



Effect of Psychological Capital Program on Flourishing and Health-Promoting Lifestyle among Patients with Depression

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ABSTRACT

Background: Psychological capital is a positive method focuses on the capacity to grow, nurture, improve, and flourish human beings instead of focusing on diseases and disorders. **Aim:** The objective of the current research was to evaluate the effect of psychological capital program on flourishing and health-promoting lifestyle among patients with depression. **Research design:** Research's aim was achieved through utilizing a quasi-experimental (pre, post, and follow up test) research design. **Sample:** Sixty depressed patients at Minia Hospital for Mental Health and addiction treatment were selected as a purposeful sample. **Tools:** Socio-demographic and clinical data sheet, Flourishing Scale, and Health-Promoting Lifestyle Profile questionnaire were utilized. **Results:** Findings proved high statistically significant differences in the global scores of Flourishing and Health- Promoting Lifestyle scales before and after program implementation. **Conclusion:** Psychological capital program is effective in enhancing depressed patients' flourishing and their health- promoting lifestyle profile. **Recommendations:** More efforts should be undertaken to include psychological capital program as a component of a holistic psychosocial interventions to depressed patients.

Keywords: Psychological capital program, Flourishing, Health- Promoting Lifestyle, Depression.

Introduction:

Depression (also known as depressive disorder) is multifaceted and complex mood disorders that can intensely affect people's lives. The cause of depression is still not fully understood, with biology, genetics, and psychology all playing a role in its development. In addition, research has shown that specific environmental influences, like the existence of chemical pollutants in the atmosphere, could be linked to the development of depression. It is

marked by enduring emotions of sadness, despair, and a decreased desire or enjoyment in activities that were previously pleasurable (Ren & Xiao, 2023).

In addition, depression restricts individuals from flourishing (Lebares et al., 2021). Flourishing is a condition of optimum functioning and positive well-being in all areas of life. Flourishing can be also defined as a mixture of feeling good and performing well to attain optimal mental wellness levels. Individuals are believed to have flourishing when

they experience happiness, maintain positive social connections, reach their objectives with skill and self-assurance, and offer meaningful contributions for others (**Przybylko et al., 2022; Logan et al., 2023**).

Based on these definitions, experiencing flourishing can augment individuals' emotional resilience, confirm peak cognitive abilities, decrease feelings of powerlessness, and create defined life objectives. Indeed, these characteristics often lack in people with depression. Besides, depression can greatly disrupt daily activities, affect social connections, and harm physical health and overall well-being. Consequently, depressed patients experience low level of flourishing (**Allen et al., 2020; Kupferberg & Hasler, 2023**).

Moreover, depression is associated with a disturbance in health behaviors and is linked to less healthy lifestyles across various aspects (Health-promoting lifestyle) (**Aguilar-Latorre et al., 2022**). A health-promoting lifestyle is described as a beneficial way of living that helps in improving overall health status. Previous studies have described health-promoting lifestyles as a comprehensive model that incorporates various perceptions and behaviors, such as health responsibility, nutrition, physical activity, stress management, interpersonal relations, and spiritual growth (**Fan et al., 2024**). The onset and persistence of depression associated with general increase in risk behaviors and decline in health promoting lifestyle behaviors. Individuals with depression have a higher tendency to engage in smoking, follow an unhealthy diet, and lead a sedentary life (**Park & Lee, 2023**).

Indeed, psychological capital is a concept created in the field of organizational psychology that pertains to an individual's cultivation of mental states that drive actions. Also, psychological capital encompasses positive conditions of self-efficacy, hope, optimism, and resilience that contribute to subjective well-being and life satisfaction (**Preston et al., 2023**). In the same aspect, the psychological capital intervention (PCI) is a targeted training session that utilizes previous research and emphasizes the positive attributes of the individual (**Song et al., 2019**).

Moreover, psychological capital interventions (PCIs) have proven to be successful in enhancing various outcomes for individuals. A study conducted by **Mokhtari & Abedi, (2020)** found that psychological capital interventions combined with drug treatment effectively alleviated symptoms of depression and was effective on improving self-efficacy, hope, optimism, and resilience in individuals experiencing depression.

Psychiatric nurses have a crucial role in caring for patients with depression. Initiating conversations with patients regarding their emotions is a positive initial approach to address their depression. Additionally, showing empathy allows patients to understand their emotions better, and increase their self-efficacy. This, in turn, has a positive impact on managing symptoms of illness, enhancing mental well-being, and increasing flourishing (**Osama et al., 2023**). Another important role of the psychiatric nurse is to teach the patient healthy behaviors which can positively influence mood; for instance, good sleep, hygiene, healthy eating, and regular exercise (**Chand et al., 2021**).

Significance of the study:

Depressive disorder is acknowledged as a worldwide issue in public health influencing around 280 million individuals worldwide, which is equivalent to 5% of adults (4% among males and 6% among females), as well as 5.7% of adults over 60 years old (WHO, 2023). According to the Egyptian Mental Health National survey, mood disorders (6.43%) were the primary issues identified, with depressive disorder (DD) being the most common type (43.7%), indicating the significant prevalence of DD as the top disorder in the country (Hasan et al., 2024).

In addition, a research achieved by Lebares et al., (2021) discovered that most of patients with depression have lower levels of flourishing. Besides, some previous research studies found that individuals who suffer from depression had statistically significantly lower health-promoting lifestyle scores (Hanawi et al., 2020; Park & Lee, 2023). Moreover, large and growing body of researches supported the positive impact of psychological capital for individuals with depression. For instance, a study on conducted by Mokhtari & Abedi, (2020) found that psychological capital interventions combined with drug treatment effectively alleviated symptoms of depression.

Furthermore, researches that support the utility of psychological capital intervention on improving self-flourishing and health-promoting lifestyle among depressed patients, haven't been conducted at Minia governorate before. Consequently, the current research was performed for evaluating the effect of psychological capital program on flourishing and

health-promoting lifestyle among patients with depression.

Aim of the Study

This research aimed to evaluate the effect of psychological capital program on flourishing and health-promoting lifestyle among patients with depression.

Research hypotheses

H1/: Patients with depression who will participate in a psychological capital program will get higher score in flourishing than before program implementation.

H2/: Patients with depression who will participate in a psychological capital program will get higher score in health-promoting lifestyle than before program implementation.

Subjects and Method

Research Design:

The research's aim was accomplished using a quasi-experimental research design with one group; pre, post, and follow-up tests.

Setting:

This research was carried out at Minia Hospital for Mental Health and addiction treatment, this hospital is affiliated to ministry of health and located in New Minia City. This hospital is made up of two floors; the first one includes outpatient clinics, female inpatient unit, as well as pharmacy. The next floor comprises male inpatient ward, department for treating addiction, administrations, and nursing office. The hospital has fifty three beds available for patients of both genders. This hospital provides health care for Minia governorate and its nine districts.

Study subjects:

A purposive sample of sixty hospitalized patients diagnosed with depression. Number of patients is determined according to **Isaac and Michael (1995)** formula as $(N = n \times 30 / 100)$, in which $(N = \text{Sample size})$ and $(n = \text{total number of depressed patients admitted to Minia Hospital for Mental Health and Addiction Treatment at previous year which equals 200 patients})$.

Inclusion criteria:

- ✓ Both genders.
- ✓ Patients between the ages of 18 and 60 yrs.

Exclusion criteria:

- ✓ Comorbid diagnosis of substance abuse disorders.
- ✓ Presence of mental retardation.
- ✓ Organic brain disorder and patients with other psychotic disorders.

Data Collection Tools:**I: Personal and clinical data questionnaire:**

This questionnaire was constructed by the researchers for assessing the demographic characteristics and clinical data of individuals with depression that include: age, gender, residence, marital status, educational levels, working status, income, mode of admission by psychiatric hospital, number of hospitalizations, and duration of illness.

II: Flourishing Scale (FS):

This scale was constructed by **Diener et al., (2010)** to appraise individuals' perceived success in key areas like self-esteem, relationships, optimism, and purpose. The FS is a brief eight-items rated on a seven point Likert Scale ranging from 1 "Strongly disagree" to 7 "Strongly agree". Adding up all the scores results in a total ranging from 8 (the lowest

score) to 56 (the highest score). A person who has a high score indicates that they possess numerous psychological assets and abilities. Scoring system as following:

Low Flourishing = 8-27

Moderate Flourishing = 28-42

High Flourishing = 43-56.

III: Health-Promoting Lifestyle Profile questionnaire (HPLP):

Walker et al. (1987) constructed the Health-Promoting Lifestyle Profile (HPLP) questionnaire to measure individuals' health-promoting lifestyle through their behaviors and perceptions that contribute to their well-being, self-actualization, and satisfaction. This questionnaire consists of fifty-two (52) item assigned to six subscales as: the first is evaluating health responsibility (9 items), the second subscale is physical activity (8 items), third one is nutrition (9 items), fourth subscale is spiritual growth (9 items), the fifth one is interpersonal relations (9 items), and the last subscale is stress management (8 items). The items included on each subscale are as follows:

All items were scored on a 4-point Likert scale ranging from never = 1, sometimes = 2, often = 3, and routinely = 4. The global score of the HPLP ranges from 52 to 208 which are further categorized as:

- Poor for the range 52–103
- Moderate for the range 104–156
- Good for the range 157–208

Validity and Reliability

Five professors in Psychiatric Nursing assessed the study tools' content validity. The statements were

reviewed for comprehensiveness, item sequencing, clarity, relevance, format, and applicability. The content of tools was valid and pertinent to the research's aim based on the opinion of all jury members. The researchers employed the test-retest approach to measure internal consistency in order to determine the research tools' reliability. The internal consistency had been confirmed by Cronbach's alpha coefficients test for reliability and the outcomes for FS and HPLP were (0.87 and 0.94 respectively).

Pilot study

The researcher evaluated the tools' clarity, applicability, as well as the time required to fulfill each sheet through a pilot study involving six patients, which represented 10% of the total sample. There were no modifications made to the assessment, therefore the sample chosen for the pilot study remained part of the study sample.

Procedure

An official letter was obtained from the dean of the Faculty of Nursing at Minia University, as well as Written approval was obtained from the director of Minia Hospital for Mental Health and Addiction Treatment at New Minia City for collecting data following agreement from the ethical committee in the Faculty of Nursing, Minia University (Code no REC202435) Written consent was received from patients to join in this research. Also, consent was formally obtained from patient right committee in the hospital.

The researchers designed psychological capital program following different reviews of present and previous relevant literatures on numerous study-related issues using recently published books, available journals, and internet resources to

familiarize oneself with the problem of current research and provide a comprehensive understanding regarding the subject, for selecting the suitable tools and designing the research program. Data were collected and the program was applied within duration of five months ranged between Marchs to July 2024. The Psychological capital program was designed through the integration of four phases.

Ethical Considerations

The Research Ethical Committee of the Faculty of Nursing, Minia University provided researchers an official permission. Then, formal agreement was derived from the General Secretariat of Mental Health and Addiction Treatment, Ministry of Health & Population to conduct this study. Since the study adhered to the standard clinical ethical guidelines for clinical research participation, there was no harm to the researched patients during the implementation of this research. Privacy was protected when collecting the data. The data were coded to ensure privacy and anonymity as well as patients are able to decline research participation for any reason. Both educated and uneducated study participants gave their spoken informed agreement to take part. The hospital's patient rights committee also provided written consent.

Program description:

The following phases were involved in the proposed program's execution:

Assessment phase:

This stage looked at assessing flourishing and health-promoting lifestyle among individuals with depression. In order to get necessary information, each patient was interviewed during this phase and

about 30 to 45 minutes were needed for completing the tools. The researcher completed the scale after explaining to the patients what each question meant so they could comprehend it. According to the assessment's findings, the researcher created the material of program as well as exercises with help of videos and posters.

Planning (Preparatory phase):

The program's strategy, sufficient time required, sessions' number, teaching techniques, and supporting media were all designed during the planning phase. Additionally, the suitability of the program's facilities and the teaching environment was examined. The program comprised a variety of teaching methods, including lectures, group discussions, patient experience sharing, photographs, posters, and role playing. The total number of sessions was 10 and the time spent to conduct each session was approximately 60–90 min according to the needed explanation.

Implementation phase:

The patients were classified into six subgroups by the researcher; each subgroup consisted of ten participants to facilitate interaction. The psychological capital program covered the theoretical part about depression as; its main signs and symptoms, immediate influence of these symptoms on patients and also the concept of psychological capital and its components. In addition, the program included several practical sessions including: deep breathing exercises and meditation, how to set and achieve goals, self-control skills, ways of improving self-confidence, skills of positive thinking, positive self-talk, and effective problem solving skills.

The researchers applied the teach-back technique throughout the training session, as the participants were instructed for repeating the information they had been acquired in their particular terms. Each subgroup of patients received the same program sessions until finishing the six subgroups. Before every session, the investigator greeted the participants, clarified the session's goals and content, and then took on role with one participant. Lately, the researcher repeated the process with a different participant and then 2 participants were selected to repeat these activities.

On each session's termination, the investigator offered a brief summary of the session's content, asked patients if they had any questions, informed them about the of following session's time and assigned them session homework. The investigator also summarized the previous session in order to ascertain how well the patients understood the exercises that were covered and to go over the session's material once more. The investigator gathered the data and carried out the program within (5) months from the beginning of (March, 2024) to the close of (July, 2024).

The session's content was described as follows:

Session 1: The session began with welcoming the patients and then clarifying the session's purpose and content. The researcher explained the program purpose, sessions' time, sessions' place, sessions' content, and the group rules were determined.

Session 2: This session aimed at helping the patient to gain information about depression. At the beginning of session, the researcher began to explain the concept of depression, its causes, symptoms and signs, as well as the negative effects on patient. The

researcher used some videos and pictures to illustrate the symptoms of depression.

Session 3: This session aimed at teaching the patients about concept of psychological capital and its components (self-efficacy - hope - optimism - resilience).

Session 4: This session aimed at teaching the patients how to practice deep breathing exercises and meditation. Patients were instructed to breathe deeply; inhaling through the nose and feeling their abdomen expand as they fill their body with air. Next, gently breathe out through your mouth while pushing your navel toward your spine to release the air.

Session 5: This session aimed at helping teaching the patients the necessity of setting and achieving goals as well as learning how through setting priorities, being realistic, setting deadlines that force the individual to work harder to achieve goal, and how to create an implementation plan that suits goals.

Session 6: This session aimed at improving individual's skills of self-control through teaching the patient to monitor himself and his behavior, actions as well as his reactions. This can be done by writing daily what happened and what done. In addition, helping the patient to know weaknesses and focus on his goals.

Session 7: This session aimed at helping the patients to identify the ways of improving self-confidence through teaching the patient to focus on directing personal life towards the better, not to make his own life similar to someone else's life, to make a list of the achievements made in life, and

avoid being harsh on self when make a mistake or fail.

Session 8: This session aimed at helping teaching the patients positive thinking and positive self-talk through helping the patient to monitor thoughts, exclude negative ones, avoid negative self-talk, be optimistic, and to look at the positive aspects of things before their negative aspects.

Session 9: This session aimed at helping the patients apply the effective problem solving skills that help them dealing with issues as well as stressful situations in community living conditions. The training activities employed present psychosocial and physical issues or past life experiences as a foundation for teaching by defining problems, breaking them down into smaller problems, establishing achievable goals, brainstorming solutions to the goals, creating and implementing action plans, and finally, appraising the results of action plan implementation.

Session 10: Closing session and expressing gratitude to the research's participants for their collaboration. Also, researchers reminded the participants about the follow-up plan.

4. Program evaluation:

The program was evaluated twice; using the same study tools;

- a) First, immediately a week after the program implementation (post-test).
- b) Second, three months after implementation of the program (follow up's test) in order to verify the program's long term effectiveness in the future. For some patients who discharged from

the hospital, the follow-up test was carried out in the outpatient clinic.

Limitations of the study

The research may be limited for numerous reasons. Firstly, a small sample size was conducted in the present research as the mentioned setting was the sole mental health hospital with little capacity serving Minia governorate and its entire districts. Also, noiseless area for meeting patients and applying the program, so, the researchers faced many interruptions and obstacles, which lead to frequent repetition. Finally, the study may be limited due to failure to restore relevant articles, despite many attempts have been done to get pertinent studies using various databases and several methods of searching. These limitations highlight areas for further future research endeavors.

Statistical Analysis

Data were collected, codified, classified, presented, scored, tabulated, and entered into the SPSS version (22). For qualitative variables, the data were displayed by descriptive statistics such as frequencies as well as percentages. For quantitative variables, data were described by means and standard deviations. T-tests were utilized to compare the means of two variables for quantitative data, while ANOVA tests were employed for comparing the means of more than two variables. Pearson correlation was applied to test the correlation between various numerical variable scores. A p-value below 0.05 was deemed as significant, while a p-value below 0.001 was classified as highly significant.

Results

Table (1) reveals that (56.7%) of patients belong to age group average of 30 to 45 years with

mean age 41.18 ± 4.45 , (61.7%) of them are females and (46.7%) are married. In addition, (70%) of patients reside in rural areas and an equal percentage are not working. Regarding educational level of studied patients, (51.7%) have primary education and (73.3%) have insufficient income.

Table (2) illustrates that (58.3%) of studied patients are hospitalized once and (73.3%) of them have the disease for less than a year. Besides, (71.7%) of the studied patients have involuntary admissions to psychiatric hospital.

Table (3) reveals that flourishing's mean score prior to the program's implementation is 23.38 ± 8.42 which has increased to 41.41 ± 7.89 and 39.20 ± 7.74 at the posttest and follow up, respectively. Furthermore, there are a highly statistically significant difference between pre, posttest and follow up among the patients concerning their flourishing scores where the P-value is $<0.001^{**}$.

Table (4) shows highly statistically significant differences among pre, post and follow up concerning the total health-promoting lifestyle as well as it's all subscales with P-value (0.001^{**}). In addition, this table reveals that, the total health-promoting lifestyle score is (95.58 ± 23.99) at pre-test which have increased to (156.56 ± 29.13) and (150.01 ± 26.65), respectively at the post-test and follow up period.

Table (5) demonstrates a highly statistically significance positive correlations between flourishing score as well as health-promoting lifestyle score at pre, post and follow up where $r = .396$, $P 0.027^*$, $r = .744$, $P .001^{**}$, $r = .799$, $P .001$, respectively).

Figure (1) demonstrates that, (80 %) of studied patients exhibit lower level of flourishing at pretest,

(15%) exhibit a moderate level while only (5%) of them have higher flourishing level. Regarding posttest and the follow up test, the same figure indicates that, the percentage of studied patients who have high flourishing level is increased to (58.40% and 53.30%,) respectively, while the percentage of patients who have low flourishing level is decreased to (13.30% and 15%), respectively.

Figure (2) clarifies that, (73.40 %) of patients exhibit lower level of health-promoting lifestyle at

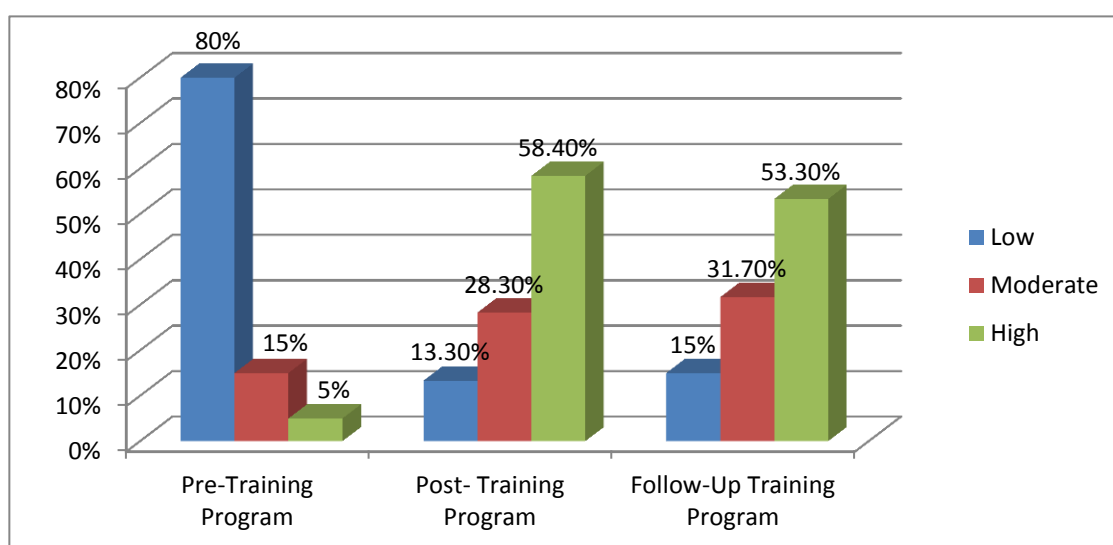
pretest, (18.30%) exhibit moderate level while only (8.30%) have higher health-promoting lifestyle level. Regarding posttest and the follow up test, the same figure indicates that, the percentage of studied patients who have high health-promoting lifestyle level is increased to (66.60 % and 60%,) respectively, while the percentage of patients who have low health-promoting lifestyle level is decreased to (13.30% and 26.70%), respectively.

Table (1): Frequency distribution of the studied patients relating to their personal data (n= 60).

personal data	no.=60	
	no.	%
Age		
18- <30	15	25.0
30-<45	34	56.7
≥45	11	18.3
Mean ± SD	41.18± 4.45	
Gender		
Male	23	38.3
Female	37	61.7
Marital status		
Single	17	28.3
Married	28	46.7
Divorced	9	15.0
Widowed	6	10.0
Residence		
Urban	18	30.0
Rural	42	70.0
Level of education		
Not read and write	12	20.0
Primary education	31	51.7
Secondary education	12	20.0
High education	5	8.3
Occupation		
Working	18	30.0
Not Working	42	70.0
Income		
Sufficient	16	26.7
Insufficient	44	73.3

Table (2): Frequency distribution of the studied patients relating to their clinical data (n= 60).

Clinical data	no.=60	
	no.	%
Number of hospitalizations		
Once	35	58.3
2-3 times	13	21.7
>3	12	20.0
Duration of illness		
less than a year	44	73.3
1-5 yrs.	9	15.0
6- 10 yrs.	7	11.7
Mode of admission		
Voluntary	17	28.3
Involuntary	43	71.7

**Figure (1):** Frequency distribution of studied patients' flourishing levels at pre, post, and follow up (n=60)**Table (3):** Comparison of studied patients' flourishing scores between pre, post and follow- up (n=60)

Total Flourishing score	Different times of measurement				
	Pretest Mean \pm SD	Post-test Mean \pm SD	Follow-Up Mean \pm SD	ANOVA	
				F	P
	23.38+8.42	41.41+7.89	39.20+7.74	90.07	0.001**

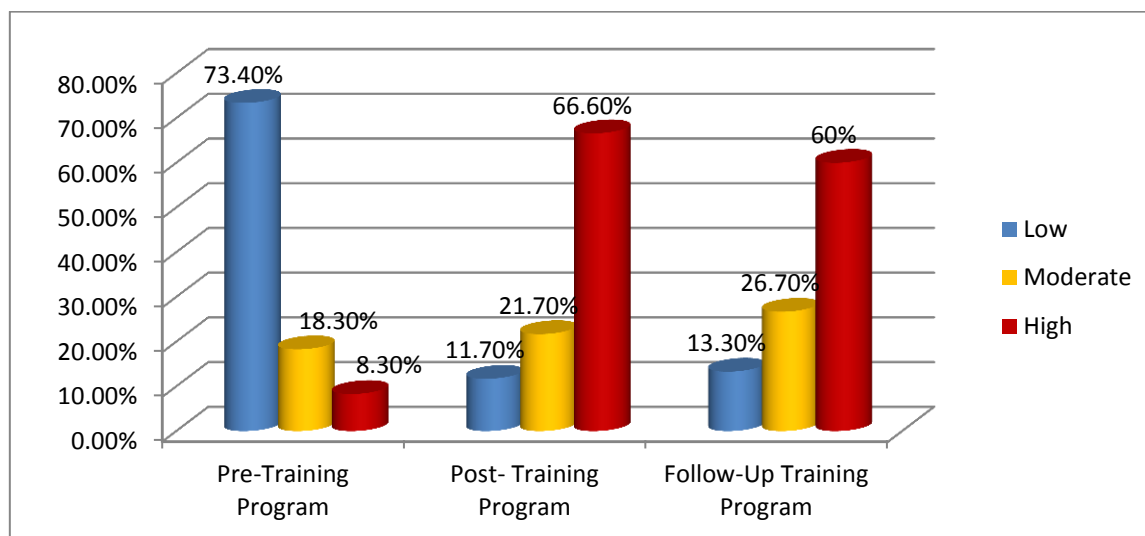


Figure (2): Frequency distribution of studied patients' health-promoting lifestyle levels at pre, post, and follows up (n=60)

Table (4): Comparison of studied patients' health-promoting lifestyle scores and its subscales between pre, post and follow- up (n=60)

Health-promoting lifestyle scale	Different times of measurement				
	Pretest Mean \pm SD	Post-test Mean \pm SD	Follow-Up Mean \pm SD	ANOVA	
				F	P
Health Responsibility	17.45 \pm 5.35	27.06 \pm 5.33	26.06 \pm 5.33	58.80	0.001**
Physical Activity	12.05 \pm 3.78	23.30 \pm 5.22	22.96 \pm 5.40	104.21	0.001**
Nutrition	18.03 \pm 5.58	27.03 \pm 5.20	24.93 \pm 4.41	51.34	0.001**
Spiritual Growth	16.78 \pm 4.35	26.85 \pm 3.94	26.78 \pm 4.19	115.93	0.001**
Interpersonal Relations	18.25 \pm 4.27	26.21 \pm 4.86	25.81 \pm 4.53	58.00	0.001**
Stress Management	13.01 \pm 3.52	26.10 \pm 11.09	23.45 \pm 4.55	55.08	0.001**
Total Health-promoting lifestyle	95.58\pm 23.99	156.56\pm 29.13	150.01\pm 26.65	94.47	0.001**

Table (5): Correlations between flourishing and health-promoting lifestyle scores among studied patients at pre, post, and follow up (n=60)

Variables	Pretest				Post-test				Follow-Up			
	Flourishing		Health-promoting lifestyle		Flourishing		Health-promoting lifestyle		Flourishing		Health-promoting lifestyle	
	r	p	R	P	R	p	r	p	r	p	r	p
Flourishing			.396	.027*			.744	.001**			.799	.001**
Health-promoting lifestyle	.396	.027*			.744	.001**			.799	.001**		

Discussion:

Psychological capital intervention is a constructive method that focuses on enhancing, cultivating, flourishing, and optimizing individuals to reach their potential. Besides, the program emphasizes on abilities which affects positively on self-flourishing and health promoting life style instead of focusing on diseases and disorders (Tahvilian et al., 2023). Thus, the current research aimed to investigate how a positive psychological capital program impacts the flourishing and health-promoting lifestyle of patients experiencing depression.

Concerning demographic data, the findings of this research specified that greater than half of participants were aged between 30 and 45 years old, with an average age of (41.18 ± 4.45). This finding might be attributed to the high incidence of depression in adulthood stage. Also, the studied sample has low experiences in handling stressors or various challenges compared to older individuals who are more adept at managing them. These problems may include loss of parent or significant person, unemployment, marital stress and divorce;

so feeling of depression were among the most common reaction for these problems. This outcome is consistent with a research conducted by (Zhang et al., 2023) who postulated that severely depressed patients have a mean age of 43.5 ± 0.50.

The current study's findings showed that, greater than half of participants were females. This could be linked to the fact that higher prevalence of depression among women compared to men (WHO, 2023). In addition, women are more prone to experiencing emotional issues and developing depression compared to men due to a combination of biological factors, psychological traits, and certain social influences. This outcome is matched with research conducted by Mestrom et al., (2024) who revealed that greater than two thirds of participants were females. Unlike finding of Okasha, et al., (2023) who reported that greater than two thirds depressed individuals were males.

Pertaining to marital status, this research indicated that, nearly half of participants were married. This finding may be justified as the marital stresses that make some people vulnerable

to depression; the most common causes of marital stress were disagreements, miscommunication between couples and behaviors that can become destructive over time. This outcome is compatible with **Wegbom et al., (2023)** who revealed that the majority of patients suffering depression were married.

The study findings revealed that greater than two thirds of participants resided in rural areas. This outcome could be referred to people living in rural areas are more prone to displaying behaviors linked to depression, like being poor, suffering from ongoing illnesses, facing restrictions in everyday tasks, and having a lower overall health condition. This outcome agrees with the research findings conducted by Egyptian study result held by **Younis et al. (2024)**, which found that greater than half of depressed individuals resided in rural areas.-

Concerning the level of education, this research revealed that, greater than half of depressed patients possessed primary education. This outcome could be related to individuals with lower levels of education had a decreased likelihood of effectively handling stressors and were also less knowledgeable about coping strategies and how to use them. In addition, this result was explained in the light of presence of high rate of unemployment and insufficient income in this research. This outcome is matched with the research of **Bahar, (2023)** who documented that greater than one third of patients suffering depression were primary school graduates. However, this outcome is disagreed with study

conducted by **Osama et al. (2023)**, who detected that greater than one third of participants obtained secondary education.

In addition, it was observed that the higher percentage of participants was not working as well as their income was insufficient. This outcome could be a result of various factors causing unemployment, such as the lack of job opportunities, education level, or inability to work. This outcome is corroborated by **Molla et al., (2024)**, who pointed that the higher percentage of depressed individuals were not working as well as their income was not enough. On the contrary, Egyptian study held by **Emara et al., (2023)** reported that greater than half of depressed patients were working.

In terms of clinical data, the present outcomes clarified that greater than half of the participants admitted to hospital once and more than two thirds of them had the disease for less than a year as well as brought into the mental hospital involuntary. These findings are corroborated by **Zein-Elabdeen et al. (2024)** who revealed that nearly half of depressed patients admitted psychiatric hospital one time, greater than half of them suffer from the disease for less than a year, and admitted to the hospital in an involuntary way.

As regards flourishing, the current outcomes demonstrated that the greatest percent of participants exhibited low level of flourishing at pretest with a lower mean score, while more than half of them had higher levels of flourishing at the posttest and follow-up with higher mean scores.

Besides, there were highly statistically significant difference between pre, posttest and follow up.

The previous outcomes might be explained as depressed patients suffer from poor mental health and have lower levels in well-being, emotional and social aspects that reflects negatively on flourishing. In addition, depressed patients experience disturbed sleep, changes to their appetite, lack of hope for the future, thoughts about dying and feelings of poor self-esteem; all these symptoms disturb their wellbeing and flourishing.

Moreover, these results can be attributed to the importance of psychological capital intervention in promoting flourishing for depressed patients by enhancing subjective wellbeing. In addition, this intervention can strengthen the ideal state of mental functioning typically associated with feeling positive attitudes, emotions, and outcomes which ultimately increase the flourishing scores.

The previous findings are matched with **Schotanus-Dijkstra et al., (2017)** who proposed that the studied patients were inflicted with low level of flourishing before intervention with a mean score (10 ± 7.3) which increased to (41 ± 29.9) after implementing program. Similarly, **Tahvilian et al (2023)** found that the mean score of flourishing at the pretest was 22 ± 47 which increased to 29 ± 87 at the posttest.

Concerning to health-promoting lifestyle, the current outcomes presented that nearly three quarters of patients exhibited low level of health-promoting lifestyle with a lower mean score at pretest, while more than two thirds of them had

higher levels of health-promoting lifestyle at posttest and follow-up with higher mean scores. Also, it was observed that highly statistically significant differences among pre, post as well as follow up concerning the total health-promoting lifestyle as well as its all subscales. These findings could be referred to depression has a significant impact on lifestyle due to the negative effect on its components as health responsibility, nutrition, physical activity, stress management, interpersonal relations, and spiritual growth.

Furthermore, the previous findings could be related to the efficacy of psychological capital intervention on patient's health-promoting lifestyles. In fact, with the increase of psychological capital components as hope, optimism, self-efficacy and resilience, patients' mental health and lifestyle will be better and healthier because healthy lifestyle is very effective in relieving depressive symptoms. These outcomes are partially parallel to the research's result of **Hanawi et al., (2020)** who proved that most of participants were suffering from an unhealthy lifestyle while the lower percent have an intermediate lifestyle.

In addition, a study achieved by **Tang et al., (2021)** postulated that health-promoting lifestyle subscales among participants had lower scores at the pretest. Further study findings are in harmony with the current research revealed by **Tahvilian et al., (2023)** who proved that health-promoting lifestyle and it's all domains had significantly improved after intervention, with a p-value of (0.01). The same author added that, total health-

promoting lifestyle score at the pretest was 102 ± 15.66 which increased to 128.07 ± 17.91 at the posttest. Similarly, these outcomes are in alignment with **Khorshidi et al., (2023)**, who confirmed the significant impact of psychological capital intervention on improving health-promoting lifestyle. The authors explained their results by reinforcing components psychological capital and positive emotions of depressed patients could predict high scores of health promoting life style.

The present research results displayed highly statistically significant positive correlations among flourishing score as well as health-promoting lifestyle score at pre, post and follow up. These findings can be justified as Unhealthy lifestyle and depression are closely connected; depression can trigger and worsen unhealthy lifestyle, leading individuals to become more susceptible to depression over time. Besides, patients experience severe depression, stress continues to be a prevalent issue, and it can be expected that flourishing tends to have lower levels. On this point, psychological capital intervention is composed of self-efficacy, hope, optimism, and resilience; these resources emphasize the strengths and positive capacities of individuals for contributing to a sense of greater flourishing and enhancing health promoting lifestyle.

These outcomes are in harmony with **Tahvilian et al., (2023)** who documented that there were associations between flourishing and health promoted lifestyle with statistically significant differences at the pretest as well as posttest. The authors added that self-flourishing is an important component in health promoting lifestyle. Analogous research directed by **Hautekiet et al.,**

(2022), who postulated that, a healthy lifestyle is positively associated with flourishing. Likewise, **Lianov, (2022)** proposed that, there were strong connections between flourishing and health promoting lifestyle. These findings suggest implementing strategies as psychological capital interventions to incorporate healthy lifestyle changes in daily life that could be beneficial for flourishing, and might offset the negative impact of depression.

Conclusion

According to the outcomes of the present research, it is likely to conclude that, depressed individuals have poor flourishing as well as health-promoting lifestyle. Also, a positive correlation was detected between patients' flourishing and their health-promoting lifestyle. In addition, there were significant improvements in flourishing and health-promoting lifestyle of depressed patients after receiving psychological capital program. So, this study established significant evidence that psychological capital program is effective in improving flourishing and health-promoting lifestyle profile among the depressed patients.

Recommendations

1. More efforts should be undertaken to include psychological capital program as a component of a holistic psychosocial interventions to depressed patients.
2. In service training for the nurses and health providers concerning psychological capital is very important in order to improve flourishing and health promoting life styles among patients with depression.

3. Ongoing follow up and monitoring for patients with depression participating in psychological capital program to support their skills learning and persistence of the change.
4. Future studies in various local and international contexts with a large sample size concerning psychological capital effect on flourishing and health promoting life styles are required in order to generalize findings.

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