in Kurdistan Region of Iraq. The results show that respondents' perceived second marriage as the major cause of divorce followed by stingy dominance in marriage, the couple's parents interfering in their lives, and modern technology (Mobile – Social Media). Also, unemployment was a reason for divorce for women rather than men. According to the respondents, sixty eight percent stated that adultery is the first reason for separation.

**Key words:** *Divorce cause; Family; Chi-Square; Factor Analysis; Erbil City.*

## Introduction

Divorce is the legal separation of marriage, which is the formal association of woman and man, typically as recognised by law when they become husband and wife (Concise Oxford English Dictionary, 2009) (Concise Oxford English Dictionary, 2009). Marriage is also the structure of socioeconomic and political development. Its progress and maintenance signify harmony, while crisis and divorce in the family signal dangers and insecurity in the society (Culled from Daily Trust, 2007).



Divorce rates in the United States began to move upward after the Civil War and continued on a regular incline throughout the century. Over time rates have fluctuated, often falling in bad economic times and usually surging after major wars. However, these short-term variations were much less consequential when considered in the context of long-term constant growth (Cherlin, 1992 & Furstenberg, 1994). Until the latter section of the nineteenth century, separation was generally prescribed by law and shunned in observation, as still happens nowadays in several nations as well as some European countries, for example, Italy and Ireland (Glendon, 1987; Herda & Dzibur, 2017).

The rate of divorce and separation has increased significantly especially during the past several decades globally and particularly in the Kurdistan's region of Iraq where it appears to be the trustworthy road to divorce rather than reconciliation. Marriage has several steps in Iraq's Kurdistan Region such as choosing a spouse, offering marriage, engagement ceremony and wedding party. Usually both male and female select his or her spouse by recommendation of his or her family, and there are two approaches to marriage such as arranged marriage or modern marriage. Male family or other relatives introduce a girl into the arranged marriage, and then they begin their assessment and gain information about each other through their neighbours, colleagues, relatives or friends to become familiar with their prospective partner. While in a modern wedding the gentlemen and ladies meet one another in educational or workplaces and with the method the couple inform their families of their intentions and sit down with them (Editorial staff in people, 2016).

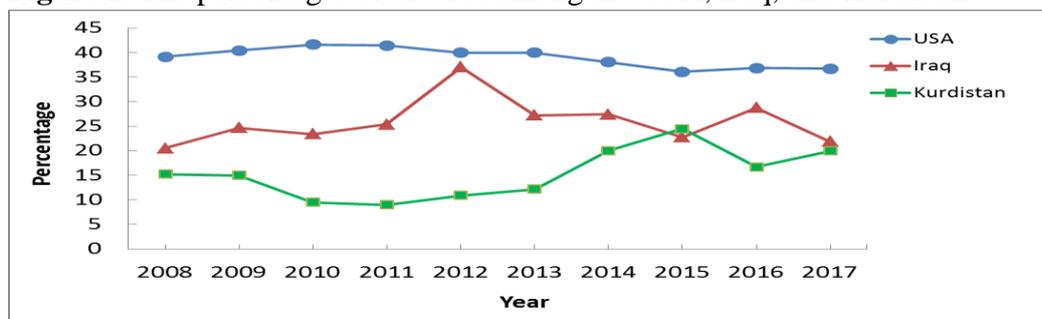
More than one million American children suffer the divorce of their parents in each year. Children whose parents have separated are increasingly the victims of abuse and perform poorly in reading, spelling, and math (Fagan & Rector, 2012). The phenomenon of divorce has more negative consequences for women. Demographers attributed the woman's desire to divorce to be for reasons of economic independence, release from men without a college education, loss of income, and social acceptance of divorce [Amato, 2000 ; Kalmijn & Poortman, 2016; Harvey, 2018). While the proposers of separation are not usually women, it is concluded that social and economic factors affect women more than men (Amato, 2010).

Until recent years, divorce is still illegal in some communities and it was considered that child abuse and domestic violence were a common reason for divorce in modern societies (Dehaghani & Nazari, 2010). However, there are some other factors such as cultural, economic and legal or political cause that can contribute to preventing divorce in which these factors are different extents in each community (Zargar, 2007). At this time, separation is a crisis that gradually affects more families. There are some other important factors for getting divorces as reflected in relevant sociological studies, problems of employment and unemployment, poverty, class level differences, and lack of knowledge about man's demands and expectations (Parvin et al., 2010).

The number of couples who registered for divorce was 9295 in 2015, while the number of separation was only 6079. The divorce rate has increased by more than 65 percent in Iraq's Kurdistan Region according to the region's high court of justice. The rate of divorce is considerably higher among young couples between 22 and 35 and that accounts for almost half of the marriages ending up in painful divorces and nearly half of the couples have more than one child when they file for divorce. Officials say domestic violence is a common reason for women to file for divorce but other factors such as infidelity and economic hardship are among the main reasons for the most recent upsurge.

In Figure 1, the highest rate of divorce in the last ten years is 38.96% in the United States of America followed by Iraq (25.32%) and Kurdistan Region (14.28%). The highest percentage of divorce in Kurdistan Region starts from the middle of the year in 2015 (24.5%) because of such reasons such as ISIS War, financial crisis, cutting salary for employees and teachers by both Kurdish and Iraqi government, and so on (Figure 1). The marriage rate has increased by 43.04% from 2008 to 2012 while it has decreased by 21.55% from 2013 to 2017. Furthermore, the result shows us most of the people do not like to get married after 2013 for such reasons such as it is not easy to find job, they do not trust the government into the future, they are considering leaving the country, they have no salary, the ISIS War, financial crisis, corruption, and so on and those reasons make it difficult to live in Kurdistan Region and get married (Divorce Magazine, 2018).

**Figure 1.** The percentages of divorce among the USA, Iraq, and Kurdistan



## Method & Material

### *Participations*

This study was recruited from the population of women and men (254 women and 240 men) who were divorced in Erbil-Iraq from January 2017 till December 2017. Data was collected using a questionnaire format, which was randomly distributed to people who were divorced in Erbil-Iraq. This questionnaire form consisted of two sections. The first part is a set of demographic questions which include sex, age, marital status, level of education, relation between couples (relationship with spouse), occupation, and place of residence. The second

section of questions was about the reasons that affected families resulting in divorce. The Likert scale (not reason at all=1, not reason=2, neutral=3, reason=4, reason at all=5) was administrated in this study. Before starting the main study, the researcher conducted a pilot study with 15 cases to ensure the validity of questionnaires, and also used Kcronbach's Alpha (0.88) to know the consistency of the data. Furthermore, the Chi-Square test and Factor Analysis were used to choose the most useful reasons for divorce for both men and women.

### *Application of Chi-Square Test*

The British statistician Karl Pearson first introduced the chi-square test statistic that asymptotically approaches a chi-square distribution in 1900. A common nonparametric test to see at least two classifications of the samples are independent or not is Chi-square test of independence.

A typical inquiry with respect to a contingency table is whether it has independence. Independence means that there is no association between row and column variables (the value of a row variable will not assist us to predict the value of a column variable) (Komorník and Metódy, 1999).

A chi-square distribution is commonly used for checking out some theoretical model of a compliance table which includes comparing expected and observed frequencies. Kostalova, (2010) said that the expected frequencies are used to see if the statistic determines values figure values A and B are independent. The formula of chi-square value ( $\chi^2$ ) in the equation below is used to compare the expected and observed frequencies (Larson & Farber, 2012).

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (1)$$

where:

$\chi^2$  is the test statistic that asymptotically approaches a chi-square distribution.

$O_{ij}$  is the observed frequency of the  $i^{\text{th}}$  row and  $j^{\text{th}}$  column.

$E_{ij}$  is the expected frequency of the  $i^{\text{th}}$  row and  $j^{\text{th}}$  column.

$r$  is the number of rows within the contingency table.

$c$  is the number of columns within the contingency table.

The null hypothesis states that knowing the level of variable A does not help you predict the level of variable B (no relationship exists between two variables). In comparison, the alternative hypothesis is that a relationship does exist between two variables. In a chi-square test of independence the null and alternative hypothesis are expressed:

H<sub>0</sub>: The two categorical variables are independent

Ha: The two categorical variables are related

The methodology of the chi-square test of independence between two categorical statistics is divided into four steps. First, write the null and alternative hypothesis. Secondly, determine the significance level ( $\alpha$ ). Thirdly, calculate the chi-square test statistic ( $\chi^2$ ). Lastly, compare the computed ( $\chi^2$ ) with the critical value in the table for the significance level ( $\alpha$ ) and then to make a statistical decision regarding the null hypothesis.

### Statistical Analysis

Descriptive analyses were used to describe the participants' details. Data were expressed as M±D and frequency of responses were determined using percentage. The study of data carried out by Chi-Square test and Factor Analysis (SPSS version 23) for comparing of proportions and means with considering  $P < 0.05$ .

### Results

In this survey, 494 divorce applicants were studied whose range of age was 16-55 with the average age of divorced men 31 years while it was 30 years for women. This small difference of ages between men and women was statistically non-significant ( $P=0.426$ ). Therefore, unemployment was a reason for divorce in women (48.8%) rather than in men (12.5%) in (Table 1) while there were no statistical differences between men and women on the level of education, relation between couples, place of residence and the group of age.

**Table 1:** Demographic characteristics of participants (n=494)

		Men (n=240)		Women (n=254)		Significance (P)
		Frequency	Percent	Frequency	Percent	
Age	15-24	54	22.5%	76	29.9%	0.205
	25-34	120	50.0%	100	39.4%	
	35-44	44	18.3%	62	24.4%	
	>=45	22	9.2%	16	6.3%	
Level of education	Illiterate	44	18.3%	44	17.3%	0.896
	Elementary	40	16.7%	48	18.9%	
	Secondary	50	20.8%	44	17.3%	
	High School	44	18.3%	42	16.5%	
	More than HS	62	25.8%	76	29.9%	
Relation between	Relative	90	37.5%	92	36.2%	0.469
	foreign	150	62.5%	162	63.8%	

couples						
Occupation	Private section	54	22.5%	52	20.5%	0.0001
	Government section	52	21.7%	58	22.8%	
	Employed	104	43.3%	20	7.9%	
	Unemployed	30	12.5%	124	48.8%	
Place of residence	Urban	174	72.5%	178	70.1%	0.390
	Rural	66	27.5%	76	29.9%	

Table 2 shows that the most ten effective reasons on divorce are adultery which is 68.02% followed by lack of respect (67.62%), marriage without permission of girl and boy (67.61%), misunderstanding (67.21%), lack of forgiveness (63.56%), jealousy (62.75%), marriage at an early age (59.92%), couple's parents interfere their lives (58.70%), leaving problems without treatment (57.49%), and dominance in marriage (56.68%) respectively.

**Table 2:** Frequency distribution of divorce factors in applicants in 2017 (494 applicants)

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Adultery	16.60%	8.91%	6.48%	12.96%	55.06%
lack of respect between them	12.55%	10.53%	9.31%	34.41%	33.20%
Marriage without permission of girl and boy	15.79%	9.31%	7.29%	23.08%	44.53%
Misunderstanding between them	12.55%	10.12%	10.12%	32.39%	34.82%
lack of forgiveness between them	9.31%	14.17%	12.96%	36.03%	27.53%
Jealousy on each other	12.15%	15.38%	9.72%	34.41%	28.34%
Marriage at an early age	16.60%	18.22%	5.26%	28.34%	31.58%
The couple's parents interfere in their lives	11.34%	14.17%	15.79%	23.89%	34.82%
leave problems without treatment	13.36%	13.77%	15.38%	31.17%	26.32%
Dominance in marriage	10.53%	18.62%	14.17%	31.17%	25.51%
Stingy	13.36%	19.43%	16.19%	27.53%	23.48%
Drugs	19.43%	16.19%	14.17%	19.03%	31.17%
Second marriage	15.38%	17.00%	17.81%	23.48%	26.32%
Being away for a long time	14.17%	20.65%	17.00%	25.51%	22.67%
Frenzy and Fast Fury	11.34%	26.72%	14.57%	32.39%	14.98%
Modern Technology (Mobile - Social Media)	12.15%	24.29%	18.62%	23.89%	21.05%
Big difference in age	12.96%	27.13%	16.19%	25.91%	17.81%
Cultural	10.12%	25.91%	23.08%	27.53%	13.36%

Tradition	10.53%	25.91%	22.67%	26.32%	14.57%
Cultural level and social class	15.38%	23.08%	21.86%	25.10%	14.57%
No independence house	12.55%	26.32%	22.67%	21.86%	16.60%
Religious beliefs difference	16.60%	25.51%	21.86%	17.81%	18.22%
Infertility	6.88%	26.32%	32.79%	22.67%	11.34%
Facial beauty	17.00%	27.53%	21.46%	21.46%	12.55%
Foreign series episodes	18.22%	25.51%	22.67%	19.03%	14.57%
Poverty	20.24%	29.15%	22.27%	19.03%	9.31%
Illiterate	19.03%	27.13%	28.34%	15.79%	9.72%
Chronic disease	15.79%	27.13%	34.82%	16.60%	5.67%

The result of chi-square test shows that there are statistical differences between men and women regarding couple's parents interfere into their lives, dominance in marriage, second marriage, stingy, modern technology, and infertility respectively.

Mean and standard deviation in (Table 3) shows that the stingy, infertility, second marriage, dominance in marriage and couple's parents interference in their lives were the strongest reasons for divorce for women rather than men while modern technology was a more valid reason for divorce for men rather than women.

**Table 3:** The mean score of a common cause of divorce between men and women

	Men =240		Women=254		Significance (P)
	Mean	SD	Mean	SD	
Marriage at an early age	3.33	1.486	3.46	1.511	0.724
Marriage without permission of girl and boy	3.69	1.538	3.73	1.461	0.616
Jealousy on each other	3.41	1.312	3.61	1.409	0.168
Adultery	3.73	1.602	3.88	1.526	0.449
Stingy	3.09	1.264	3.46	1.441	0.008
Frenzy and Fast Fury	3.14	1.259	3.12	1.301	0.479
Cultural level and social class	2.98	1.306	3.03	1.297	0.874
Illiterate	2.7	1.241	2.7	1.211	0.798
Big difference in age	3.1	1.331	3.07	1.328	0.817
Infertility	2.99	1.033	3.11	1.17	0.002
Chronic disease	2.63	1.069	2.75	1.127	0.877
Second marriage	3.06	1.349	3.5	1.447	0.035
Facial beauty	3	1.25	2.71	1.31	0.279
lack of forgiveness between them	3.65	1.275	3.52	1.29	0.733
lack of respect between them	3.55	1.413	3.75	1.315	0.778
Misunderstanding between them	3.61	1.445	3.72	1.301	0.654
leave problems without treatment (Carelessness)	3.34	1.363	3.52	1.362	0.608
No independence house (accommodation)	2.93	1.221	3.13	1.341	0.193

Poverty	2.68	1.161	2.69	1.337	0.193
Drugs	3.15	1.465	3.37	1.573	0.134
Dominance in marriage	3.27	1.282	3.57	1.36	0.000
Being away for a long time	3.1	1.337	3.33	1.409	0.168
Cultural	3.07	1.248	3.09	1.185	0.544
Religious beliefs difference	2.76	1.316	3.14	1.367	0.147
The couple's parents interfere in their lives	3.46	1.408	3.67	1.357	0.048
Tradition	2.98	1.223	3.18	1.244	0.650
Modern Technology (Mobile - Social media)	3.23	1.301	3.12	1.372	0.010
Foreign series episodes	2.86	1.362	2.87	1.287	0.559

Factor Analysis is used to select the strong significant reason for getting a divorce which was found in the Chi-Square test. Overall Measure of Sampling Adequacy (MSA) for the six significant variables included in this analysis was 0.746, which exceeds the minimum requirement of 0.50 for overall MSA. The probability associated with the Bartlett test is less than 0.01, which satisfies the requirement of Principal component analysis.

Table 4 shows the proportion of variability that the total variance explained 57.13 % of the first two common factors which is a quite good percentage depending on Kaiser Criteria that an Eigen Value is greater than 1. Here note that the first factors explain relatively large amounts of variance for 35.10% of the total variance and included four variables (second marriage, stingy, dominance in marriage, the couple's parents interfere their lives), and the second factor explained 22.03% of the total variance and contained the two variables (infertility and modern technology).

**Table 4:** Rotated Component Matrix for ranking of the most six causes of divorce between men and women

	Component	
	1	2
Second marriage	.804	
Stingy	.763	
Dominance in marriage	.659	
The couple's parents interfere in their lives	.624	
Infertility		.841
Modern Technology (Mobile – Social Media)		.595

## Conclusion

This study aimed to identify the most common reasons for divorce for both men and women in Erbil-Iraq and the study group comprised of applicants who are aged between 16 and 55 years. According to the responders, 68 percent of the applicants said that the adultery is the



first reason for divorce followed in sequence by, lack of respect (67.62%), marriage without permission of girl and boy (67.61%), misunderstanding (67.21%), lack of forgiveness (63.56%), jealousy (62.75%), marriage at an early age (59.92%), couple's parents interfere their lives (58.70%), leaving problems without treatment (57.49%), and dominance in marriage (56.68%) and so on. Therefore, unemployment was a reason for divorce for women rather than men. Both Chi-square test and Factor Analysis show that there are statistical differences between men and women with regards to whether couple's parents interfere in their lives, dominance in marriage, second marriage, stingy, modern technology, and infertility respectively. Stingy, infertility, second marriage, dominance in marriage, couple's parents interfere in their lives were the strongest reasons for divorce for women rather than men while modern technology was a more valid reason for divorce for men rather than women.

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