Relationship between Psychological Resilience and Depression among Women with Habitual Abortion or without: A Comparative Study.

Hussein Mohamed Hussein Bakheet[1], Nadia Abdalla Mohamed[2,] and Sabah Saleh Hassan[3]

[1]Professor of Psychology at Qena Faculty of Arts, South Valley University, Egypt
[2]Assistant Professor of Obstetrics and Gynecology, Faculty of Nursing, South valley University, Egypt
[3]Lecturer of Psychiatric and Mental Health Nursing, Faculty of Nursing, Minia University, Egypt.
Correspondence: Sabah Saleh Hassan. Address: Faculty of Nursing, Minia University, Egypt.
E-mail: sabahsaleh99@yahoo.com

Abstract: Depression is considered one of the main psychological disturbances resulted from crises like repeated abortions. **The study aims** to disclose the relationship between depression and psychological resilience among women with habitual abortion and those who don't. A **descriptive correlational design** was used. The study **hypotheses** were: 1.There is a correlation between repeated abortion and resilience among women who experience repeated abortion. 2. Women who experience repeated apportion will have depression and negative correlation in psychological resilience dimensions. A **convenience sample** of 100 women attending the Mother and Child Center were selected to participate in the study. Fifty women were pregnant with no history of abortion, and fifty women had a history of repeated abortion. **The study was conducted at** tow Mother and Child Health Centers in Qena Governorate, Egypt. **The tools of the study** were: 1. a list that illicit data regarding social and economic levels, 2. A scale of psychological resilience, and 3. a scale of depression. The tools were measured for validity and reliability and prove to be valid and reliable. **The results** of the study validated the research hypothesis. There are a correlation between repeated abortion and depression. The study **recommended** counseling of women with repeated abortion focusing on aspects of psychological resilience.

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1. Introduction

Psychology has immersed and engaged a lot in studying the negative aspects of human beings' lives like anxiety, misery and psychological diseases, as it is a science for solving problems only. Its contributions, analyses and premises are very few for studying those illuminated aspects of human lives like hope, optimism, love, contentment, flux (flow)and patience, as well as the most sophisticated ones like resilience and sensing the value of life. The psychological resilience is considered one of the main fields of the contemporary literature of psychology. Resilience helps the individual not only be protected against emotional disorders but also it enables him/her to face adversity and misfortunes, solve problems and efficiently respond to difficult situations such as depression (Aroian, et al. 2000).

Psychological resilience is considered one of the greatest structures of the positive psychology. The positive psychology is the approach that maximizes the human powers as they are originated in humans facing those common and prevalent approaches which focus on shortcomings and human weaknesses (Al-A'sar, 2010). Besides, it plays a critical role in successfully responding to crises and challenges and in relieving stress and depression. Also, Gohar (2014) indicated that there is a statistically significant positive-correlation between the psychological resilience and methods for facing stresses.

Depression is considered one of the main (psychiatric) psychological disturbances resulted from crises like repeated abortions. It is not only the most prevalent one in the world but also the oldest registered psychological and mental disturbance in the human medical heritage. A report, issued by the World Health Organization in 2007, indicated that the prevalence rate of psychological and neurological disorders in the world is 450 million people suffering from psychological disturbances, 873 thousand people of them commit suicide a year with 60% because of depression (WHO 2007). Depression is one of the most prevalent diseases as its rate ranges from 5% – 7% in the fourth place among all other diseases (Okasha and Okasha, 2009). Many studies across different cultures have indicated that depression is considered one of the most prevalent disorders in the developing countries more than in the developed ones; differences reached statistical significance.

In this regard, Brenda et al. (2007) noted that humanity had suffered much more from psychological

depression than all other diseases. Perhaps the ability to conduct psychological resilience is considered one of the most important responses which help an individual positively deal and comply with crises like repeated abortion, as that resilience is a major factor for confronting and resisting those crises.

Health damages like repeated abortion, the sudden death of the mother, neurological and psychological trauma, hemorrhage and bleeding, infection and inflammation, and other complications that may be early or late can cause depression. These effects can cause infertility and disorder of mother's blood circulation, as well as sadness, anxiety and depression (Asseba'ey, 1997).

Repeated pregnancy abortion is considered one of the most prevalent phenomena among women. Abortion usually occurs before the twentieth (20^{th}) week of pregnancy three times or more in a row. Three percent of women suffer from this problem and it is more serious with women over 35 years. However, 80% of pregnancies can continue with women who have experienced abortion once (Ameen 2010).

Further, Kossakowska (2016) has concluded that depression is more dangerous with women who have experienced abortions repeatedly than with those who haven't. Likewise, Kagamiet al. (2014) found that those women aborted repeatedly suffer from psychological incompatibility. A study conducted by Evelyn et al. (2016) indicated that women who aborted repeatedly view life negatively and feel depressed and worried.

Psychological resilience enables individuals positively handle and comply with daily difficult situations. It is considered a major factor for confronting and resisting trauma without being broken or deformed. Besides, it provides protection to individuals against emotional disturbances. It develops the one's ability to face adversity and solve problems. Eskin's study (2013) concluded that people with psychological resilience have the adaptation skills to difficult situations in life. The psychological resilience is important for those women exposed to such crises, as it supports them all to effectively stand against, and positively live with those circumstances (Abu Halawa, 2013).

The study problem is embodied in the phenomenon of repeated pregnancy abortion from which some women suffer as it has a dangerous impact on the mother's health physically and psychologically.

Objectives of the Study:

The study aims at:

- Disclosing the relationship between depression and psychological resilience among women who experience abortion repeatedly and those who don't.
- Knowing how variation of socio- economic level correlate to depression and psychological resilience among those who experience abortion repeatedly.
- Knowing how psychological resilience and depression vary with those who experience abortion repeatedly and those who don't according to the variation of their residency (rural and urban).

Significance of the Study:

The study is important because its topic is not frequently studied. The study addresses the depression and psychological resilience among women who experience pregnancy abortion repeatedly. It is considered one of the recent topics in which researchers are interested. The importance of the study is shown in the theoretical rooting of psychological resilience as one of the concepts of positive psychology. Knowing the relationship between psychological resilience and depression is important in the light of some demographic changes by setting two scales; one to measure psychological resilience and the other to measure depression, and knowing the differences between those who experience abortion repeatedly and those who don't regarding psychological resilience and depression.

Hypotheses of the Study:

The study hypotheses are combined together from the theoretical framework, the problem, the objectives and the study significance. Therefore, they are as follows:

1. There is a correlation between depression symptoms and resilience among women who experience repeated abortion.
2. There are statistical significant differences between women who experience repeated abortion and those who don't regarding depression and psychological resilience.
3. Residency (Urban or Rural) of woman who experience repeated apportion will correlate positively to their psychological resilience and depression.
4. Socio economic level will correlate to depression and psychological resilience among women with repeated abortion

2. Materials and Method

Study Design:

The present study adopted the comparative correlative descriptive design.

Sample of the Study:

A convenience sample of 100 pregnant women attending the Mother and Child Health Center were selected to participate in the study. They were divided into two groups: Fifty women who experience repeated abortion and 50 women who don't. It has been taken into account that the samples are matching

in age, social and economic levels and some demographic characteristics.

Selection criteria:

- Woman's age ranged from 25 to 45 years old, either they are from rural or urban areas.
- Fifty women are pregnant with no history of abortion or other medical or gynecological morbidity.
- Fifty women have a history of repeated abortion.

Setting:

The sample selection and so the data collection took place at the Mother and Child Health Center in Qena, Egypt.

Tools of the Study:

The study tools were as follows:

1. A list that illicit data regarding social and economic levels that was developed by Abdel Wahab (2012).
2. A scale of psychological resilience developed by the first author.
3. A scale of depression developed by the first author.

These tools can be reviewed as follows:

First: The List of Social and Economic Levels

It is prepared by Abdel Wahab (2012) in order to measure the economic and social levels. The list consisted of three parts. The first part covered basic data relating to age, gender marital status, and education. The second part covered the social level. It consisted of some items related to the social level of the family; the social class of the family, and educational level of the family members. The third part covered the economic level of the family; for example, income resources, average income of the family, housing data, properties of household appliances and how they spend their free time. The scores were graded according to their values on the list. Then special standards were prepared on the list according to data of the current sample. Raw grades were turned into T scores with a mean of 50 and a standard deviation of 10 in order to use them to divide the sample members into low, medium and high relating to economic and social levels.

Psychometric Competency of the Scale:

The psychometric competency covers characteristics of reliability and validity as follows:

Validity:

The validity of the scale was measured via three methods:

First: Construct Validity:

The scale was drafted and prepared in the light of revising and reviewing the theoretical heritage represented in theories, scales and procedural definitions, as well as applying and conducting an open questionnaire. Therefore, the scale becomes valid and honest regarding its structure and formation.

Second: Validity of Arbitrators:

The scale was presented to eight professors of psychology. All items, which were not accepted by 80% of arbitrators, were excluded.

Third: Criterion-Related Validity:

This validity was measured between the current scale and that of psychological resilience prepared by Sermini (2014). Correlation coefficients vary from 0.697 in the secondary dimensions to 0.897 in the total score. These coefficients indicated that the test has a good level of validity.

Reliability:

It was measured using three methods which are Cronbach's Alpha, Split-Half and Internal Consistency. The reliability was measured and calculated with the total sample of the study. Reliability coefficients vary when using Cronbach's Alpha to be 0.845 with the Optimism dimension, 0.833 with the Social Relationships dimension, 0.836 with the Self-Efficacy dimension, 0.852 with the Social Support dimension and 0.846 with the Problem Solving dimension. The Alpha reliability coefficient reached 0.942 at the total scale. Using the Split-Half, the scale was divided into two sections. The first section contained the single items and the other one contained the even items. The correlation coefficients after correction vary to be 0.911 with the Optimism dimension, 0.894 with the Social Relationships dimension, 0.909 with the Self-Efficacy dimension, 0.951 with the Social Support dimension and 0.911 with the Problem Solving dimension. The Alpha reliability coefficient reached 0.940 at the total scale. All have a level of significance at 0.001. Using the Internal Consistency, the correlation coefficient varied between the item and the total score of the dimension to be 0.353 with item (paragraph) 37 and 0.678 with item 9. It varied between the item and the total score of the scale to be 0.355 with item 16 and 0.670 with item 21. It was 0.919 between Optimism and the total score of psychological resilience scale. It varied between the item and the total score of the dimension to be 0.413 with item 2 and 0.723 with item 12. It varied between the item and the total score of the scale to be 0.301 with item 32 and 0.638 with item 46. It was 0.839 between Social Relationships and the total score of psychological resilience scale. It varied between the item and the total score of the dimension to be 0.324 with item 45 and 0.703 with item 36. It varied between the item and the total score of the scale to be 0.361 with item 45 and 0.176 with item 36. It was 0.912 between Self-Efficacy and the total score of psychological resilience scale. It varied between the item and the total score of the dimension to be 0.483 with item 50 and 0.736 with item 14. It varied between the item and the total score of the scale to be 0.442 with item 34 and 0.663 with item 10. It is 0.893

between Problem Solving and the total score of psychological resilience scale. It varied between the item and the total score of the dimension to be 0.422 with item 23 and 0.712 with item 5. It varied between the item and the total score of the scale to be 0.249 with item 23 and 0.719 with item 11. It was 0.860 between Social Support and the total score of psychological resilience scale.

Second: The Scale of Psychological Resilience:

The scale goes through some steps summarized as follows:

- Analyzing theories and researches related to psychological resilience in order to know various and different viewpoints interpreting psychological resilience for identifying its components.
- An open questionnaire was designed to be applied and conducted with a sample of 10 women who experience repeated abortion and those who don't. The results helped to write some items.
- Reviewing and revising previous scales which aimed at measuring psychological resilience as it was considered an important factor identifying items of the scale, and referring to previous models as a valid standard. As well as recognizing practically how to write items and knowing how to build scales technically. Some of those scales were: the scale of psychological resilience prepared by Mary Bolton Green (2010) which consists of 14 items, the scale of psychological resilience prepared by Young & Onwukwe (2010) which consisted of 36 items, the scale of psychological resilience prepared by Ebony, Johnson (2011) which consisted of 46 items, the scale of psychological resilience prepared by El-Beheiry (2011) which consisted of 36 items, the scale of psychological resilience prepared by Amer (2012) which consisted of 32 items and the scale of psychological resilience prepared by Sermini (2014).

Components of the Scale:

The scale was formed basically and initially from 55 items. After arbitration, 5items were deleted. Hence, the final number of items became49 ones distributed on 5 components. The first component was 'Solving Problems' which consisted of nine items; 1, 10, 14, 18, 27, 34, 43, 49 and 50. The second component was the 'Social Relationships' which consisted of eight items; 2, 6, 12, 17, 22, 32, 40 and 46. The third component was 'Self-Efficacy' which consisted of thirteen items; 3, 4, 8, 15, 19, 24, 29, 36, 38, 41, 42, 45 and 48. The fourth component is 'Optimism' which consisted of ten items; 9, 13, 16, 21, 31, 35, 37, 39, 44 and 47. The fifth component was 'Social Support' which consisted of ten items; 5, 7, 17, 20, 23, 25, 26, 28, 30 and 33. By identifying alternatives of responses via reviewing scales related to that variable and other previous studies, some alternatives of responses were identified via a tri-interval scale represented in three responses (always – sometimes – rarely).

Third: The Scale of Depression:

The scale goes through some steps summarized as follow:

- Analyzing theories and researches related to depression in order to know various and different viewpoints interpreting depression for identifying its components.
- A focus group was formed and an open ended questionnaire was designed to be applied and conducted with a sample of 10 women who experience repeated abortion and those who don't. Results helped write some items.
- Reviewing and revising previous scales including: the list of depression by Beck (1961) that was translated by Abdel Khalek (1996) which consisted of 15 items, the scale of anxiety and depression derived from the list of disease symptoms translated by El-Beheiry (1984) which consisted of 30 items, the list of depression symptoms by Hamilton (1960)which consisted of 17 items, the scale of depression by Beck (1991) translated by Al-Shennawy and Khedr (1991)which consisted of 20 items, the scale of depression by Harrington and Rutter (2006) which consisted of 15 items, and the scale of depression by Sermini (2014) which consisted of 54 items.

Components of the Scale:

In the light of the previous analysis and identifying what is common and mutual, the main components of the scale were extracted. Items were designed according to terms of scientific formulation. The scale was formed basically and initially from 50 items. After arbitration, 10 items were deleted. Hence, the final number of items became40items distributed on 4 components. The first component is 'Physical Symptoms' which consisted of eleven items; 1, 5, 9, 14, 18, 23, 27, 30, 34, 37 and 40. The second component was 'Sentimental Symptoms' which consisted of eleven items; 4, 10, 12, 16, 19, 21, 25, 32, 35, 38 and 39. The third component is 'Cognitive Symptoms' which consists of ten items; 2, 6, 11, 15, 17, 20, 22, 26, 29 and 36. Finally, the fourth component was 'Behavioral Symptoms' which consisted of eight items; 3, 7, 8, 13, 24, 28, 31 and 33. By identifying alternatives of responses via reviewing scales related to that variable and other previous studies, some alternatives of responses were identified via a tri-interval scale represented in three responses (always – sometimes – rarely).

Psychometric Competency of the Scale:

The psychometric competency covered characteristics of reliability and validity as follows:

Validity:

The validity of the scale was measured and calculated via three methods:

First: Construct Validity:

The scale was drafted and prepared in the light of revising and reviewing the theoretical heritage represented in theories, scales and procedural definitions, as well as applying and conducting an open questionnaire. Therefore, the scale was valid and honest regarding its structure and formation.

Second: Validity of Arbitrators:

The scale was offered and presented to eight professors of psychology. All items, which were not accepted by 80% of arbitrators, were excluded.

Third: Criterion-Related Validity:

This validity was measured and calculated between the current scale and that of depression prepared by Beck. Correlation coefficients vary from 0.73 in the secondary dimensions to 0.86 in the total score. These coefficients indicate that the test has a good level of validity.

Reliability:

It was measured using three methods which were Cronbach's Alpha, Split-Half and Internal Consistency. The reliability was measured and calculated with the total sample of the study. Reliability coefficients vary when using Cronbach's Alpha to be 0.682 with the Physical Symptoms dimension, 0.584 with the Sentimental Symptoms dimension, 0.691 with the Cognitive Symptoms dimension and 0.664 with the Behavioral Symptoms dimension. The Alpha reliability coefficient reached 0.847 at the total scale. Using the Split-Half, the scale was divided into two sections. The first section contained the single items and the other one contains the double items. The correlation coefficients after correction vary to be 0.742 with the Physical Symptoms dimension, 0.648 with the Sentimental Symptoms dimension, 0.831 with the Cognitive Symptoms dimension and 0.760 with the Behavioral Symptoms dimension. The Alpha reliability coefficient reached 0.847 at the total scale. All have a level of significance at 0.001. Using the Internal Consistency, the correlation coefficient varied between the item and the total score of the dimension to be 0.079 with item (paragraph) 14 and 0.569 with item 34. It was 0.835 between Physical Symptoms and the total score of depression scale. It varied between the item and the total score of the dimension to be 0.213 with item 12 and 0.656 with item 35. It varied between the item and the total score of the scale to be 0.195 with item 12 and 0.611 with item 35. It was 0.878 between Sentimental Symptoms and the total score of depression scale. It varied between the item and the total score of the dimension to be 0.354 with item 15 and 0.621 with item 6. It varied between the item and the total score of the scale to be 0.221 with item 20 and 0.543 with item 4. It was 0.861 between Cognitive Symptoms and the total score of depression scale. It varied between the item and the total score of the dimension to be 0.248 with item 24 and 0.296 with item 33. It varied between the item and the total score of the scale to be 0.164 with item 24 and 0.580 with item 33. It was 0.851 between Behavioral Symptoms and the total score of depression scale.

Method

1. **Administrative approvals**: All the needed approvals were granted from the Ethical Committee, Faculty of Nursing and Faculty of Literature, Qena University. A formal letter was forwarded from the deans of the two Faculties to the directors of the hospitals to allow the researchers to collect the data.

2. **Ethical considerations**: Women who participated in the study were verbally approved to be interviewed by the researchers, they were informed that their participation is voluntary and they can withdraw at any moment without any penalty. They were assured that the information they give will be confidential and they will not be personally identified. After the data collection participant women were given a chance to ask questions and the researcher gave them health education class and answered all their questions related to pregnancy.

3. **Implementation process**

- **Phase one:** After getting the official approvals, the researchers started the process of preparation and validation of the study tools through reviewing the available literature, and selection of the sample. This phase took almost 4 months.
- **Phase two: Interviewing the study subjects for data collection.** Each woman was interviewed personally for a period from 45- 60 minutes according to her level of education and understanding of the questionnaire. The question was repeated and simplified to women in a standardized way. Women were given a chance to ask questions and the researchers gave them the needed health education and guidance regarding their pregnancy/ abortion and resilience. The data collection took around 2 months (2 days /week).
- **Phase three: Coding and analyzing the data**

The arithmetic mean, Pearson correlation coefficient, T-Score, and analysis of variance were utilized for data analysis.

3. Results

Table 1 showed no statistical significance differences between women in the study group and women who had no history of repeated abortion and they can be considered matching groups.

The First Hypothesis stated that: There is a correlation between depression symptoms and resilience among women who experience repeated abortion than those who don't.

Table 2 illustrated that there was statistical significant correlation between dimensions of psychological resilience and depression and repeated abortion, except for sentimental symptoms.

Table 3 clarified a negative correlation between dimensions of psychological resilience and depression among women who don't experience repeated abortion except for behavioral symptoms.

The Second Hypothesis stated that there are statistical significant differences between women who experience repeated abortion and those who don't regarding depression and psychological resilience.

To check the validity of the hypothesis, the significance of differences between women who experience repeated abortion and those who don't are calculated and measured regarding dimensions of psychological and resilience and depression using T test. **Table 4** validated the hypothesis and showed statistical significant differences between the women who experience repeated abortion and women who had no history of repeated abortion regarding all items of psychological resilience.

The Third Hypothesis: Residency (Urban or Rural) of woman who experience repeated apportion will correlate positively to their psychological resilience and depression.

Table 5 showed the results of analysis of binary variance of interaction between abortion and residency (urban and rural areas). It illustrated no statistical significant differences between psychological resilience and depression, with women who experience repeated abortion except for optimism, social support and problem solving where there was statistical significant relation which validate the hypothesis

The Fourth Hypothesis stated that economic and social levels will correlate to psychological resilience and or depression among women with repeated abortion.

Table 6 checked the validity of the hypothesis and found no significant relation (Null hypothesis) between repeated abortion and women's economic and social levels in the dimensions of psychological resilience and depression using analysis of binary variance 2 x3.

Table (1) Distribution of significance differences between women who experience repeated abortion and those who don't according to age, social and economic levels.

Significance of Differences	**Women with repeated abortion N = 50**		**Women with no repeated abortion N = 50**		**T Value**	**P-Value**
Variables	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Age	32.06	4.83	32.42	5.07	0.363	.091
Social and Economic Level	46.86	9.42	46.36	10.77	0.247	.072

Level of Significance= P ≤0.05

Table (2) Distribution of the differences in correlation coefficients between dimensions of psychological resilience and depression among women who experience repeated abortion

Psychological Resilience Dimensions	**Solving Problems**		**Social Relationships**		**Self-Efficacy**		**Optimism**		**Social Support**		**Total Score**	
Depression Dimensions	R	p	R	P	R	P	R	P	R	P	R	p
Sentimental Symptoms	0.182	No	0.242	No	0.139	No	0.175	No	0.202	No	0.202	No
Cognitive Symptoms	0.482	0.001	0.550	0.001	0.465	0.001	0.589	0.001	0.539	0.001	0.564	0.01
Behavioral Symptoms	0.336	0.05	0.382	0.05	0.325	0.001	0.460	0.001	0.380	0.001	0.405	0.01
Total Score	0.397	0.001	0.460	0.05	0.349	0.05	0.456	0.001	0.422	0.001	0.446	0.01

Level of significance = P ≤ 0.05

Table (3) Distribution of the differences in correlation coefficients between dimensions of psychological resilience and depression with women who don't experience repeated abortion.

Psychological Resilience Dimensions	**Solving Problems**		**Social Relationships**		**Self-Efficacy**		**Optimism**		**Social Support**		**Total Score**	
Depression Dimensions	r	p	R	P	R	P	R	P	R	P	R	p
Physical Symptoms	-0.080	No	-0.142	No	-0.061	No	-0.015	No	0.083	No	-0.055	No
Sentimental Symptoms	-0.347	0.05	-0.101	No	-0.246	No	-0.315	0.05	0.029	No	-0.311	0.5
Cognitive Symptoms	-0.015	No	0.008	No	-0.247	No	-0.149	No	-0.109	No	-0.183	No
Behavioral Symptoms	0.100	No	-0.056	No	-0.276	No	-0.326	0.01	0.067	No	-0.188	No
Total Score	-0.198	No	-0.148	No	-0.383	0.001	-0.383	0.001	0.039	No	-0.358	0.5

Level of significance = **P ≤ 0.05**

Table (4) Distribution of the significance differences between women who experience repeated abortion and those who don't regarding psychological resilience and depression

Significance of Differences	**Women experience repeated abortion (N=50)**		**Women who don't experience abortion (N=50)**		**T Value**	**P value**
Dimensions	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Physical Symptoms	19.6000	3.68117	15.7800	2.63640	5.966	0.001
Sentimental Symptoms	19.5000	3.10530	18.0400	2.86399	2.444	0.001
Cognitive Symptoms	17.6600	3.14682	16.3800	2.24872	2.340	0.001
Behavioral Symptoms	14.1400	2.57943	13.3400	2.13436	1.690	0.01
Total Score	70.9000	10.72714	63.5400	5.16349	4.371	0.001
Problem-Solving	18.7400	4.20791	22.7600	2.10500	-6.042	0.001
Social Relationships	16.7600	3.90479	19.5600	1.63083	-4.679	0.001
Self-Efficacy	25.9800	5.69816	31.5000	3.09872	-6.018	0.05
Optimism	20.9800	4.66638	23.6400	2.81222	-3.452	0.01
Social Support	20.7800	5.28490	24.7400	2.33701	-4.846	0.01
Total Score	103.2400	22.00608	122.2000	7.95908	-5.729	0.01

Level of significance =P ≤ 0.05

Table (5) Distribution of the interaction between abortion and accommodation

Dimensions	**Source of Variance**	**Freedom Scores**	**Mean of Squares**	**Total Squares**	**F Value**	**P value**
Physical Symptoms	Abortion (a)	1	58.41	58.41	4.61	0.05
	Accommodation (b)	1	0.808	0.808	0.064	No
	Interaction (a) x (b)	1	16.68	16.68	1.32	No
	In groups	96	12.67	1216.60		
Sentimental Symptoms	Abortion (a)	1	168.127	168.127	20.18	0.001
	Accommodation (b)	1	22.91	22.91	2.75	No
	Interaction (a) x (b)	1	0.246	0.246	0.030	No
	In groups	96	8.34	0.855		
Cognitive Symptoms	Abortion (a)	1	144.17	144.17	16.83	0.001
	Accommodation (b)	1	4.17	4.17	0.487	No
	Interaction (a) x (b)	1	8.65	8.65	1.01	No
	In groups	96	8.57	822.48		
Behavioral Symptoms	Abortion (a)	1	101.56	101.56	19.47	0.001

Dimensions	Source of Variance	Freedom Scores	Mean of Squares	Total Squares	F Value	P value
	Accommodation	1	1.72	1.72	0.330	No
	(b)	1	0.775	0.775	0.149	No
	Interaction (a) x (b)	96	5.22	0.575		
	In groups					
	Abortion (a)	1	1900.79	1900.79	21.56	0.05
	Accommodation	1	30.43	30.43	0.346	No
Total Score	(b)	1	56.28	56.28	0.939	No
	Interaction (a) x (b)	96	88.06	8453.77		
	In groups					
	Abortion (a)	1	294.08	294.08	26.56	0.001
	Accommodation	1	44.84	44.84	4.15	0.05
Problem-Solving	(b)	1	41.16	41.16	3.72	0.05
	Interaction (a) x (b)	96	11.07	1062.996		
	In groups					
	Abortion (a)	1	107.301	107.301	11.33	0.001
	Accommodation	1	10.02	10.02	1.06	No
Social Relationships	(b)	1	17.45	17.45	1.84	No
	Interaction (a) x (b)	96	9.47	908.93		
	In groups					
	Abortion (a)	1	572.63	572.63	29.18	0.001
	Accommodation	1	227.27	227.27	10.21	No
Self-Efficacy	(b)	1	52.96	52.96	2.79	No
	Interaction (a) x (b)	96	19.62	1883.77		
	In groups					
	Abortion (a)	1	162.25	162.25	10.77	0.001
	Accommodation	1	100.81	100.81	6.69	0.01
Optimism	(b)	1	2.48	2.48	0.164	No
	Interaction (a) x (b)	96	15.07	1446.44		
	In groups					
	Abortion (a)	1	312.35	312.35	16.45	0.001
	Accommodation	1	124.43	124.43	6.55	0.05
Social Support	(b)	1	27.41	27.41	1.44	No
	Interaction (a) x (b)	96	18.99	1822.74		
	In groups					
	Abortion (a)	1	6699.133	6699.133	24.450	0.000
	Accommodation	1	2043.853	2043.853	7.460	0.008
Total Score	(b)	1	609.055	609.055	2.223	0.139
	Interaction (a) x (b)	96	273.989	26302.952		
	In groups					

Level of significance= p≤ 0.05

Table (6) Distribution of the interaction between abortion and economic and social levels

Dimensions	Source of Variance	Freedom Scores	Mean of Squares	Total Squares	F Value	P value
	Abortion (a)	1	82.98	82.98	6.66	0.05
	Economic Social Level	2	24.48	48.96	1.97	No
Physical Symptoms	(b)	2	7.41	14.82	0.595	No
	Interaction (a) x (b)	94	12.46	1071.31		
	In groups					
	Abortion (a)	1	326.33	326.33	37.85	0.01
	Economic Social Level	2	2.54	5.08	0.295	No
Sentimental Symptoms	(b)	2	4.264	8.527	0.495	No
	Interaction (a) x (b)	94	8.621	810.387		
	In groups					

Dimensions	Source of Variance	Freedom Scores	Mean of Squares	Total Squares	F Value	P value
Cognitive Symptoms	Abortion (a)	1	220.86	220.86	25.40	0.001
	Economic Social Level (b)	2	1.85	3.70	0.213	No
	Interaction (a) x (b)	2	7.15	14.30	0.822	No
	In groups	94	8.70	817.49		
Behavioral Symptoms	Abortion (a)	1	108.69	108.69	21.37	0.001
	Economic Social Level (b)	2	2.07	4.14	0.408	No
	Interaction (a) x (b)	2	10.75	21.50	2.11	No
	In groups	94	5.08	478.09		
Total Score	Abortion (a)	1	2860.45	2860.45	32.59	0.001
	Economic Social Level (b)	2	67.36	134.72	0.768	No
	Interaction (a) x (b)	2	82.87	165.74	0.944	No
	In groups	94	87.76	8249.99		
Problem-Solving	Abortion (a)	1	228.10	228.10	19.47	0.001
	Economic Social Level (b)	2	23.70	47.40	3.02	No
	Interaction (a) x (b)	2	0.067	0.134	0.006	No
	In groups	94	11.717	1101.43		
Social Relationships	Abortion (a)	1	73.11	73.11	7.94	0.01
	Economic Social Level (b)	2	25.07	50.14	2.72	No
	Interaction (a) x (b)	2	10.94	21.89	1.189	No
	In groups	94	9.20	865.13		
Self-Efficacy	Abortion (a)	1	275.40	275.40	12.77	0.001
	Economic Social Level (b)	2	26.87	53.47	1.25	No
	Interaction (a) x (b)	2	27.52	55.04	1.27	No
	In groups	94	21.57	2027.20		
Optimism	Abortion (a)	1	49.17	49.17	3.07	No
	Economic Social Level (b)	2	12.20	24.40	0.762	No
	Interaction (a) x (b)	2	10.53	21.07	0.659	No
	In groups	94	15.99	1503.81		
Social Support	Abortion (a)	1	154.15	154.15	7.28	0.001
	Economic Social Level (b)	2	14.70	29.39	0.713	No
	Interaction (a) x (b)	2	3.41	6.82	0.165	No
	In groups	94	20.62	1938.31		
Total Score	Abortion (a)	1	3561.277	3561.277	12.074	0.001
	Economic Social Level (b)	2	468.099	936.197	1.587	0.210
	Interaction (a) x (b)	2	142.514	285.027	0.483	0.618
	In groups	94	294.963	27726.497		

Level of significance= p≤ 0.05

4. Discussion and Conclusion

It is noted from table 1that there were no significant differences between women who experience repeated abortion and those who don't regarding variables of age, social and economic levels, and this reveals that the two samples are matched to exclude any attributes which might affect the study.

The findings of table 2 validated the first hypothesis and pointed to a positive correlation between all dimensions of psychological resilience Physical, cognitive, emotional, social), and depression with their dimensions among women who experience repeated abortion except for sentimental symptoms. This could be because they suffer from stress, severe

grief and hopelessness, feel disappointed, desperate, anxious and careless and have negative concept about themselves (their egos) with self-scolding (self-blame). Hence, resilience becomes less and inefficient in relieving their depression. Besides, they might tend to take antidepressants that might cause some side effects and lessens their self-efficiency on psychological resilience to relieve depression. It was reported by Zehra et al. (2010) that depression increases and rises during pregnancy especially when it is related to previous history of abortion, and that those women, who experience abortion earlier, are more likely to be aborted so they feel depressed. This result is congruent with the results of study conducted by Yueh (2012) which noted that there was a positive correlation between resilience and depression and that there was a positive correlation between social support and depression. Likewise, a study by Anderson (2012) indicated that most components of psychological resilience are able to predict those components of depression, and a study by Wingoet al. (2010) which showed that there was a positive correlation between psychological resilience and depression.

Regarding the correlation between psychological resilience and depression among women who don't experience repeated abortion, the current study results validated the second hypothesis and noted from table (3) that there was negative correlation between depression and pregnancy, so most women who don't have past experience of repeated apportion don't have depression. These findings could be because pregnancy (though stressful and exhausting) is an important and joyful life experience for most women and family members especially in upper Egypt, and the family mostly support pregnant woman, so they don't feel depressed and will have strong resilience. This finding is congruent with a study by Gohar (2014), Engman (2013) Eskin (2013), which showed that there wasan inverse correlation between resilience and depression and a positive statistical significant correlation between resilience and methods of coping with psychological stresses. Meanwhile, a study by Garcia and Calvo (2011) concluded that there was a negative statistically significant correlation between resilience and psychological stress (fatigue). In addition, Mautneret al. (2013) concluded that women with high psychological resilience get low level of depression. It can be explained that psychological resilience makes an individual be more compatible with life situations and challenges leading undoubtedly to relieve depression. High psychological resilience make an individual be less vulnerable to psychological stresses and combustion.

It is noted from table (4) that there was statistically significant increase in the mean total score of depression dimensions among women who experience repeated abortion than those who don't and there was decrease in the total mean scores of resilience and the total score of depression among those who experience repeated abortion. These findings indicated that women who experience repeated abortion feel upset and annoyed and think negatively of their life and future. This negative thinking can lead to lose of hope, recognition and awareness, be unable to appreciate and comprehend qualifications and strengths, and feel despair. This, in turn, can lead to focus only on negative sides and feel disappointed and depressed. This feeling leads also to grieve, loneliness, unhappiness, disorder in relation with the ego, lack of resourcefulness, failure, and reduction of enthusiasm and determination. Brenda et al. (2007) one of the most famous scholars and scientists of psychology, indicated that psychological depression causes more suffering to humans than any other disease does.

In the same line, Anderson (2000) added that depressed people lack involvement in relation with others around. They don't like expressing themselves and lack resources of social support. Besides, they don't have a harmonic look at their egos. Their cognitive skills are weak and their thoughts towards their egos and future are negative. They are expected to suffer high social isolation. Likewise, Taha (1993) mentions that depressed patients are controlled by grieve, solicitude, not enjoying life, desire to die, inactivity and lack of enthusiasm to work or production, and it is accompanied by insomnia and sleeping disorder, as well as suffering poor appetite and feeling unable to do and conduct tasks. Their life changes and they recognize that they are different from others as they lose initiative, suffer this change and be pessimistic of future.

However, women, who don't experience repeated abortion, feel satisfied, optimistic and hope with life, and that life satisfaction increases psychological resilience. This finding is congruent with the Hussein (2007) who concluded that an optimist tends to be confident and determined expecting success in doing tasks while facing and confronting challenges. Also, Hasanirad and Souri (2011) concluded that resilience attributes to good psychological state.

This result differs from those results of a study by Defson, &Neil (2013) who inferred that depression is the most common psychological disorder especially in communities with low economic and social levels. This is because getting antenatal care and medical or psychological consultation especially with repeated abortions is expensive and out of capabilities of people with low income or low social status. This in turn leads to lack of medical /psychological care and enrich the feeling of helplessness and depression. However, the findings from table (5, 6) showed that there were

no statistical significant differences in resilience and or depression, between women who experience repeated abortion and those who don't regarding to residency (urban and rural areas) and/or social status. These findings suggested a null hypothesis where there were no effects of residency and /or economic and social level on their depression or psychological resilience. This could be because families in general (rich or poor, in rural or urban) have strong social interaction and support in all cases withers with pregnant women or those with repeated apportions, they both will get the needed care and emotional support.

Recommendations

Based on the study results, the following recommendations are presented:

- Focusing on aspects as family support, antenatal care and /or psychological counseling to enhance and develop psychological resilience and relieve depression among women who experience repeated abortion.
- Preparing training courses for care givers of pregnant women about the importance of psychological resilience and confronting life stresses.
- Encouraging women who experience repeated abortion to attend counseling session to help them to alleviate their depression and use psychological resilience.
- More researches that focus on using psychological resilience among women who experience repeated abortion to alleviate depression and optimize happiness.

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