

RESEARCH PAPER

Psychological disorders associated with women after abortion

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ABSTRACT:

The researcher's aimed in their current research to identify the levels and the significant of the difference of psychological disorders of women after abortion for (150) participants in Erbil city. Taking into consideration variables such as ages among (5) groups {(21 - 25), (26 - 30), (31 - 35), (36 - 40), (41 & more)}, then number of miscarriages among (3) groups {(1 -2), (3 - 4), (5 & more)} and academic achievement among (4) groups {(Illiterate), (Middle school & less), (Secondary), (Diploma & higher)}. To measuring the Variable's in current researcher's prepared the items of psychological disorders and its (5) dimensions (anxiety, depression, phobia , guilt, OCD) depended on Mental Health Literature after translating the scale according to the need of the research, the validity and reliability of scale were verified. The, (% 90.90) of experts agreed on all items of the scale, and the researcher's relied on the Split-half and Cronbach's Alpha methods to record the scales reliability, the results showed that the reliability value of psychological disorders is (0.83) (0.80) respectively. After that the scale were applied on the research samples through individual interviews, and then data processing by using (Spss) the results showed: 1. The prevalence rate of psychological disorders and all dimensions (anxiety, depression, phobia , guilt, OCD) are high and significant among participant's women after abortion in Erbil city. 2. There are significant differences in the prevalence rate of psychological disorders and all dimensions (anxiety, depression, phobia, OCD) according to the variable of age groups among participant's women after abortion , except for the dimensions of guilt it is not significant. 3. There are significant differences in the prevalence rate of psychological disorders and all dimensions (anxiety, depression, phobia, guilt, OCD) according to the variable of number of miscarriage's groups among participant's women after abortion. 4. There are no significant differences in the prevalence rate of psychological disorders and all dimensions (anxiety, depression, phobia, guilt, OCD) according to the variable of academic achievement groups among participant's women after abortion. Depending on these results, the researchers has presented some recommendations and suggestions.

KEY WORDS: Psychological disorders , abortion , Anxiety , Depression , Phobia , Guilt .

DOI: <http://dx.doi.org/10.21271/ZJPAS.35.1.23>

ZJPAS (2023) , 35(1);241-260 .

1. INTRODUCTION:

1.1. Research problem:

Spontaneous abortion is one of the utmost usual complications of pregnancy (1). Abortion is the medicinal epithet for any pregnancy loss before the fetus is viable (could have lived exterior the womb) commonly called miscarriage. A viable fetus is ordinarily characterized as a fetus of more than 20 to 24 weeks of gestation. Abortion can occur spontaneously or can be induced. (2) .

An abortion that happens without intercession is known as a miscarriage or "spontaneous abortion". Researches demonstrate that the incidence of spontaneous abortion is between 15% to 30% of all pregnancies (3). It ought to moreover be famous that most of the spontaneous abortions happen in the early weeks of pregnancy, and so, it can be confused with menstrual bleeding. The hazard of miscarriage diminishes after 12 weeks' gestation. (4). In more than half of the cases, the causes of abortion have been hereditary disarranges and chromosomal

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Article History:

Received: 22/09/2022

Accepted: 09/11/2022

Published: 20/02 /2023

abnormalities. Nevertheless, other variable influencing abortion are as follows: uterine abnormalities, untreated diseases of the mother, infectious diseases, the age of the mother during pregnancy, previous history of abortion, use of contraceptive drugs, BMI > 25 kg/m², menstrual disorders, age at the first menstruation, environmental conditions and mother's lifestyle such as use of caffeine, smoking or being exposed to cigarette smoke, low socioeconomic and employment status, which are compelling within the event of abortion. (5)

For men and women of reproductive age, pregnancy and the coming enlargement of the self, the family, is a watershed moment. Pregnancy also establishes a woman's reproductive capability and gives her a new identity as a mother. Miscarriage is the most common pregnancy issue, impacting around one-third of all women (6). Its consequences on individuals can be devastating and long-lasting (7). No study concerning assessment of psychological disorders associated with women after abortion was done previously in Kurdistan region. Therefore, the researchers are interested to conduct such a study and that will give an insight the psychological disorders with abortion among Kurdish women in Iraqi Kurdistan Region. In this study in order to collect data we will prepare a questionnaire.

1.2. Significance of the Research:

Abortion is recognized as a most important reason of maternal mortality, existence threatening complication (8). National measurements on abortion point out that the female experiencing abortion go through from bodily problems such as pain, fevers, infections, perforation of the uterus, embolism, bleeding, and anesthesia problems (9). On the different hand, psychological problems like guilt, regret, smoking alcoholism, self- adverse behaviors, and even suicide on the other (8). There is some discussion on whether or not the emotional response to a miscarriage is tolerate additional powerfully straightaway following the loss compared with weeks, months or years later and whether a late loss is tough stronger showing emotion than an early loss. as a result of it's hard to reconcile a miscarriage at ten weeks of gestation, before visible and tactile proof of a physiological

condition is obvious, compared with a loss at twenty-five weeks, once the crying mother is sometimes visibly pregnant and she has felt the baby move (6). Abortion is a distressing journey that influences the mom in a variety of approaches with the aid of impacting on emotional fame that can at closing end result in psychological problems such as depression. (10) Other psychological issues consist of regrets decision, sexual dysfunctions, sleep disturbances, and terrible reactions. (9)

However, abortion both as a miscarriage or as a crook termination of a fetus lifestyles produces physical, social, and psychological penalties which may also ultimate for a lengthy duration of time, and have an effect on personal, family, and social lifestyles of individuals (8). No study concerning assessment of psychological problems associated with abortion was done previously in Kurdistan region. Therefore, the researchers were interested to conduct such a study and that gave an insight the psychological consequences with abortion among Kurdish women in Iraqi Kurdistan Region.

1.3. Research Objectives:

1. Measuring the Prevalence rate of Psychological disorders' and his 5 dimensions among Participants.
2. Examining Statistical Differences of Variable Psychological Disorder's according to participants' Age, the number of miscarriages, and Academic Achievement.

1.4. Limitations:

The current research has been consisted of the Women after abortion in the Erbil city – Kurdistan Region / Iraq, for the year (2021 - 2022).

1.5. Research Definitions :

Theoretical definition of psychological disorders:

" the psychological or behavioral patterns that an individual feels as a result of his feeling of distress or helplessness, as these disorders are considered abnormal development in mental skills, and it is believed that they occur as a result of the emergence of psychological stresses and painful events in life, due to the complex interaction that occurs between factors genetics and life experiences of the individual ".

Practical definition of Psychological disorders:

The researcher's defines the psychological disorders practically it is the degree that women after abortion get by the measure psychological disorders scale and its 5 dimension , the high degree of result shows high psychological disorders among women after abortion , and the low degree of result shows low psychological disorders among women after abortion.

Anxiety:

"The American Psychological Association defines anxiety is an emotion characterized by feeling of tension, worried thoughts and physical changes like increased blood pressure. People with anxiety disorders usually have recurring intrusive thoughts or concerns" (11).

Depression:

"Depression is a mood disorder that involves a persistent feeling of sadness and loss of interest.it is different from the mood the mood fluctuations that people regularly experiences as a part of life. Depression is the main cause of disability. Depression is an ongoing problem, not a passing one. It consists of episodes during which the symptoms last for at least 2 weeks. Depression can last for several weeks, months or years (12).

Phobia:

"A phobia is a type of anxiety disorder that causes an individual to experience extreme, irrational fear about a situation, living creature, place, or object "(13).

Guilt:

"Guilt is described as a self-conscious emotion that involves negative evaluations of the self, feelings of distress, and feelings of failure" (14).

Obsessive-compulsive disorder (OCD):

"Obsessive-compulsive disorder (OCD) is a mental health condition characterized by obsessions and compulsions that interfere with daily life. OCD was formerly classified as an [anxiety disorder](#) because people affected by this mental illness often experience severe anxiety as a result of obsessive thoughts. They may also engage in extensive rituals in an attempt to reduce the anxiety caused by obsessions" (15.)

2. Previous studies:

Defining women's emotional experiences related with abortion is a hard task. Many circumstantial elements have an effect on women's emotional journeys for the duration of their abortion experience and beyond.

Therefore, the researcher did the initial review of the English based texts with the keywords of "psychological problems and miscarriage ", some of the study has conducted at the beginning and during the research process as summarized offered:

A Qualitative Study was done by Kukulskiene and Žemaitien in 2022 entitled experience of late miscarriage and practical implications for post-natal health care. A phenomenological thematic analysis was applied for their study. Experiential characteristics of late miscarriage were described by four themes and 13 subthemes: the initial splitting state (Dissociation, An Opened Void, An impaired Symbiosis, and The Body is Still Pregnant while the Psyche is Mourning); Betrayal of the body (Symbolic Experience of Internalized Death, Shocking Materiality of the Ongoing Miscarriage, Lost control of the Body, and Confusing Body Signals); Disconnecting (Depersonalizing Medical Environment, Guilt Falsifies perception, and Retreat as a means of Self-Preservation); and Reconnecting (Collecting Shatters and Reinterpretation of Maternal Identity) (15).

Psychological distress in women with recurrent spontaneous abortion is another study was done by Adib-Rad *et al*, (2019). Their findings had showed that the psychological distress in women with recurrent spontaneous abortion was higher after abortion, it persisted even after one year since the abortion, and it was of greater intensity in women from rural areas. Therefore, it is suggested that women with recurrent spontaneous abortion be provided with psychological counseling to handle the distress they experience. Thus, the psychological management of distress in women with miscarriage must be included in the treatment of recurrent spontaneous abortion (16).

A study was done by Farren *et al*, (2018) with titled the psychological impact of early pregnancy loss, they found evidence of significant depression and anxiety in the first month following early pregnancy loss in women. Partners were also shown to display depression and anxiety, albeit to a generally lower level. There is also evidence of post-traumatic stress symptoms relating to the early pregnancy loss in three studies (17).

Ambriz-López *et al* (2016) When analyzing the relationship between a history of depression and symptoms of anxiety or depression post-abortion

found 41.7% reported symptoms suggestive of depression and/or anxiety at some degree (18).

But no study concerning assessment of psychological problems associated with abortion was done previously in Kurdistan region till now. Therefore, the researchers were interested to conduct such a study and that gave an insight the psychological consequences with abortion among Kurdish women in Iraqi Kurdistan Region.

3. Research procedure (Introduction):

In order to achieve the current study objectives, it is necessary to identify the research society and select a representative sample. Also provides procedure to measure the prevalence rate of study's variable that is "psychological disorders" among women after abortion. The study also examines this variable according to some socio-demographic factors among participants such as (age, the number of miscarriages, academic achievement).

3.1. Research design:

Researchers use the approach to examine and measure the prevalence rate of the study's variable "psychological disorders associated with women after abortion" according to some socio-demographic factors.

3.2. Research population:

The study population contains all the women who had an abortion in Erbil city and their number in five years before from 2017 until the end of 2021 it is (5181) abortion women . Some of them had a miscarriage more than once. Which their ages are different and their academic achievement are also different.

3.3. Research sample:

Another importance step of the study is selecting the sample from the community. Since the community is often large in size also not countable and it is more or less impossible for the researchers to study all women which had an abortion, So the researchers select a sample of the target community that is likely to be representative of that community that are interested in. the research sample contains (150) women which had an abortion, there were randomly selected , which they are differed in age, number of abortions, and academic achievement.

3.4. Scale:

Psychological disorders: this scale has been prepared by the researchers and the researchers depended on literature of mental health to prepare the scale, which consisted of (40) items with divided to 5 dimensions (Anxiety 9 items , Depression 9 items , Phobia 9 items , Feeling guilty 9 items, Obsessive 4 items). Regarding the value of participants, respondents, five alternatives were identified and determined, which were (Always =5 degree , Frequently =4 degree , Sometimes =3degree , Scarcely =2 degree , Never =1 degree), the items which measure the scale and each dimensions of scale is measure in one direction. The highest degree on the scale or on the each of dimensions shows that the participant has the high level of the psychological disorders, and the lowest degree on the scale or on the each of dimensions shows that the participant have a low level of the psychological disorders. Appendix number (1).

3.5. The Validity of the Scale :

Translate Validity: all the items of the scale (Psychological Disorders) translated from Arabic language (Original Arabic) to English language by an expert whose specialist in Arabic and English language, and then translated back to Arabic language by a specialist in English language , so the end step was comparing both (Original Arabic scale) and (translated Arabic scale) by the professor which her specialist is Educational and Psychology to compare between them and the result came out the same. Appendix number (2).

Face validity: for the purpose of insuring the validity of the scale, the researchers presented the scale in its initial form with (Arabic) language to (12) experts and specialists in the field of personality & mental health, psychiatrist, maternity nursing. appendix (2). In the scale of (Psychological Disorders) appendix (1) , (% 90.90) of experts agreed on all items. With some changes in some of the approved items; these are the following items (8 , 9 , 12 , 20 , 24 , 32 , 34 , 36) . Check appendix number (3).

Discriminant Validity: The discriminatory power refers to the ability of the items to distinguished between good quality individuals (who have a high degree) and between weak quality individuals (who have a low degree), and this is

done by contrasting criterion group. The same sample of (150) targeted women after abortion was selected. By using (27 %) to choose the upper and lower extremist groups , to get the maximum sample size and maximum variance (Ebel, 1972,p: 385). Then, the discriminatory power of each item was calculated through using

the " independent sample t -test" to compare the arithmetic mean of the two extremist sample of (82) participants. And it is clear that all of the items are distinct (except item number 1) at the level of significance (0.05) and with degree of freedom (80).See table (1).

Table (1) Independent sample t-test to extract the discriminate of the items of the scale of psychological disorders .

Items	Upper Bounds		Lower Bounds		Paired	Calculated T Value	Sig.
	Mean	Std. Deviation	Mean	Std. Deviation			
1	5.00	0.000	4.93	0.264	H1-L1	1.777	Not Sig.
2	4.93	0.264	4.54	0.552	H2- L2	4.084	Sig.
3	4.78	0.419	4.46	0.636	H3-L3	2.665	Sig.
4	4.78	0.419	4.12	0.714	H4-L4	5.093	Sig.
5	4.80	0.401	4.20	0.813	H5-L5	4.307	Sig.
6	4.76	0.435	4.34	0.762	H6-L6	3.027	Sig.
7	4.80	0.401	4.32	0.610	H7-L7	4.279	Sig.
8	4.68	0.471	4.17	0.704	H8-L8	3.873	Sig.
9	4.85	0.358	4.20	0.715	H9-L9	5.275	Sig.
10	4.76	0.435	4.17	0.892	H10-L10	3.778	Sig.
11	4.80	0.401	4.34	0.693	H11-L11	3.705	Sig.
12	4.83	0.381	4.17	0.738	H12-L12	5.075	Sig.
13	4.83	0.381	4.27	0.742	H13-L13	4.305	Sig.
14	4.83	0.381	4.27	0.672	H14-L14	4.651	Sig.
15	4.78	0.475	4.24	0.734	H15-L15	3.929	Sig.
16	4.80	0.401	4.22	0.725	H16-L16	4.523	Sig.
17	4.71	0.461	4.10	0.831	H17-L17	4.110	Sig.

18	4.76	0.435	4.00	0.922	H18-L18	4.750	Sig.
19	4.80	0.401	4.32	0.722	H19-L19	3.780	Sig.
20	4.83	0.381	4.27	0.593	H20-L20	5.099	Sig.
21	4.83	0.381	4.39	0.703	H21-L21	3.517	Sig.
22	4.85	0.358	4.00	0.632	H22-L22	7.522	Sig.
23	4.80	0.401	4.15	0.853	H23-L23	4.472	Sig.
24	4.85	0.358	4.12	0.714	H24-L24	5.867	Sig.
25	4.88	0.331	4.07	0.721	H25-L25	6.497	Sig.
26	4.66	0.480	4.12	0.781	H26-L26	3.748	Sig.
27	4.71	0.461	4.29	0.642	H27-L27	3.360	Sig.
28	4.78	0.419	4.32	0.756	H28-L28	3.432	Sig.
29	4.71	0.559	4.15	0.760	H29-L29	3.807	Sig.
30	4.80	0.401	4.02	0.790	H30-L30	5.639	Sig.
31	4.80	0.401	4.10	0.664	H31-L31	5.841	Sig.
32	4.73	0.501	4.15	0.760	H32-L32	4.116	Sig.
33	4.73	0.449	4.15	0.727	H33-L33	4.389	Sig.
34	4.88	0.331	4.12	0.714	H34-L34	6.151	Sig.
35	4.78	0.419	4.17	0.667	H35-L35	4.956	Sig.
36	4.76	0.435	4.12	0.640	H36-L36	5.247	Sig.
37	4.71	0.461	4.27	0.672	H37-L37	3.451	Sig.
38	4.88	0.331	4.12	0.557	H38-L38	7.475	Sig.
39	4.93	0.264	4.07	0.608	H39-L39	8.250	Sig.
40	4.95	0.218	4.20	0.608	H40-L40	7.441	Sig.

T – table Value = 1.990 at the level of significance(0.05)

Items Validity: It means the Items relations to the overall score Above all, the researcher's used the Pearson correlation coefficient to extract the correlation between all items in the scale to its overall score. In this procedure (150) targeted

sample, and if the correlation is statistically significant at the level of significance (0.05)

then the item can be included in the scale as it is moving in the same theoretical direction of the

scale. All items are significant statistically except item number (1) in the scale is not statistically significant. This means that only 39 items are

valid in the scale for application to the research sample. See table (2)

Table (2) the Items correlation to the overall scale score of psychological disorders

Items	Correlation	Items	Correlation	Items	Correlation	Items	Correlation
1	0.127 invalid	11	0.427**	21	0.227**	31	0.498**
2	0.379**	12	0.388**	22	0.511**	32	0.306**
3	0.271**	13	0.317**	23	0.363**	33	0.379**
4	0.447**	14	0.332**	24	0.468**	34	0.513**
5	0.355**	15	0.283**	25	0.498**	35	0.474**
6	0.359**	16	0.484**	26	0.348**	36	0.431**
7	0.398**	17	0.449**	27	0.331**	37	0.354**
8	0.350**	18	0.543**	28	0.304**	38	0.430**
9	0.384**	19	0.371**	29	0.392**	39	0.575**
10	0.419**	20	0.448**	30	0.501**	40	0.538**

Correlation is significant at the (0.05), (0.01) levels

3.6 The Reliability:

There is more than one method that can be used to reach the reliability of the scale, but the researchers relied on the Split-half and Cronbach's Alpha methods to record the scale reliability. The researcher's chose split-half method to measure homogeneity of the items in terms of content, as each items expresses the psychological disorders. This method the test contribute equally to what is being measured. Means, in a way of comparing the results of one half with the results from other half of the test (McLeod,2013,para 5-6). In this regard, the data was taken from the (40) of abortion women. Then the all items of the scale have divided in to two halves, which the first half

were (odd items) and the other half were (even items), the Pearson Correlation Coefficient was calculated between the results of both groups (odd items and even items).The result showed that the reliability of the scale is (0.71), also the researcher's used the Guttman split-half correlation for the purpose of correcting the value of the reliability so it was (0.83)which is considered as an acceptable reliability coefficient according to the items number. Also the Cronbach's Alpha is using to measure the internal consistency of the scale of Psychological Disorders (0.80), as it considered as a basic equation for extracting internal consistency reliability. this is a high correlation, which means that the scale has a high degree of stability; see table (3)

Table (3) the method of Split-Half reliability of the scale of psychological disorders

Scale	Items	Group test	Correlation Pearson	Guttman Spilt-Half Correlation	Cronbach's Alpha
Psychological Disorders	39	Odd items Even items	0.71	0.83	0.80

3.7. The Final Survey:

After completing and evaluating the psychometric properties of the scale. The scale of study **appendix (3)** were applied among the study samples of (150) participants (women after abortion). After obtaining answers all were converted to data and then analyzed and tabulated, the researchers aimed to gain the statistical features of the scale and their components to achieve the study's aims by using a statistical instrument that are used in human sciences and called spss.

3.8. Statistical Instrument:

The researchers used spss as social sciences software to process and analyzing the study data , which included : One-Sample T-Test ,T-Test for two independent Samples , Pearson Correlation Coefficient.

4. Research Result (Introduction):

The present research aims to find the prevalence rate of Psychological Disorders associated with women after abortion in Erbil city. the chapter shows the descriptive statistics of the level the variable according the aim's, as well as, shows the overall outcomes of the statistical analysis, which examine the research's goals. In addition, this part discusses the finding of the data analysis and it compares with the previous studies' findings to discover the similarity and dissimilarity. Hence, following shows each aim with statistical analysis and their outcomes and discussions. The researchers couldn't compare the results of this research to the previous researches because their samples are different.

4.1. Measuring the Prevalence rate of Psychological disorders' and his 5 dimensions among Participants:

Table (4) One Sample T-Test to measure the level of psychological disorders & his 5 dimensions .

Variable	Numbers of sample	Mean	Std. Deviation	Hypothetical mean	T value		Sig. 0.05
					Calculated	Table	
Psychological disorders	150	184.30	11.732	120	67.123	1.960	Sig.
Anxiety	150	41.95	2.292	27	79.907	1.960	Sig.
Depression	150	40.89	3.039	27	55.987	1.960	Sig.
Phobia	150	41.27	2.729	27	64.054	1.960	Sig.
Guilt	150	41.29	2.813	27	62.230	1.960	Sig.
OCD	150	18.71	1.490	12	55.192	1.960	Sig.

After applying the psychological disorders and his five dimensions (Anxiety, Depression, phobia, guilt, OCD) questionnaires among (150) participants, the result showed that the mean degree of the measurement respectively is (184.30, 41.95, 40.89, 41.27,

41.29, 18.71) with a standard deviation respectively is (11.732, 2.292, 3.039, 2.729, 2.813, 1.490). From this result, when comparing these degrees of mean with a hypothetical means of the scale and his five dimensions respectively is (120, 27, 27, 27,

27, 12), can be noticed that the former is bigger than the later. Hence, examining the differences between the calculate means and hypothetical means with using one-sample t-test, it was found to be significant at the level of (0.05) because the T-calculate values are bigger than the T-table value with the degree of freedom (149) for the benefit of the sample statistically. Researchers believe that the harsh psychological conditions of women who have undergone abortion led to the emergence of various symptoms of psychological disorders,

because abortion in a woman means a shift to not feeling the sense of motherhood and living in difficult days and unique suffering.

4.2.Examining Statistical Differences of Variable Psychological Disorder's according to participants' Age , the number of miscarriages, Academic Achievement :

4.2.1. Differences in Psychological Disorders according to the Age variable:

Table (5) One –way ANOVA to examine statistical differences in psychological disorders and all dimensions according to variable age.

Variable	Source of contrast	Sum of squares	df	Mean square	F value		Sig. 0.05
					Calculated	Tab	
Psychological disorders	Between groups	1549.914	4	387.478	2.963	2.37	Sig
	Within groups	18959.586	145	130.756			
	Total	20509.500	149				
Anxiety	Between groups	98.320	4	24.580	5.208	2.37	Sig
	Within groups	684.353	145	4.720			
	Total	782.673	149				
depression	Between groups	135.853	4	33.963	3.970	2.37	Sig.
	Within groups	1240.440	145	8.555			
	Total	1376.293	149				
Phobia	Between groups	90.734	4	22.683	3.228	2.37	Sig.
	Within groups	1019.060	145	7.028			
	Total	1109.793	149				
Guilt	Between groups	66.609	4	16.652	2.170	2.37	Not Sig.
	Within groups	1112.484	145	7.672			
	Total	1179.093	149				
OCD	Between groups	26.345	4	6.586	3.138	2.37	Sig.

	Within groups	304.329	145	2.099			
	Total	330.673	149				

In order to achieve this aim, which is comparing ages group of participants and its relation to the level of psychological disorders and all dimensions, one way ANOVA method was used, and its reported that there is a significant main effect of ages with the psychological disorders and all dimensions, the ages of participants were distributed among (5) groups {(21 - 25), (26 - 30), (31 - 35), (36 - 40), (41 & more)}. From the above table can be noticed that the F-Calculated value of psychological disorders and all

dimensions (except for the feeling of guilt) are bigger than the F-Table value. which means that there are significant differences in the level of psychological disorders and all dimensions (except for the feeling of guilt) according to the ages of the participants, at the degree of freedom (4) horizontally & (145) vertically at the level of (0.05). In order to determine the trend of differences, the research used (Scheffe) for their second analyzes and it was found that all the values of comparison were statistically significant at the level of (0.05), see table (6).

Table (6) Scheffe method to show the values of the differences between means of all dimensions among participants according to variable age

Variable	Age	N	Mean	Std. deviation	Comparing Value	Sig. 0.05
Psychological disorders	36 – 40	40	187.88	7.552		Sig.
	41 & more	24	186.00	8.434	1.88	
	31 – 35	47	184.51	14.559	3.37	
	21 – 25	9	180.00	10.452	7.88	
	26 – 30	30	179.13	12.423	8.75	
	Total	150	184.30	11.732		
Anxiety	36 – 40	40	42.60	1.692		Sig.
	41 & more	24	42.54	1.769	0.06	
	31 – 35	47	42.21	2.074	0.39	
	21 – 25	9	40.78	2.167	1.82	
	26 – 30	30	40.57	3.025	2.03	
	Total	150	41.95	2.292		
Depression	36 – 40	40	42.03	2.118		Sig.
	31 – 35	47	41.19	2.525	0.84	
	41 & more	24	40.75	3.326	1.28	
	26 – 30	30	39.47	3.812	2.56	
	21 – 25	9	39.44	3.468	2.59	
	Total	150	40.89	3.039		
Phobia	41 & more	24	42.04	2.074		Sig.
	36 - 40	40	41.98	2.370	0.06	
	31 – 35	47	41.28	2.668	0.76	
	26 – 30	30	40.17	3.130	1.87	
	21 – 25	9	39.78	3.346	2.26	
	Total	150	41.27	2.729		
OCD	36 – 40	40	19.10	1.374		Sig.
	31 – 35	47	18.96	1.318	0.14	
	41 & more	24	18.63	1.245	0.47	
	21 – 25	9	18.44	1.509	0.66	

	26 – 30	30	17.97	1.829	1.13	
	Total	150	18.71	1.490		

{(21 – 25; N= 9), (26 – 30;N=30)}is ranked as a lower level of psychological disorders and all dimensions. In Researcher's opinion, the result may be explained by the fact that the older women was more pain and suffering in case of miscarriage than the women who is younger, Because they are old, hopeless to get pregnant again

...

4.2.2. Differences in Psychological Disorders according to the number of miscarriages variable:

The above table indicates that, the level of psychological disorders, anxiety, depression, and OCD were same higher among age group (36 – 40; N= 40). and Phobia is the fourth dimension of psychological dimensions was higher among age group (41 & more) and the age group (41& more; N= 24) is ranked as a second level of psychological disorders and anxiety. But the age group (31 – 35; N=47) is ranked as a second level of depression and OCD. And age group (36 – 40; N=40) is ranked as a second level of Phobia. The results in the above table also showed that the age groups

Table (7) One –way ANOVA to examine statistical differences in psychological disorders and all dimensions according to variable number of miscarriages.

Variable	Source of contrast	Sum of squares	df	Mean square	F value		Sig. 0.05
					Calculated	Tab	
Psychologic al. disorders	Between groups	3400.034	2	1700.017	14.606	3.00	Sig
	Within groups	17109.466	147	116.391			
	Total	20509.500	149				
Anxiety	Between groups	124.377	2	62.189	13.887	3.00	Sig
	Within groups	658.296	147	4.478			
	Total	782.673	149				
depression	Between groups	96.301	2	48.150	5.530	3.00	Sig.
	Within groups	1279.993	147	8.707			
	Total	1376.293	149				
Phobia	Between groups	193.971	2	96.985	15.567	3.00	Sig.
	Within groups	915.823	147	6.230			
	Total	1109.793	149				
Guilt	Between groups	113.919	2	56.960	7.861	3.00	Sig.
	Within	1065.174	147	7.246			

	groups						
	Total	1179.093	149				
OCD	Between groups	25.342	2	12.671	6.100	3.00	Sig.
	Within groups	305.331	147	2.077			
	Total	330.673	149				

In order to achieve this aim, which is comparing number of miscarriages {(1 – 2), (3 - 4), (5 & more)} group of participants and its relation to the level of psychological disorders and all dimensions, one-way ANOVA method was used, and its reported that there is a significant main effect of number of miscarriages with the psychological disorders and all dimensions, the number of miscarriages of participants were distributed among (3) groups {(1 – 2), (3 - 4), (5 & more)}. From the above table can be noticed that the F-Calculated value of psychological

disorders and all dimensions are bigger than the F-Table value. which means that there are significant differences in the level of psychological disorders and all dimensions according to the number of miscarriages of the participants, at the degree of freedom (2) horizontally & (147) vertically at the level of (0.05). In order to determine the trend of differences, the research used (Scheffe) for their second analyzes and it was found that all the values of comparison were statistically significant at the level of (0.05), see table (8).

Table (8) Scheffe method to show the values of the differences between means of all dimensions among participants according to variable number of miscarriages

Variable	miscarriages	N	Mean	Std. deviation	Comparing Value	Sig. 0.05
Psychological disorders	5 & more	31	188.06	6.444		Sig.
	3 – 4	86	186.35	9.140	1.71	
	1 – 2	33	175.42	16.547	12.64	
	Total	150	184.30	11.732		
Anxiety	5 & more	31	42.55	2.249		Sig.
	3 – 4	86	42.40	1.661	0.15	
	1 – 2	33	40.24	2.916	2.31	
	Total	150	41.95	2.292		
Depression	5 & more	31	41.48	2.080		Sig.
	3 – 4	86	41.26	3.061	0.22	
	1 – 2	33	39.39	3.325	2.09	
	Total	150	40.89	3.039		
Phobia	5 & more	31	42.32	1.777		Sig.
	3 – 4	86	41.70	2.459	0.62	
	1 – 2	33	39.18	3.097	3.14	
	Total	150	41.27	2.729		
Guilt	5 & more	31	42.23	2.061		Sig.
	3 – 4	86	41.56	2.738	0.67	
	1 – 2	33	39.73	3.065	2.5	
	Total	150	41.29	2.813		
OCD	5 & more	31	18.94	1.209		Sig.
	3 – 4	86	18.93	1.370	0.01	
	1 – 2	33	17.94	1.784	1	
	Total	150	18.71	1.490		

The above table indicates that, the level of psychological disorders and all dimensions (anxiety, depression, phobia, guilt, OCD) were same higher among number of miscarriages group (5 & more; N= 31). And the number of miscarriages group (3 – 4; N= 86) is ranked as a second level of psychological disorders and all dimensions (anxiety, depression, phobia, guilt, OCD). The results in the above table also showed that the number of miscarriages group (1 – 2; N=33) is ranked as a lower level of psychological disorders and all dimensions (anxiety, depression, phobia, guilt, OCD) . In Researcher's opinion, the

result may be explained by the fact that the women was more pain and suffering in case of higher number of miscarriages than the women of lower number of miscarriages, whatever the reason, the risk of miscarriage may cause greater harm to the mother. Its repetition negatively affects the uterus, and leads to its weakness and damage. Inability to get pregnant.

4.2.3. Differences in Psychological Disorders according to the Academic Achievement variable:

Table (9) One –way ANOVA to examine statistical differences in psychological disorders and all dimensions according to variable academic achievement.

Variable	Source of contrast	Sum of squares	df	Mean square	F value		Sig. 0.05
					Calculated	Tab	
Psychological disorders	Between groups	301.017	3	100.339	0.725	2.60	Not Sig
	Within groups	20208.483	146	138.414			
	Total	20509.500	149				
Anxiety	Between groups	3.449	3	1.150	0.215	2.60	Not Sig
	Within groups	779.225	146	5.337			
	Total	782.673	149				
depression	Between groups	12.066	3	4.022	0.430	2.60	Not Sig
	Within groups	1364.227	146	9.344			
	Total	1376.293					
Phobia	Between groups	6.937	3	2.312	0.306	2.60	Not Sig
	Within groups	1102.857	146	7.554			
	Total	1109.793	149				
Guilt	Between groups	6.082	3	2.027	0.252	2.60	Not Sig
	Within groups	1173.012	146	8.034			
	Total	1179.093	149				
OCD	Between	10.671	3	3.557	1.623	2.60	Not

	groups						Sig
	Within groups	320.003	146	2.192			
	Total	330.673	149				

In order to achieve this aim, which is comparing academic achievement {(Illiterate, Middle school & less), (Secondary), (Diploma & higher)} group of participants and its relation to the level of psychological disorders and all dimensions, one way ANOVA method was used, and its reported that there is no significant main effect of academic achievement with the psychological disorders and all dimensions, academic achievement of participants were distributed among (4) groups {(Illiterate) (Middle school & less), (Secondary), (Diploma & higher)}. From the above table can be noticed that the F-Calculated value of psychological disorders and all dimensions are smaller than the F-Table value. which means that there are no significant differences in the level of psychological disorders and all dimensions according to the academic achievement, at the degree of freedom (3) horizontally & (146) vertically at the level of (0.05). In Researcher's opinion, the result may be explained by the fact that the academic achievement levels did not affect women's abortions. This may due to the difficult painful situation for women, regardless of their academic achievement.

4.3. Research's overall findings:

- The prevalence rate of psychological disorders and all dimensions (anxiety, depression, phobia, guilt, OCD) are high and significance among participant's women after abortion.
- There are significant differences in the prevalence rate of psychological disorders and all dimension (anxiety, depression, phobia, OCD) according to the variable age groups among participants. Except for the dimension of guilt, it is no significant.
- There are significant differences in the prevalence rate of psychological disorders and all dimension (anxiety, depression, phobia, guilt, OCD) according to the variable of number of miscarriage's group among participants, women after abortion.

- There are no significant differences in the prevalence rate of psychological disorders and all dimension (anxiety, depression, phobia, guilt, OCD) according to the variable of academic achievement group among participants, women after abortion.

4.4. Recommendations:

- Helping women after abortion resort to complete rest and avoid fatigue, until the body returns to normal and to reduce the side effects that can occur.
- Family and friends should provide emotional support during the nervous period that a women experiences after an abortion to improve and develop their hope in life and to increase more positive emotions, behavior and thoughts .
- It is necessary to eat foods rich in iron such as spinach, vegetables and lean meat, because after the abortion the mother loses a lot of blood.
- Government need to pay more attention to women and provide health care services to protect them from different kind of psychological disorders and increasing their quality of life.

4.5. Suggestions:

- Future studies are needed to further explore the relation between psychological disorders and all dimensions related with suicidal tendency, feelings of inferiority among women after abortion .
- Future studies are needed to further explore the relation between psychological disorders related with the Big Five Factors of personality.
- Future studies are needed to further explore the relation between psychological disorders related with hope in life, the meaning in life.

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Appendix:

Appendix (1) Presenting the scale in its form to numbers of specialists

Salahaddin University – Erbil
Erbil Technical University
College of Education
Shaqalawa College of Technology
Department of Educational and
Nursing Department

Psychological Counseling

Dear Professor: Greeting and respect:
Researchers will do a research under the title of (Psychological **disorders associated with women after abortion**) in this regard to measure psychological disorders researcher's depending on Mental Health literature , and that are (40) items distributed in five dimensions, the scale has five alternative answers for each question that are start from (5-to Always), (4-to Frequently), (3-to some times), (2-to Scarcely), (1-to Never).

Researchers define psychological disorders as (the psychological or behavioral patterns that an individual feels as a result of his feeling of distress or helplessness, as these disorders are considered abnormal development in mental skills, and it is believed that they occur as a result of the emergence of psychological stresses and painful events in life, due to the complex interaction that occurs between factors genetics and life experiences of the individual).

In this regard, we will be thanking to use your experience and knowledge in this field, and read the paragraph of each scale and clarify their validity.

Your full name: Scientific title : Specialize : Work place :

Researchers: 1. Asst.Lecturer Nihayet Abdulla Sheck 2. Dr.Vian Haji Rasul

3. Professor.Dr. Moaid Ismail Jarjis

Anxiety Symptoms:

N	Items	Acceptable	Unacceptable	Note
1	I feel tense.			
2	I feel weak and tired.			
3	I have difficulty sleeping.			
4	I feel irritable and impatient.			
5	I feel tension in the muscles.			
6	I feel dizzy and headache.			
7	I feel an increase in my heart rate and breathing.			
8	I feel bad eating habits.			
9	I feel headache.			

Depression Symptoms:

N	Items	Acceptable	Unacceptable	Note
10	I feel hopeless.			
11	I find it difficult to be able to make a decision.			
12	I feel losing the desire to go about my normal daily activities.			
13	Because of my lack of focus I cannot solve my problems.			
14	I lost the desire to have sex.			
15	I feel a lack of respect or value.			
16	I feel underweight.			
17	I cry for no reason.			
18	I feel lonely .			

Phobia Symptoms:

N	Items	Acceptable	Unacceptable	Note
19	I am afraid of not being able to get pregnant again.			
20	I feel insecure in my life.			
21	I am terrified of the miscarriage.			
22	I feel chest pain.			
23	I feel unable to control myself.			
24	I Feel alienated or separated from the environment			
25	I expect the worst consequences because of the miscarriage incident.			
26	I am afraid of situations in which others judge me negatively.			
27	I feel that my life is threatened.			

Guilt Symptoms:

N	Items	Acceptable	Unacceptable	Note
28	I feel guilty about the abortion.			
29	I deserve the blame.			
30	I feel hate and aversion from myself.			

31	I regret what happened to me.			
32	I deserve myself.			
33	I blame others for what happened to me.			
34	I blame myself daily.			
35	I am afraid of criticizing others.			
36	I am tormented for not forgetting my longing for the child.			

OCD symptoms:

N	Items	Acceptable	Unacceptable	Note
1	I have thoughts about shouting obscenities in a crowd.			
2	I imagine disturbing sexual images.			
3	I am afraid of getting contaminated by touching things or shaking hands.			
4	I feel comfortable doing what I have in mind.			

Appendix (2) Names of Specialists for Translate & Face Validity

N	Scientific title	Full Names	Specialty	College/ university
1	Professor Dr.	Yousif Hama Salih Mustafa	Personality & Mental Health	College of Arts Salahaddin University- Erbil
2	Professor Dr.	Omer Ibrahim Aziz	Educational Psychology	College of Arts Salahaddin University- Erbil
3	Professor Dr.	Hamdya Mirxan Ahmad	maternity Nursing	College of Health Sciences / Erbil Medical University
4	Professor Dr.	Rezan Ibrahim Ali	Mental Health	College of Arts Salahaddin University- Erbil
5	Assistant Professor Dr.	Tiran Jamil piro	maternity Nursing	College of Nursing Erbil Medical University
6	Assistant Professor Dr.	Abdulqader Hussin Hamad	Mental Health Nursing	Erbil Medical University
7	Lecturer Dr.	Assma Subhi Muhyadin	Psychiatrist	Erbil Psychiatric Hospital
8	Lecturer Dr.	Saman Sharif Aziz	Psychiatrist	Erbil Psychiatric Hospital
9	Lecturer Dr.	Tara Xasraw Yasin	Obstetrics and Gynecology	obstetrics Hospital
10	Lecturer Dr.	Shilan Omer Jafar	Obstetrics and Gynecology	College of Medicine/Erbil Teaching Hospital
11	Lecturer Dr.	Nishtiman Azad Abdulla	Psychiatrist	Erbil Psychiatric Hospital
12	Lecturer Dr.	Muslih Sabir Karim	Psychiatric	Erbil Medical

			Nursing	University
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Appendix (3)

Salahaddin University – Erbil
 College of Education
 Department of Educational and
 Psychological Counseling

Erbil Technical University
 Shaqlawa College of Technology
 Nursing Department

Dear Madam.... Greetings and appreciation....

There are a number of paragraphs at your disposal, please read all the paragraphs and specify the ones that apply to you, by placing a signal () under the alternatives to the paragraphs that suit you, note: that there is no right or wrong answer, the correct answer is the one that expresses what you really feel, your answer will be Keep confidential and there is no need to write your name, please do not leave any paragraph without a response, thank you for your cooperation. Please fill in the following information.

Age: () number of abortions: ()

Academic achievement: illiterate (), Middle school & less (), Secondary () Diploma and higher ().

Researchers: 1. Asst.Lecturer Nihayet Abdulla Sheck 2. Dr.Vian Haji Rasul 3.Professor.Dr. Moaid Ismail Jarjis

Appendix (3) The last version of scale after analyzing and for final survey

Dimensions	N	Items (only 39 items are valid in the scale for application)	Always	Frequently	Some times	Scarcely	Never
Anxiety	1	I feel tense. (Invalid)					
	2	I feel weak and tired.					
	3	I have difficulty sleeping.					
	4	I feel irritable and impatient.					
	5	I feel tension in the muscles.					
	6	I feel dizzy and headache.					
	7	I feel an increase in my heart rate and breathing.					
	8	I feel an appetite disorder.					
	9	I suffer from sudden outbursts.					
Depression	10	I feel hopeless.					
	11	I find it difficult to be able to make a decision.					
	12	I feel a loss of interest in normal daily activities.					
	13	Because of my lack of focus I cannot solve my problems.					
	14	I lost the desire to have sex.					

	15	I feel a lack of respect or value.					
	16	I feel underweight.					
	17	I cry for no reason.					
	18	I feel lonely .					
Phobia	19	I am afraid of not being able to get pregnant again.					
	20	I suffer from a loss of security in my life.					
	21	I am terrified of the miscarriage.					
	22	I feel chest pain.					
	23	I feel unable to control myself.					
	24	I feel alienated from others.					
	25	I expect the worst consequences because of the miscarriage incident.					
	26	I am afraid of situations in which others judge me negatively.					
	27	I feel that my life is threatened.					
Guilt	28	I feel guilty about the abortion.					
	29	I deserve the blame.					
	30	I feel hate and aversion from myself.					
	31	I regret what happened to me.					
	32	My self-esteem was lowered by what happened.					
	33	I blame others for what happened to me.					
	34	I criticize myself for what I suffer.					
	35	I am afraid of criticizing others.					
	36	I suffer from the experience of losing a child.					
	37	I have thoughts about shouting obscenities					

OCD		in a crowd.					
	38	I imagine disturbing sexual images.					
	39	I am afraid of getting contaminated by touching things or shaking hands.					
	40	I feel comfortable doing what I have in mind.					