

*Full Length Research Paper*

# **A study on the reduction of the depression level and improvement of the psychological adjustment level of university students through a counseling programme, using Beck's theories of depression**

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**This study aims to investigate the reduction of university students' depression level as well as improvement of their psychological adjustment level through a counseling programme, using Beck's Theories of depression. The sample of this study was randomly selected, and categorized into two groups: experimental and control groups. The former consists of 15 students, who were counseled in a session per week, while the latter consists of 15 students, who were not counseled. The counseling was done in 8 sessions, with 90 minutes spent for each session. This study had two variables: counseling program was the independent variable, while dependent variable was depression and psychological adjustment. The results of One-way Analysis of Covariance (ANCOVA) show that in the depression level of the students, there were significant differences between the experimental group and control group; for psychological adjustment level, there were no significant differences between both groups.**

**Key words:** Beck's theory, depression, adjustment.

## **INTRODUCTION**

University students encounter many problems relating to their daily activities. Such problems might lead to non-adaptive behaviors, emotions and depressive behaviors, then stress. This would require the students to seek help. Mentoring could help these students. Therefore, it is necessary to use or seek for counseling preventive programs that can help to alleviate students' depression and non-adaptive behavior (Dawood, 2001).

The most effective counseling programs are those that can show how to correct and modify one's negative thinking, using Beck's theory of depression. Beck (1987) indicates that depression is a reaction that prevents an individual from adapting to or copes with negative situations. When an individual is depressed, he or she finds it difficult to adjust to stress and also has difficulty in expressing himself or herself.

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According to Beck (1974), individuals encounter many problems daily that prevent them from achieving their goals. That is, the way individuals interpret and see things can help them adapt to different life situations. Therefore, every positive outcome, or negative feeling, experienced by an individual is based on his or her cognitive structure, belief system, and pattern of thoughts. If an individual's thought and thinking pattern are positive and undistorted, his or her emotion and behavior would be positive. This in turn would reflect on his or her level of psychological adjustment.

According to Burns (2000), depression was the first health problem in the world. Depression is a mental disorder that can ultimately lead to suicide. Ibrahim (1998) points out that there are three sources of depression:

- (1) Biological factors: These factors include an individual's genetics, nervous system and biochemical change that lead to depression.
- (2) Social learning: This includes the family and school factors that can contribute to the occurrence of depression.
- (3) Stress and environmental crises: These are social factors that lead to distress and depression such as, disasters, divorce and death of loved ones.

Beck (1988) introduced two theories of depression. The first theory suggests that social relationship problem is the main cause of depression. Based on this, Beck named the first personality type as socially stereotypical character; while the second personality type is the independent character. These independent people appreciate their freedom, but they become depressed when they cannot accomplish things by themselves, without depending on others.

In his second theory, Beck (1988) attempted to identify whether depressive thoughts are distorted or undistorted, whether they are negative underestimate self. According to Beck et al, (1979), depression activate three main cognitive patterns, which are called cognitive trinity. These cognitive patterns are negative attitudes towards self, the world, and future. These are manifested in four areas:

- (1) Emotional aspects: These comprise depressive mood, and sadness.
- (2) Cognitive aspects: These include low self-esteem and misconception.
- (3) Motivational aspects: These consist of negativism and suicidal tendency.
- (4) Physical aspects: These include loss of appetite, and insomnia.

Williams (2006) ascertains that depression and its accompanying symptoms, such as fatigue impair one's energy and psychological adjustment level. Therefore,

with positive reinforcement, individuals can have their level of psychological adjustment increased. Such a positive support is based on three sources:

- (1) Psychological support: This kind of support is associated with an individual's personal or physical traits and characteristics such as age, level of attractiveness to others, and sense of belonging.
- (2) Environmental support: This occurs as an individual grows and matures in a secured, friendly and democratic family.
- (3) Social and professional support: This kind of support is related to the high social skills an individual acquire and having the kind of profession that helps him psychologically to resist stress and depression.

Moreover, Burns (2000) points out that depression is not an emotional disorder as claimed by psychologists; it is the change in emotion and feeling that results from the distorted attitudes adopted by an individual. Distorted thoughts are always accompanied by depressive sequences or painful emotions. These cognitive distortions include:

- (1) All or nothing: This cognitive distortion is referred to as an individual's tendency to radicalize things, either to get everything or lose everything.
- (2) Overgeneralization: The tendency of an individual to make absolute judgments and extreme generalizations.
- (3) Mental purging: One's focus on the bad aspects in any situation.
- (4) Underestimating positive events: The depressive tendency of an individual to turn positive experiences into negative ones.
- (5) Random conclusion: In many cases of depression, behavior is the result of misinterpretation of an incident.

According to Ellis and Dryden (1987), there are multiple approaches to Cognitive Behavior Therapy (CBT). However, there is a general consensus that for the therapy process to be effective and successful, thought, emotion and behavior cannot be separated because they are all interrelated. Cognitive therapy is a skill-building model, and not a healing model. With it, patients are taught to acquire skills to deal more effectively with their irrational thoughts and behaviors. Beck's cognitive behavioral therapy is a process through which patients' behavior can be modified by influencing their thought processes; it involves knowing how individuals think and how to change their distorted thoughts and negative beliefs (Mustafa, 2000).

### **Problem of the study and its significance**

Beck's theory has much of its theoretical foundations

from the fact that mental and psychological disorders cannot be separated from the way an individual thinks of himself, the world, and his future. Distorted thought is not a symptom of depression; rather it is one of the causes of depression. People have wrong thoughts because they do not know how to think in the right way. Therefore, modifying how a person thinks can help him/her to adjust psychologically (Rude, 2003).

The researcher conducted this study based on his long experience in counseling work. During this work, the researcher noticed that most of the problems of the students are related to their wrong thinking. Students' wrong thinking makes them to have family, collective and adaptive problems and this consequently leads to depression.

The study is significant as it attempts to find solutions to depression using a counseling cognitive-based program, Beck's theory of depression. The study is based on the results of foreign studies, which show the relationship that exists between depression and distorted thoughts. One of such studies is that of Beavers and Millere (2012). More specifically, this study identify the effectiveness of Beck's theory in training students on how to use logical reasoning, knowing the level of depression experienced by the students and improving their level of adjustment. Hypotheses of the study are:

- (1) There are no statistically significant differences in the level of depression reduction of the university students who were counseled, using Beck's theory of depression and those who were not counseled at 5%.
- (2) There are no statistically significant differences in the improvement level of the psychological adjustment of the university students who were counseled, using Beck's theory of depression and those who were not counseled at 5%.

## **Definition of terms**

### ***Depression***

It is an emotional state in which an individual suffers from severe grief, delayed response, and pessimistic tendencies. This might lead to suicidal tendency. Depression is categorized into three: depressive sentiment, depressive distortions, and depressive disorder (Ibrahim, 1998). In this study, depression is defined based on the level of an individual in the Beck's Depression Inventory (Hamdi et al., 1988).

### ***Adjustment***

This falls within three categories: the first is biological, the second is social, and the third is psychological.

Psychological adjustment is characterized as one's self-esteem and appreciation of one's responsibility (Hamdi et al., 1992).

### ***Counseling program***

It is a set of structured cognitive behavioral procedures and exercises used to train individuals to help them reduce their depression level and improve their level of psychological adjustment. In this study, the program is measured by Beck's Depression Inventory.

## **LITERATURE REVIEW**

Kelly and Lahey (1983) identified wrong thinking as a mediator between depression, life stress and psychological adjustment in a sample of 286 university students. Beck Depression Inventory and Life Experience Scale were used in the study. The results of the study indicated there was a statistically significant relationship between wrong thinking and depression, and a statistically significant relationship between the inventory of misconceptions and Beck's Depression Inventory (Amer, 2004).

Ibrahim and Alnafie (1991) determined the percentage of depressive distortions among a sample of Saudi students, using different psychological scales. They concluded that 64% of the students had the tendency to self-reproach, 52% felt helpless; 49% suffered from loss of appetite and 38% had sleep disorders. Similarly, many of the participants had other pathological symptoms including: inability to concentrate (54%), extreme shyness (53%), convulsions (42%), and academic difficulties (33%).

Beavers and Miller (2012) identified the extent to which a cognitive therapy was used to modify the misconceptions and depressive symptoms of individuals who were under a six-month therapeutic program. The results revealed that there was a statistically significant relationship between wrong thoughts and depressive symptoms; misconceptions and depressive symptoms every month for one year. The results of the study showed that wrong thoughts and depression decreased in the participants who received the cognitive therapy but not in those who did not receive the cognitive therapy.

Moreover, Tellier (2013) conducted a study to examine the effectiveness of a cognitive behavioral therapy program in reducing depression in a sample of 62 adolescents divided into (experimental group and control group). The first group was trained to reduce the level of depression, using the Depression Scale, Jones Test for Misconceptions and the Determination of Guilt survey for adolescents. The results of the study indicated that there was a statistically significant reduction in the depression

level of the experimental group who received the training but not the control group.

Larsen (2011) examined the non-adaptive behavior of 82 adolescents through discussion, self-monitoring, cognitive construction, and home assignments. The results showed the effectiveness of the therapeutic program in reducing the non-adaptive behavior of the participants.

Apsche et al. (2010) studied a strategy used in changing one's way of thinking. The program helped them to identify negative thoughts, feelings and misconceptions of the participants of the study. Beck Depression Inventory was applied on a sample of 10 adolescents of 11-18 years, for 16 weeks. The results indicated that the cognitive behavioral therapy was effective in modifying the misconceptions and reducing the level of depression of the adolescents.

## METHODOLOGY

### Sample of the study

The population of the study consists of 100 students of the Faculty of Educational Sciences, World Islamic Sciences and Education University (WISE). The researcher used Beck's Depression Inventory (BDI) and Psychological Adjustment Scale (PAS) in the study. The students were divided into two groups: experimental group and control group. Since the average score of BDI is 16 to 23, it is considered that the participants who had 25 score and above had a high level of depression. Accordingly, 30 students with the highest scores were selected. The students had 50 and below in the psychological adjustment test.

### Experimental group

The experimental group was composed of 15 students, who were counseled using Beck's theory of depression. The researcher met with them once in a week for eight weeks. The program had eight sessions, 90 minute for each.

### Control group

The control group consisted of 15 students, who were not counseled. They were placed on the waiting inventory. Table 1 shows the distribution of the population of the study.

### Instruments used for the Study

#### *Beck's depression Inventory (BDI)*

In this study, the Arabic version of BDI was used (Hamdi et al., 1988). Originally, the inventory consists of 21 items used to measure depression level. The score on each item is 0-3, while the total score on the inventory is between 0 to 63. The borderline between the normal and depression level in the real copy of the inventory is 10. The researcher tested the liability of the inventory, by consulting a group of experts. The experts instructed that the inventory paragraphs should not be modified. To measure the validity of the inventory, Cronbach's Alpha equation was used on a sample of 30 students with a validity value of 0.85. The inventory

was corrected by adding the scores obtained by the individuals on all the scale items, where the total score ranged from 0 to 63. The scale items on the inventory are interpreted as follows:

- (1) Not depressed from 0 to 9.
- (2) Mild depression from 10 to 15.
- (3) Intermediate depression from 16 to 23; and
- (4) Strong depression from 24 to 63.

#### *Psychological adjustment scale*

This scale was developed by Jibril (1994). The test consists of 40 scale items used to measure four dimensions:

- (1) Personal dimension
- (2) Emotional dimension
- (3) Family dimension; and
- (4) Social dimension.

The researcher did a reliability test for this study by presenting the scale to ten experts specialized in guidance and counseling. The total score on the scale is calculated by adding all the scores that represent the level of psychological adjustment. The total score of the scale is between 0 to 120 and the researcher extracted the stability of the scale using the equation of Cronbach's Alpha (0.85).

### Counseling program

The researcher conducted the counseling in eight sessions; 90 min was used for each session. For each session, the following things were looked into:

- First session: Positive thinking and its relationship with depression and psychological adjustment.
- Second session: Negative thinking and its relationship with depression and psychological adjustment.
- Third session: Types and cause of depression.
- Fourth session: The two ideas of all or nothing and, amplification and reduction.
- Fifth session: The two ideas of overgeneralization and naming.
- Sixth session: The two ideas of charisma and essentials.
- Seventh session: Physical and social problems and their relation with depression.
- Eighth session: Closing session.

### Procedures of the study

The study was conducted as follows:

- (1) Defining the population of the study: 100 male students from the Faculty of Educational Sciences in WISE were involved. The sample of the study consisted of 30 students.
- (2) Constructing a counseling program, using Beck's Theory of depression: this consists of eight counseling sessions; each session lasted for 90 minutes.
- (3) Adopting two instruments for the study: Beck's Inventory of Depression and the Psychological Adjustment Scale.
- (4) Applying the counseling program on the experimental group: they got the highest scores in the Beck's Inventory of Depression and the lowest scores in the Psychological Adjustment Scale.

### Study design and statistical analysis

This work is a semi-empirical study. Its aim is to identify the use of

**Table 1.** Distribution of the population of the study sample according to group and pre- and post- scales.

Variable	Beck's depression inventory (BDI)		Adjustment scale	
	Pre-test	Post-test	Pre-test	Post-test
Experimental group	15	15	15	15
Control group	15	15	15	15
Total	30	30	30	30

**Table 2.** The mean squares and standard deviations for the experimental and control groups in post-test of the depression scale.

Group	Mean	Standard deviation
Experimental	11.010	0.750
Control	13.60	0.750

Beck's Theory counseling program in reducing depression and improving the level of psychological adjustment of the study's participants. One-way Analysis of Covariance (ANCOVA) test was used to identify the effect of the experimental treatment on the experimental group and control group. The variables of the study are as follows:

Independent variable: Counseling program; Dependent variables: Depression and psychological adjustment.

Accordingly, the experimental design is as follows:

The experimental group: pre-test; counseling program –post-test scale;

O1 x O2

Control group: pre-test scale; No treatment - post-test scale;

O1 x O2

## FINDINGS

The study aims to identify the effectiveness of counseling using Beck's Theory of depression in reducing the depression level and as well as improving the psychological adjustment level of male students in the Faculty of Educational Sciences World Islamic Sciences and Education University.

### Results of the first hypothesis

To examine this hypothesis, mean squares and standard deviations were calculated for both the experimental and control groups. Table 2 shows the modified mean squares and the standard deviations of the depression scale in the post-test. Table 2 shows that the mean of the experimental group in the post-test is 11.010, while that of the control group is 13.60. In order to verify that the

difference between the mean squares was statistically significant, ANCOVA was applied as shown in Table 3. Table 3 shows that the differences between the mean squares of both groups were statistically significant. The differences were in favor of the experimental group. Their level of depression was significantly and statistically reduced.

### Results related to the second hypothesis

To test this hypothesis, ANCOVA was applied as shown in Table 4. Table 4 indicates that there are no statistically significant differences between the mean squares of both groups. There was no significant difference in the experimental group, those who were counseled as a level of adjustment was not improved statistically and significantly.

To ensure that the differences between the mean squares of both groups were statistically significant, ANCOVA was applied as shown in Table 5.

Table 5 shows that there are no statistically significant differences between the mean squares of the experimental and control groups. The differences were not in favor of the experimental group, as their level of psychological adjustment on the first dimension (personal) was not considered statistically significant. To ensure that the difference between the mean squares of both groups was statistically significant, ANCOVA was applied as shown in Table 6.

Table 6 indicates that there are no statistically significant differences between the mean squares of the two groups; the differences were not in favor of the experimental group, as their level of psychological adjustment on the second dimension (emotional) was not considered statistically significant. In order to ensure that the difference between the mean squares of both groups was statistically significant, ANCOVA was used as shown in Table 7.

Table 7 indicates that there are no statistically significant differences between the mean squares of both groups. The differences are not in favor of the students of the experimental group, who were counseled as their level of psychological adjustment on the third dimension (family) was not considered statistically significant. In

**Table 3.** Results of the ANCOVA for the significant differences between the mean squares of the experimental and control groups on the depression scale.

Variance source	Mean squares	Std. deviation	Mean Sq.	P-value	Sig.
Group	52.095	1	52.095	6.181	*0.01
Pre-test	1473.911	1	1473.911	147.883	0.00
Error	227.555	27	8.428	-	-
Total	1798.667	29	-	-	-

**Table 4.** Results of ANCOVA of significant differences between the mean squares of the experimental group and control group on the adjustment scale (total score).

Variance source	Mean squares	Std. deviation	Mean Sq.	P-value	Sig.
Group	8.043	1	8.043	0.261	0.614
Pre-test	297.961	1	2974.9611	96.546	0.00
Error	831.973	27	30.814	-	-
Total	3999.467	29	-	-	-

P-value: Significant at 5% level.

**Table 5.** The results of ANCOVA of the significant differences between the mean of the experimental and control groups on the scale of adjustment (the personal first dimension).

Variance source	Mean squares	Std. deviation	Mean Sq.	P-value	Sig.
Group	4.636	1	4.636	0.678	0.418
Pre-test	125.782	1	125.782	18.382	0.00
Error	184.752	27	6.843	-	-
Total	331.367	29	-	-	-

**Table 6.** Results of the ANCOVA of the significant differences between the mean squares of the two groups on the scale of adjustment (the emotional second dimension).

Variance source	Mean squares	Std. deviation	Mean Sq.	P-value	Sig.
Group	1.577	1	1.577	0.491	0.489
Pre-test	446.411	1	446.411	139.091	0.00
Error	86.656	27	3.209	-	-
Total	542.700	29	-	-	-

**Table 7.** Results of the ANCOVA of the significant differences between the mean squares of the experimental group and control group on the scale of psychological adjustment (Third dimension: the family).

Variance source	Mean squares	Std. deviation	Mean Sq.	P-value	Sig.
Group	0.026	1	0.026	0.010	0.923
Pre-test	466.447	1	466.447	174.387	0.00
Error	72.219	27	2.675	-	-
Total	543.467	29	-	-	-

order to verify that the difference between the mean squares of both groups was statistically significant,

ANCOVA was used as shown in Table 8.

Table 8 shows that there are no statistically significant

**Table 8.** Results of the ANCOVA of the significant differences between the mean squares of the two groups on the scale of psychological adjustment (the fourth dimension social).

Variance source	Mean squares	Std. deviation	Mean Sq.	P-value	Sig.
Group	3.314	1	3.314	2.032	0.165
Pre-test	113.706	1	113.706	69.7	0.00
Error	44.027	27	1.631	-	-
Total	173.86	29	-	-	-

differences between the mean squares of the two groups. The differences were not in favor of the students of the experimental group, who were counseled. Their level of adjustment on the fourth dimension was not considered statistically significant.

## DISCUSSION

The study explores the effectiveness of a counseling program based on Beck's theory in reducing depression and improving the level of adjustment among male university students in the Faculty of Education, World Islamic Sciences and Education University.

The findings of the study revealed the effectiveness of counseling in reducing the depression level of the experimental group, but not that of the control group. Also the findings of the study showed that the counseling program could not improve the level of psychological adjustment of the experimental group. The analysis of common variance indicated that the differences in the means of the experimental group and control group were statistically significant.

The experimental group population, who went through counseling program, had decreased level of depression in the pre-test and the post-test compared to the control group. This is because the program was centered on modifying the thinking patterns of the students. Also, multiple skills were applied during the sessions of the counseling program. The students were given assignments, and asked to apply what they had learned to real life situations. The counseling program showed how negative thoughts could lead to depression. This finding is in agreement with other studies such as Kelly and Tellier (2013), which indicated a low level of depression in individuals trained to modify their negative thoughts. It also agrees with Tellier (2013), which showed the effectiveness of a cognitive behavioral program in reducing the level of depression of the study's participants.

For the second hypothesis, ANCOVA results revealed that there were no statistically significant differences in the mean squares of the experimental and control groups. This is shown by the mean squares of the pre and post scales of the experimental and control groups. Here there was no improvement in the psychological

adjustment level of the experimental group compared to the control group on the total score of the adjustment scale. This is because the experimental group had negative thought, which manifested in their discussions, and pessimistic view of themselves, the world and their future.

Also, modifying one's thinking reduces depression not psychological adjustment. This indicates that individuals require a longer period of time to modify their wrong ideas. Adjustment is a process whereby an individual accepts a new situation, and then begins to act accordingly. Therefore, this result is not consistent with the results of Apscheatel (2010) study, which indicates a reduction in the level of stress and improvement in adjustment among individuals, who went through a behavioral cognitive counseling program.

As regards the sub-dimensions of the adjustment scale, which include the personal, emotional, family and social dimension, the results of ANCOVA indicated that there were no statistical significant differences between the mean squares of the experimental and control group. This is seen in their mean squares in the pre-test and post-test. This result can be attributed to the fact that it takes time for people to adjust their behavior.

Therefore, for adjustment to take place, the first step is to adjust one's negative ideas and then replace them with positive ones. Then, the next step is to put these ideas to work, applying them to real life situations. The program had eight sessions. However, if a similar program was applied for a year, the results would be statistically significant at the level of Individuals need to be trained to adjust their thinking, so that the process of adjustment can be facilitated.

Based on the previous findings of this study, the researcher recommends the following: group counseling of behavioral and cognitive aspects should be done with parents; individual counseling using behavioral and cognitive methods should also be done to modify people's misconceptions; behavioral and cognitive programs for depression should be designed so that they can be compared.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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