

The effectiveness of a training program for providing the art of crochet skills as an adjunct for depression patients' therapy

Dr. Ekram Hassan Alamri

**Lecture, Department of Fashion and Textiles Faculty of Human Sciences and Design
King Abdul-Aziz University - Jeddah - Kingdom Saudi Arabia**

ehalamri@kau.edu.sa

Prof. Rania Mustafa Dabes

**Professor, Department of Fashion and Textiles Faculty of Human Sciences and Design
King Abdul-Aziz University – Jeddah- Kingdom Saudi Arabia**

rdeb@kau.edu.sa

Abstract:

The study aimed to design a training program to provide the patients of depression with the art of crochet skills, and to measure the effectiveness of this proposed training program in acquiring the art of crochet skills, and to measure its impact on alleviating the severity of the mentioned disease, and to measure the patients' attitude towards the proposed program. The researcher used the quasi-experimental approach in applying the program to a number of 5 samples of psychologically depressed patients with a degree of moderate depression, and measuring their improvement through the pre and post-scale of depression of "Fatma Nofal". The study was applied at King Abdul-Aziz University with the aim to benefit from the faculty members and female technicians at the Department of Psychology at the Faculty of Arts and the psychiatrist at the medical administration at the university. The study concluded that there are statistically significant differences between the skill test scores before and after the application of the program, in favor of the post application. There are also statistically significant differences between the level of depression in the sample before and after the application, in favor of the post application. In light of the results, the researcher recommends activating the therapy with crochet at hospitals and training chronic disease patients on crochet to alleviate the depression accompanying the disease, conducting other studies on the therapy with various handicrafts, paving the way for psychiatric patients and encouraging them to become productive persons. The researcher also recommends creating jobs for the graduates of the Clothing and Textile Department at the psychiatric clinics or Psychological counseling centers under the title of "Assistant Occupational Therapist".

Keywords:

(depression, occupational therapy, art therapy, crochet, training program).

Introduction:

Depression is considered one of the most common and prevalent psychological disorders across the times. The latest period of the twentieth century has witnessed a considerable increase in the prevalence of depression across the globe. The latest statistics issued by the World Health Organization in 2016 AD indicated that approximately 7% to 10% of the world population suffer from depression. This means that hundreds of millions of people suffer as a result of this disease. (Nofal,2016) Depression accounts for 20% of the psychological diseases in Saudi

Arabia. It is more common among women in the Saudi society. In this regard, the study of (Al-Zahrani Al-Zahrani ,1992) indicated that Saudi women are more prone to depression than Saudi men.

According to the conducted studies, "there is an expected considerable increase in the number of people suffering from depression in the coming decades." (Nofal,2016) This prompted the World Health Organization, on the World Psychological Health Day in 2016, to launch a health campaign on depression. The overall goal of this one-year campaign is to increase the number of people with depression in all countries who are seeking and obtaining help, which may contribute to raising awareness of patients and those around them, including relatives and various educational institutions. The study of (Kaldo ,2018) recommended exploring new types of therapeutic interventions for patients with depression.

One of the forms of primary therapy for those who show symptoms of depression among children or students is to try to direct them to beneficial ideas, such as; joining an institution that is interested in developing a skill or craft and indulging them with a loving talent, so the mind is preoccupied and does not find a way for negative thoughts, which may constitute a successful educational alternative to eliminate obsessions and fear. The self must be kept occupied with beneficial things that can prove and assert, otherwise the oneself will be a prey to despair and despondency, and will be inflicted with the psychological disease. Accordingly, the wise men of Greece, whenever they wanted to treat a person suffering from delusions, anxiety, and psychological diseases, they force him to work in agriculture and orchards, and he is recovered within a short time. (Al-Qarni ,2013)

Out of a practical point of view, psychological therapy in general requires the synergy of all the processes that would restore a person's compatibility with himself and his environment, so that adaptation occurs, through the modification of his knowledge and behavior. (Nofal,2017) One of such processes is "Occupational therapy", which includes work therapy and art therapy. This is done in cooperation with an occupational therapist or an art therapist. As they train patients on a variety of handicrafts that suit each patient and his capabilities thereof. Through the field experience of the researcher in teaching the crochet course at the Department of Clothing and Textile at the Faculty of Home Economics, King Abdul-Aziz University, which is considered a branch of needle and thread work, it was found to be one of the work therapy skills that can be provided for the students and which helps them to engage in work, leaving behind all their other burdens. It is also considered one of the methods of art therapy that depends on selecting colors and shapes in an artistic manner that helps relieve their stress resulting from various psychological diseases out of an emotional point of view.

The study of (Al-Yami ,2003) indicated that visual shapes contribute to finding the basic information in the diagnostic and therapeutic processes. Out of this point of view, the researcher conducted field interviews as an opinion poll for specialists in the fields of psychiatry, psychological counseling, and psychology. The concluded results supported the idea of crochet therapy for depressed patients, because it is an accomplished work that has a form with a final output through which the low morale of patients are enhanced and it also helps to unload their energies by developing their creativity and innovation. It considerably alleviates the severity of their psychological depression. The study of (Al-Qiq ,2016) proved the effectiveness of painting and embroidery therapy in relieving the feeling of psychological loneliness and death anxiety, which stand for two key symptoms of depression for those who suffer from a social problem or

psychological trauma. The scale of occupational attitudes towards crochet, prepared by the researcher, was aimed to measure the patient's desire to learn the craft of crochet. The study was applied to those who suffer from moderate depression and who have the skills required for the art of crochet.

From the above review, the problem of the study is determined in the following questions:

- What are the degrees and symptoms of depression?
- What is the possibility of designing a training program to provide depression patients with the crochet art skills?
- What is the effectiveness of the proposed training program in acquiring the crochet art skills?
- What is the impact of the proposed training program in alleviating the severity of depression disease?
- What is the patient's attitude towards the proposed program?

Objectives of the study:

- Designing a training program to provide depression patients with the crochet art skills.
- Measuring the effectiveness of the proposed training program in acquiring the crochet art skills.
- Measuring the impact of the proposed training program on alleviating the severity of depression disease.

Significance of the study:

1. A qualitative addition to the scientific research movement in the field of psychotherapy through work.
2. This study is considered an interdisciplinary study that combines the Department of Clothing and Textile, Psychology and Medical Sciences.
3. Investing the latent energies of depression patients by converting them into productive hands.
4. Supporting the institutions that adopt training programs for psychiatric patients, such as occupational therapy centers.
5. Contributing to diagnosing some symptoms of depression patients by observing and recording their behavior, emotions and responses during training.

Hypotheses of the study:

1. There are statistically significant differences between the skill test scores before and after the application of the program in favor of the post application.
2. There are statistically significant differences between the level of depression in the study sample before and after the application in favor of the post application.
3. Forming a positive attitude in the study sample towards the proposed program.

Literature of the study:

Concept of depression:

Depression expresses a set of complex symptoms that scientists call the concept of depressive episode, the symptoms of which differ from one person to another and take several various forms, some of which take the form of harsh feelings of blame and self-reproach and may take

the form of physical symptoms and may emerge in the form of feelings of despair, pessimism and rapid boredom of people and life. (Ibrahim,1998)

Symptoms of depression:

Depression manifests itself in a set of symptoms called the depressive syndrome, which includes aspects of behavior, thinking, and feelings that occur in an interrelated manner and that ultimately help describe and diagnose the depressive behavior. (Nofal,2016) classified them as follows:

Emotional symptoms: They appear in the form of feeling of being sad, crying, fearful, despairing, anxious, feeling reprimanded, feeling the tingling of conscience, feeling unimportant and degrading oneself.

Cognitive symptoms: They appear in the form of delusions, hallucinations, deceptions, and dissipation of self and reality.

Physical symptoms: They appear in the form of sleep disturbances, appetite disorders, constipation, and loss of sexual desire and delusion of physical diseases.

Behavioral symptoms: They appear in the appearance and external behavior, weakness or strength of motor activity and the desire to get rid of life, and suicide in the severest forms of depression.

Depression Therapy:

The severity of depression ranges from mild to moderate and severe.

This study is limited to the treatment of moderate depression (milder form), which "Beck" believes that moderate depression cases do not require the use of pharmacological antidepressants. (Debono Center for Teaching Thinking, 2017)

Moderate depression can be treated behaviorally through occupational therapy under the supervision of an occupational therapist who is part of the treating team in the psychological departments, and whose role is focused on training patients on some work through which they can acquire certain skills to spend their free time and may provide them with material benefit (income) as well. (Alhabib ,2006)

(Kaldo,2018) conducted a study aimed at evaluating the positive effects of cognitive behavioral therapy based on physical exercise on working depression patients and the ability to work for the unemployed.

The symptoms of depression can also be alleviated by art therapy by providing guidance and counseling services to individuals using different artistic formats as a means of expressing their inner selves, and as a method for treating their problems and achieving comfort and recovery, where this method is a complementary to or alternative to other methods. (Mohamed ,2013).

(Al-Momani, 2015) conducted a study aimed at measuring the effect of a score of counseling program based on art therapy in reducing depression and anxiety and increasing life satisfaction among a sample of elderly people at care homes. The study of (Al-Dhalaan, 2012) aimed to explore the role of plastic art in rehabilitating people with impaired hearing disabilities psychologically.

The two methods of work therapy and art therapy can be combined with training in the crochet technique, which is based on the process of creating a fabric from yarn or thread using a needle

called a crochet needle characterized by a hook-shaped tip. Crochet is known in Arabic as hand knitting. (Iskandarani, 2011)

This is done under the name of crochet therapy, as the study of (Michelle, 2018) provided data on the role of crochet therapy in alleviating several various psychological symptoms, which were summarized as follows:

1. Crochet helps alleviate depression through repeated stitches, as Serotonin is released, which is a natural antidepressant.
2. Crochet reduces anxiety as the hand remains occupied and the mind is occupied too with counting. It also reduces anxiety associated with obsessive-compulsive disorder. The Craft Yarn Council reports in a study conducted on women suffering from anorexia found that knitting calms and reduces anxiety by three quarters of the sample.
3. Crochet helps with self-esteem and expression by acquiring a new skill that makes persons feel productive and provides a means of giving towards others.
4. Crochet also helped reduce the fear of unemployment, as the British Journal of Occupational Therapy reported that 81% of the respondents who suffer from depression felt happy after knitting.
5. Crochet delays Alzheimer's in the elderly and can be soothing for Alzheimer's patients. Researcher Yonas Geda conducted a study that showed that knitting can reduce Alzheimer's by 50%.

Methodology:

The researcher used the quasi-experimental method, which was defined by both (Zollev and Tarawneh ,1998) as "an intentional and controlled change of the specific conditions of the fact or phenomenon that is the subject of the study and to note the effects of this change in this reality and phenomenon." The study also uses the descriptive approach (case study), which is called field research, which is "that type of research that is conducted in a natural and unpretentious reality, and by means of the researcher's actual experience (participatory observation) for the entire facts of behavior in the field and without any kind of pre-adjustment or the exclusion of certain variables in the research" (Al-Assaf, 2006).

Community of the study:

Kingdom of Saudi Arabia

Sample of the study:

The sample of the study consists of 5 moderate depression patients, girls who meet the skill requirements and accordingly can pass the scale of occupational attitudes towards crochet.

Tools of the study:

1. The scale of pre and post-depression.
2. The scale of occupational attitudes towards crochet.
3. The training program.
4. The pre and post skill test.
5. Scale of assessment.
6. Note card.
7. Form of disease cases follow-up.
8. Scale of attitude

Results of the study:

The researcher used the quasi-experimental methodology to conclude the effectiveness of the independent variable (training program) on the dependent variable (crochet skill) and the dependent variable (depression).

Variables of the research:

- The independent variable: Training program
- The dependent variable: Crochet skill
- The dependent variable: depression

Validity and reliability of the tools of the study:**First: The validity and reliability of the scale of skill test assessment:****1) Validity of the assessment scale:**

Validity of the assessment scale was verified by presenting it in its initial form to a group of specialized professors, where they expressed their opinions and observations about its measurability and added their observations thereof, and in light of those opinions, formulation of some phrases of the estimation scale was modified.

2) The reliability of the assessment scale:

Reliability of the assessment scale was verified by calculating the correlation coefficients between the scores of the correctors. Correction was done by three correctors; they are (P, N, U). The following table shows the results of the correlation coefficients between the correctors using Spearman's rank correlation coefficients.

Table (1): Spearman's coefficients for ranks among the correctors

Correctors	First axis	Second axis	Third axis	Fourth axis	Aggregate
P	0.83**	0.81**	0.79**	0.89*	0.81**
N	0.81**	0.83**	0.77**	0.83**	0.83**
U	0.81**	0.76**	0.74**	0.79**	0.82**

The correlation coefficients are statistically significant at the level of significance of (0.01).

Out of the previous table, it is evident that the values of the correlation coefficients between the scores of the three correctors are high, and that all of them are statistically significant at the level of (0.01). This indicates the reliability of the applied test that measures skill performance. It also indicates the reliability of the assessment scale, which is the skill test correction tool.

Reliability of the tool of the research: The reliability of the scale of the general attitude towards the proposed program was verified by calculating the reliability of the internal consistency of the phrases using Cronbach's alpha coefficient, split-half reliability coefficients. The following table shows the results of the reliability coefficients.

Table (2): Cronbach's alpha reliability coefficients and split-half reliability coefficients

Cronbach's alpha reliability coefficient	split-half reliability coefficient	
	First Half	Second Half
0.92	0.86	0.90

It is evident from the previous table that all the reliability coefficients are of high values, as they are (0.92) by using Cronbach alpha coefficient. As for the split-half reliability coefficients, they are (0.86) for the first half of the scale, and (0.90) for the second half of the scale. Such high values of the reliability coefficients indicate the validity of the scale of the general attitude towards the proposed program for application and the possibility of the reliability and validity of its results.

Results of the hypotheses of the study:

Results of the first hypothesis: The first hypothesis states that “there are statistically significant differences between the skill test scores before and after the application of the program in favor of the post application”.

A pre-test was conducted for the study sample and it was found that the female students did not know anything about the art of crochet except for some basics such as the starting chain stitch, and they did not know the translation of the drawn pattern or the names of the stitches. The same became familiar for them after the training program as the scores in the post-test skill increased in varying proportions.



Photo1, Sample Production ١



Photo2, Sample Production ٢



Photo3, Sample Production ٣



Photo4, Sample Production ٤



Photo5, Sample Production ٥

To verify the validity of this hypothesis, the researcher used the T-Test for the dependent (correlated) samples, which is used to identify the differences in the application of the program before and after the application. The following table shows the results of the T-Test of the interconnected samples (before / after) the proposed program.

Table (٣): Results of the T-Test of the interrelated samples of differences in the skill test scores before and after the application of the program

	Arithmetic mean	standard deviations	Calculated T value	Degrees of freedom	Significance value	The direction of significance
Before application	0.00	0.00	-15.83	4	0.00	Significant in favor of the post-test
After application	61.86	8.73				

From the previous table it is evident that:

1. The arithmetic mean of the students' scores after applying the proposed program = 61.86 with a standard deviation of 8.73.
2. The arithmetic mean of the students' scores before applying the program = zero, with a standard deviation = zero, because the students did not know any information about the art of crochet.
3. The calculated (T) value = 15.83 with a significance value = 0.00, which is less than the level of statistical significance (0.05), which indicates that there are statistically significant differences between the skill test scores before and after the application of the program in favor of the post application, which indicates an improvement in the skill performance among the members of the sample of the study.

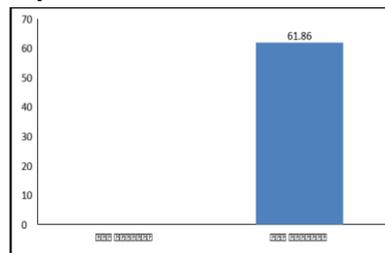


Figure (1): The pre and post skill test score

With the aim to identify the size of the impact of the proposed program on increasing the effectiveness of the skill performance of the study sample, the researcher used Eta Square to measure the size of the impact.

Eta Square = calculated square of T-value ÷ (calculated square of T-value + degrees of freedom)

Value of (T) = 15.83

degrees of freedom = 4

Eta Square = 0.98

The size of the impact is determined small, moderate or big as follows:

Eta Square = 0.2 small size of effect.

Eta Square = 0.5 moderate size of effect.

Eta Square = 0.8 big size of effect.

It is evident from the results of the impact size that the value of Eta Square of the proposed program = 0.98, which is close to the correct one, which indicates that the size of the impact of the proposed program for the skill performance was a significant impact on learning the skill of the art of crochet among the members of the study sample.

Measuring the effectiveness of the proposed training program in acquiring the skills of the art of crochet:

With the aim to the measure the effectiveness of the proposed training program in acquiring the skills of the art of crochet, the researcher used the gain rate equation which is known as “Black Equation”, as follows:

$$\text{Gain rate} = (m_2 - m_1) / d + (m_2 - m_1) / (d - m_1)$$

Where:

P2: average score after application.

P1: average scores before application.

D: maximum value of the test is (72) degrees.

The following table shows the results of the gain rate for the achievement test.

Table (٤): The results of the adjusted average earning rate for Black Skill Test

Experimental group	arithmetic mean	Gain rate
Before	0.00	1.72
After	61.83	

Black's average gain in the skill test was (1.72), which is located in the determinant of Black (1.2-2.00), which indicates that the skill test is effective.

Such results also indicate that the students' scores increased after using the training program for the art of crochet skills, which indicates the high levels of students' skills in the art of crochet after applying the proposed training program.

Results of the second hypothesis:

The second hypothesis states:

"There are statistically significant differences between the level of depression in the sample before and after the application in favor of the post application".

To measure this hypothesis, the pre-depression scale prepared by (Nowfal, 2018) was distributed to the research sample, and then the post-depression scale was distributed to the sample.

To verify the validity of this hypothesis statistically, the researcher used the T-Test for the dependent (correlated) samples.

The following table shows the results of the T-Test for the correlated samples:

Table ٥: The results of the T-Test of the correlated samples between the level of depression of the sample before and after the application, in favor of the post application

Direction of significance	Significance value	Degrees of freedom	Calculated T value	standard deviations	arithmetic mean		
Significant in favor of after application	0.019	4	3.81	5.04	92.00	Before application	Degree of depression
				8.79	77.20	After application	
Significant in favor of after application	0.035	4	2.74	4.35	22.00	Before application	Cognitive level
				2.5	17.40	After application	

Significant in favor of after application	0.021	4	3.50	4.41	25.20	Before application	Emotional level
				3.57	19.40	After application	
Significant in favor of after application	0.031	4	2.85	2.23	20.00	Before application	Behavioral level
				3.20	16.6	After application	
Significant in favor of after application	0.038	4	2.68	3.11	24.80	Before application	Physical level
				2.35	20.00	After application	

From the previous table, it is evident that the calculated T values for the scale axes were as follows (3.81 - 2.74 - 3.50 - 2.85 - 2.68), respectively, with significant values of (0.019 - 0.035 - 0.021 - 0.031 - 0.038) respectively. The significance values were less than the level of statistical significance which is (0.05), which indicates that there are statistically significant differences between the level of depression in the sample before and after the application. Considering the arithmetic mean of the scores of depression after application, we find that they were less than the arithmetic mean of the scores of depression before application, which indicates that the differences were in favor of the scores before application. Such results indicate that the proposed program contributed to a decrease in depression rates among the members of the study sample.

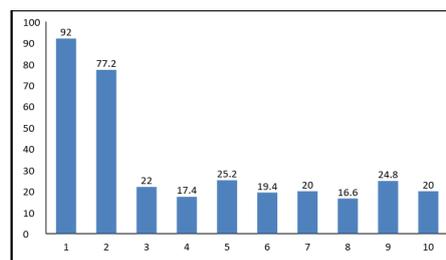


Figure (2) Level of depression in the sample before and after the application of the training program in the cognitive, emotional, behavioral and physical aspects.

By calculating the difference between the pre and post scale means for each phrase, they were, respectively, as follows:

The score of depression came first, then the emotional level, then the behavioral level, then the physical level, and eventually the cognitive level.

Results of the third hypothesis:

The third hypothesis states that “the sample formed a positive attitude towards the proposed program.”

To verify the validity of this hypothesis, the researcher used a one-sample T-Test, and the results were as in the following table:

Table (٦): Results of a one-sample T-Test of the attitudes of the study sample members towards the proposed program.

Arithmetic mean for study sample direction	Standard deviation	Standard arithmetic mean	Calculated T value	Significance value	Significance direction
33.33	3.11	26	9.39	0.00	Positive

From the previous table it is evident that:

-١ The arithmetic mean of the attitude of the study sample = 33.33, with a standard deviation of 3.11.

-٢ Standard arithmetic mean = 26

-٣ The calculated T value = 9.39, with a significance value of 0.00, which is less than the level of statistical significance (0.05), which indicates that there are statistically significant differences between the arithmetic mean of the attitudes of the study sample and the standard mean and that the differences are in favor of the actual mean of the attitudes of the study sample, which indicates the formation of a positive attitude among the study sample members towards the proposed training program.

Discussion and conclusions:

The results of this study showed:

“ -١ There are statistically significant differences between the skill test scores before and after the application of the program in favor of the post application”, where the degree of the post skill test proved that the study samples acquired the skill of crochet through their implementation of the required piece in the test question. The note card also indicated their acquisition of the basic techniques of the art of crochet by implementing samples of different flowers .This is consistent with the studies of (Razuqi,2018), (Abul-Ela ,2016), (Sarhan ,2015) , (Mahmoud, 2015), (Halabiya, 2013) (Abdul Aziz ,2012) ,(Al-Fayoumi,2009), and (Youssef, 2008), where they proved the effectiveness of using the training programs with different strategies, such as; the educational bag and cooperative education using the quasi-experimental methodology based on the pre and post-test or the control and experimental group for the purpose of training on the skill of needlework, including crochet and embroidery.

"-٢ There are statistically significant differences between the level of depression in the sample before and after the application in favor of the post application". Considering the arithmetic means of the degree of depression scale before and after the application, it is evident that there are differences in the degree of depression as a whole. The moderate level of depression moved to the low level of depression for samples 1, 2, 4 and 5, whereas, the degree of depression of sample 3 did not change before and after the application of the training program.

By classifying the symptoms into emotional, physical, psychological, behavioral and cognitive symptoms, and by presenting the results of the pre and post- depression scale for the study

samples to the specialists in psychology and psychiatry, the emotional side of depression came first in its reduction after the application of the training program, where there was an improvement in the following emotional symptoms:

- (Feeling of remorse and tingling of conscience) for samples 1, 2, 4 and 5 .
- (Not enjoying the joys of life) for samples 1, 2, 4 and 5.
- (Feelings of insignificance, belittling and devaluing oneself) for samples 1 and 2.
- (feeling despair, fear, anxiety) for samples 1, 2, 4 and 5
- (feeling sad) for samples 1, 2, 4 and 5.
- (Irritability) for sample 5.

And since the emotional side is related to selecting the appropriate yarn colors when implementing the crochet stitches and when selecting the different shapes for napkins and roses, thus it affects the disappearance of some symptoms in this aspect, and this is consistent with the study of Al-Yami [5] where he indicated that the visual shapes contribute to the therapeutic process at the emotional level.

It is followed by the behavioral aspect, where there was an improvement in the following behavioral symptoms:

- (Inability to perform work) for samples 1 and 5.
- (Isolation of the patient from society) for samples 1 and 4.
- (Feeling tired and apathy) for samples 2 and 4.

This is followed by the physical side, where there was an improvement in the following physical symptoms:

- (Sleep disorders) for samples 1, 4 and 5.
- (Appetite disorders) for sample 4.

Eventually, the cognitive aspect came in the last place, where there was an improvement in the presentation (difficulty of concentrating and remembering) for sample 5 only. This is consistent with the findings of the studies by (Wiswell ,2018), (Lynne Murphy,2017), (Al-Qiq ,2016), (Ismail ,2015), (Al-Momani ,2015), (Abd Al-Nabi,2008), which indicated the effectiveness of treating the psychological diseases, including depression, in the two methods of work therapy and art therapy through various techniques such as drawing, equestrian and embroidery works. They also indicated the role of such techniques in raising the morale of the study samples, such as increasing life satisfaction.

٣- Forming a positive attitude among the study sample of depression patients towards the training program for the art of crochet.

- Recommendations:

١. Activating therapy by hand work at hospitals for depression patients.
٢. Training patients with chronic diseases for crochet as a relief from depression associated with the disease.
3. Conducting other studies on different handmade arts therapy.
4. Paving the way for psychiatric patients and encouraging them to become productive hands.
5. Creating jobs for graduates of the Clothing and Textile Department at the psychiatric clinics or psychological counseling centers under the title of “Assistant Occupational Therapist.”

References:

- Nofal, Fatma. (2016 AD). Depression, Cairo: Anglo-Egyptian Library
- Al-Zahrani, Ali Hassan Safhan (1992). "Diagnosing depression and the factors associated with it" Master's Thesis, Makkah Al-Mukarramah, Umm Al-Qura University.
- Al-Qarni, Ayedh (2013). Do not be sad, 26th Edition, Riyadh: Obeikan
- Nofal, Fatma. (201٧ AD). Cognitive- behavioral therapy, Cairo: Anglo-Egyptian Library.
- Al-Yami, Awad bin Mubarak Saad (2003). Visual forms and psychotherapy: Towards a cognitive-behavioral treatment of plastic art, published research, General Egyptian Book Authority: Psychology Journal, p. 17, Vol. 65, 66.
- Al-Qiq, Nimer Subh Mahmood (2016). The effectiveness of using art therapy in reducing feelings of death anxiety and psychological loneliness among terminally ill patients: a case study, Published research, Helwan University: Faculty of Education, Department of Education Sciences, Research Journal in Art Education and Arts, Vol. 47.
- Ibrahim, Abdelsattar (1998). "Depression, the modern era disorder, its understanding and methods of its treatment", Kuwait, Allam Alma3refah "the world of knowledge."
- Debono Center for Teaching Thinking (2017). Depression scales, Dubai: Debono Thinking Education Centre.
- Alhabib, Tariq Ali (2006). "Misconceptions about Psychiatry", Riyadh, King Fahd National Index.
- Mohamed, Adel Abdullah (2013). Characteristics and specifications of the art therapist for the disabled persons, published research, Zagazig University, Journal of Special Education, Vol. 3, ps. 1-11
- Momani, Faten Mohamed (2015). The effect of a group counseling program based on art therapy in reducing depression and anxiety and increasing life satisfaction among the elderly at care homes, PhD thesis, Yarmouk University.
- Al-Dhalan, Mohamed bin Salal Nayel (2012). The role of plastic art therapy in psychological rehabilitation of people with hearing disabilities from an emotional point of view, Published research, Assiut University, Journal of the Faculty of Education, Volume 28, p4.
- Iskandarani, Buthaina Mohamed (2011). "Encyclopedia of the art of knitting and crochet", Jeddah, Khawarim Al-Alamiah for Publication and Distribution.
- Zolev and Al-Tarwana, Mahdi and Tahsin (1998). "Methodology of Scientific Research", Amman, Dar Al-Fikr.
- Al-Assaf, Saleh bin Hamad (2006). Introduction to Research in Behavioral Sciences, Riyadh, Obeikan.
- Razzouqi, Baidaa Anwar (2018). An educational bag in the art of crochet and its effectiveness in developing handicraft skills, Published research, Baghdad University Journal, Vol. 224.
- Abul-Ela, Hala Mustafa Mohamed (2016). "The effectiveness of a newly developed educational module in the art of Tatting in the design, embroidery and crochet course for Home Economics students", PhD Thesis, Minia University, Faculty of Specific Education, Department of Home Economics.

- Sarhan, Azza Abdel Halim (2015) . A training program for the implementation of multi-purpose Irish crochet units relevant for making a small project, published research, Specific Education Journal Vol.: 44 October.
- Mahmood, Huda Khodari Abdel Rahim (2015) .The effectiveness of a training program to develop knowledge and skills for the Broomstick stitch for the female students of the Department of Home Economics. Published research, Mansoura University, Journal of Specific Education, Vol. 38
- Halabiya, Shaimaa Mahmood Abdel-Ghani (2013). “Designing and producing a programmed module according to Abdul Latif Al-Jazzar model for teaching crochet principles to middle school students”, published research, Journal of the College of Education in Port Said, Vol.: 14, part 2.
- Abdelaziz, Mona Ezzat Hamed (2012). “The effectiveness of a proposed educational module for developing students’ skills in designing and implementing clothing accessories inspired by the remains of fabrics and crochet”, Published research, Journal of the College of Home Economics, Vol. 22, Edition 4.
- Al-Fayoumi, Amal (2009). The effectiveness of a proposed program in needlework for the deaf and dumb to benefit from in self-employment
- Youssef, Mona Asaad (2008). The effectiveness of a proposed curriculum for the needlework course in light of the needs of female students of the College of Elementary Education in the State of Kuwait on both academic achievement and skill performance, Published research, Helwan University, Faculty of Education, Educational and Social Studies, Volume 14, Edition1
- Ismail, Abdelsalam Emara (2015). Psychological depression “causes - symptoms - methods of treatment”, published research, Al-Marqab University, Faculty of Education in Al-Khums, Educational Journal Edition No. 7, Egyptian Health, Volume (22), No. (1), ps. 150- 165.
- Abdelnabi, Samia Mohamed Saber Mohamed (2008). “The Effectiveness of Using Art Therapy - Drawing - in Reducing Psychological Loneliness in a Sample of University Students, Clinical Therapeutic Study, Published Research, Tanta University, Faculty of Education: Journal of the Faculty of Education, edition 39.
- Kaldo, Viktor. Occupational and Environmental Effects of internet-based cognitive behavioral therapy and physical exercise on sick leave and employment in primary care patients with depression: two subgroup analyses Medicine (2018), Volume: 75 Issue 1
- Michelle Borst Polino (2018). Crochet Therapy.
- Wiswell, Sara (2018) .The effect of art therapy on the quality of life in patients with a gynecologic cancer receiving chemotherapy Gynecologic Oncology, ISSN: 0090-8258 Online ISSN: 1095-6859
- Lynne Murphy, Jacqueline Wilsonand and Stacey Greenberg (2017) .Equine-Assisted Experiential Learning in Occupational Therapy Education. American Journal of Occupational Therapy Volume: 72 Issue 6