



# Comparison of the Effectiveness of Interpersonal Counseling and Interpersonal Psychotherapy in Emotional Expression, Social Skills, and Depression Symptoms in Students

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## Abstract

**Background:** Depression symptoms are among the most common psychological problems in students. Short-term treatments are important in preventing depression from turning into a disorder.

**Objectives:** The current study aimed to investigate the effectiveness of interpersonal counseling (IPC) in depression symptoms, emotional expression, and social skills of students in comparison to interpersonal psychotherapy (IPT).

**Methods:** A pretest and posttest design with follow-up was used in this study, with two experimental groups and a control group conducted in Mashhad, Iran, in 2021. A total of 51 subjects who scored 14 or higher on the Beck Depression Inventory-Second Edition (BDI-II) were randomly assigned to two experimental and control groups. Finally, the information obtained from 41 subjects was analyzed. The experimental groups underwent 7 sessions of 45 minutes of IPC and 12 sessions of 90 minutes of IPT every week. At the beginning of the study, after the end of the intervention, and after one- and three-month follow-up periods, all the subjects were evaluated with the BDI-II, emotional expressiveness, and social skills questionnaires. The findings were analyzed using the repeated measurement method and Kruskal-Wallis and Mann-Whitney U tests. All the analyses were carried out with SPSS software (version 23).

**Results:** Both IPC and IPT treatments were effective in depression symptoms (M: 31.76, 20.41, 22.94, and 24), emotional expression (M: 32.94, 40.26, 38.47, and 37.23), and social skills (M: 224.9, 265.2, 254.4, and 253.7) ( $P < 0.05$ ). The comparison of the two treatments showed no significant difference in the variables ( $P > 0.05$ ).

**Conclusions:** The findings of the present study can be considered a useful step in the field of short-term and effective interventions.

**Keywords:** Counseling, Social Skills, Psychotherapy, Brief, Emotional Expression, Interpersonal Psychotherapy

## 1. Background

Depression is a significant mental health concern worldwide due to its high prevalence, chronicity, and difficult treatment and recovery (1). University students face many challenges, including independent living, academic stress, and planning for their future careers (2), predisposing them to depression (3). These psychological pressures can affect their physical and mental health (4) and are associated with acute infectious diseases (5), suicidal ideation, and suicide attempt (6). Studies show that in different countries, the prevalence of depression among students is increasing (7). In a recent study, depression prevalence among university students was reported to be higher than

in the general population (8). In studies on depression in Iran, its prevalence is estimated within the range of 36 - 66% among students and 15 - 25% among normal individuals (9).

Symptoms of depression are considered in the prognostic phase of depression and are among the best predictors of major depression (10). The presence of only a few symptoms of depression that do not meet the criteria for major depression leads to a significant reduction in social and physical function (11). Individuals with depressive symptoms who are not diagnosed with a major depressive disorder are five times more likely to develop the major depressive disorder after one year than asymptomatic individuals. Therefore, early interventions are required to pre-

vent this from happening.

By looking at the literature on depression, several components are found that are affected by this disorder (12). One of these components is an individual's social skills, in which the depressed person loses his/her social efficiency and cannot reach the appropriate level of social activity in interpersonal relationships (13). Individuals' verbal and non-verbal social skills to cultivate, maintain, and strengthen relationships with others have been proven to be associated with mental health outcomes. Poor social skills are associated with higher rates of depression and its symptoms. The ability to make effective use of social support and build relationships that help individuals with distress reduce negative mental health outcomes has been expressed by the social skills deficit vulnerability model. This model, tested in longitudinal studies on university students, shows that students with lower social skills show more depressive symptoms when entering a university (14). Another component is emotional expressiveness, an important component that psychologists consider individuals' mental health to depend on. Several theorists believe that depressed individuals suffer from this clinical disorder due to weakness in this component (15).

At present, various interventions for depression have been proposed, few of which have been able to prove their effectiveness in experimental studies (16). Research has shown that interpersonal psychotherapy (IPT) and behavioral activation therapy are more effective in treating depression than cognitive therapy; accordingly, they can be considered the treatment of choice for depression (17). The IPT is a treatment with a fixed duration (12-16 weeks) based on the treatment manual. In this method, an attempt is made to reduce the symptoms of depression by focusing on current interpersonal problems and changing the interpersonal tissue of patients. This method is one of the effective treatments for major depressive disorder (18).

After the advent of IPT, its various forms were developed with different goals and theoretical and practical development, which include IPT for adolescents, short-term IPT, and interpersonal counseling (IPC) (16). On the other hand, in many low-resource and developing countries, there are few mental health professionals, and they are not available to teach these interventions. Therefore, the priority of public health is the development of psychological interventions that are simplified and easily implemented by mental health professionals and individuals with minimal education in the field of mental health after training and supervision.

The main goal of the World Health Organization (WHO) is to provide quick access to primary care and prevent the chronicity and progression of symptoms. Patients with depressive symptoms usually receive medica-

tion; however, if possible, they usually prefer to talk to someone about their problems (19). Less than 40% of adults receiving psychotherapy attend more than three to five sessions (20). For this reason, IPC is derived directly from IPT, which is a research-based treatment. This treatment has been used for different age groups and conditions around different parts of the world (16, 20).

The IPC is a concise, patient-centered approach to controlling depression, which reduces the burden of primary care. This approach is a brief psychological intervention performed over six or, optionally, seven sessions (20). The basic tenet of IPC is that depressive symptoms are related to interpersonal relationships. By affecting interpersonal relationships, depressive symptoms can be reduced in an optimal and supportive way (16). Depressive symptoms are generally identified in three stages of treatment. The first stage (usually one or two sessions), which includes a diagnostic evaluation and psychiatric history, sets the treatment framework. In the first session, which is usually longer, the symptoms and interpersonal contexts are assessed and presented to the patient. During the intermediate stage, the therapist follows strategies specific to the chosen area, namely grief, disputes, transitions/life changes, or loneliness and isolation. In the final stage of IPC, the patient is encouraged to recognize, integrate therapeutic achievements, and learn the methods of identifying and coping with depressive symptoms that might arise in the future (21).

Due to the importance of depressive symptoms in students and that depression by changing and expressing emotion changes the level of concentration and mood of the person from normal to depressed and considering that expressing emotion is one of the main components of social skills, it can be said that by changing the expression of emotion, a person's performance in social environments is also disrupted. Due to the novelty of this intervention, no study has been carried out on IPC in Iran, and studies in other countries are limited.

## 2. Objectives

This study aimed to investigate the effect of IPC on depressive symptoms, emotional expression, and social skills of students in comparison to IPT.

## 3. Methods

This study was performed with a pretest-posttest design with two groups of subjects and a control group in the Psychological Intervention Center of Mashhad Municipality, Mashhad, Iran. The study's statistical population included the students referred to the Counseling Center of

Ferdowsi University of Mashhad with a complaint of depression and were referred to the researcher by a psychiatrist. The inclusion criteria in this study were scores 14-28 in the Beck Depression Inventory-second Edition (BDI-II), age of at least 19 - 30 years, and not undergoing psychiatric (drug) and psychological treatments simultaneously. Severe depressive disorder or bipolar disorder, risk of committing suicide before and during treatment, absence from two treatment sessions, severe mental disorders (e.g., psychosis), or severe personality disorders were among the exclusion criteria.

Sampling was performed using the availability method. Therefore, from the list of individuals referred (with a complaint of depression) to the clinic for counseling and treatment, 73 patients were selected and invited to participate in the study. After referring 73 patients, completing the BDI-II and a consent form, and having full knowledge of participating in the study, 51 eligible patients who obtained a score above 14 in the BDI-II were selected. With written consent as a sample of the study, they were randomly divided (by the lottery method) into three groups of experimental and control (17 subjects in each group, including IPC, IPT, and control groups). The BDI-II, social skills, and emotional expression questionnaires before and after the intervention and 1 month and 3 months after the intervention were filled out by the three groups.

Two, three, and five patients from the IPC, IPT, and control groups withdrew from the study for personal reasons, respectively, and could not attend the study until the end. Two, three, and five patients from the IPC, IPT, and control groups refused to continue the study due to personal reasons, respectively, and could not participate in the study until the end. The final analysis was carried out on 41 participants.

The IPC consisted of seven 45-minute sessions per week, according to the WHO manual. The IPT group underwent IPT for 12 90-minute sessions per week, according to the Guide to Interpersonal Psychotherapy (16). The interventions were carried out by a PhD student trained in IPT. After the last follow-up stage, the control group underwent IPC for seven sessions to observe the ethical principles.

### 3.1. Measures

Three self-report questionnaires were used in this study, namely the BDI-II, Emotional Expressiveness Questionnaire (EEQ), and Social Skills Inventory (SSI).

#### 3.1.1. Beck Depression Inventory-Second Edition

Similar to the BDI, the BDI-II has 21 items, and the answers are scored from 0 to 3. Cut points in the BDI-II differ from the BDI, including 0 - 13, 14 - 19, 20 - 28, and 29 - 63

as minor, mild, moderate, and severe depression, respectively. Higher scores indicate more severe depressive symptoms. The BDI-II measures both the presence and severity of depressive symptoms (22). The BDI-II has a correlation of +0.71 with Hamilton Rating Scale for Depression, and the reliability of its one-week retest is 0.93. The internal consistency of this questionnaire is 0.91 (23). In Iran, a study was conducted on 2260 students of Shiraz University to determine the validity and reliability of the BDI-II. The results showed that this questionnaire had high internal stability (0.87) and acceptable reliability over time ( $r = 0.72$ ) (24).

#### 3.1.2. Emotional Expressiveness Questionnaire

The EEQ includes 16 items and three subscales of positive emotional expression, intimacy expression, and negative emotional expression. Items 1 - 7, 8 - 12, and 13 - 16 are related to the positive emotional expression, intimacy expression, and negative emotional expression subscales, respectively. This questionnaire is based on a 5-point Likert scale; therefore, the answers completely agreed and completely disagreed are assigned scores of 5 and 1, respectively. According to this scoring method, a person's total score varies from 16 to 80. A higher score indicates higher emotional expression. For the evaluation of convergent validity, a positive correlation was obtained between the three scores of the subscales of EEQ and the Minnesota Multidimensional Personality Questionnaire (25). The reliability of this scale was evaluated by the internal consistency method in a study by Rafeinia et al. Cronbach's alpha coefficient for the whole scale was 0.68, and Cronbach's alpha coefficients for the subscales of positive emotional expression, intimacy expression, and negative emotional expression were 0.65, 0.59, and 0.68, respectively, which were significant at the level of  $\alpha = 0.001$  (26).

#### 3.1.3. Social Skills Inventory

The SSI developed by Reggio (1989) is a 90-item tool designed as a short but comprehensive self-report measurement to assess social skills. The items are scored based on a 5-point Likert scale (1 to 5). Six SSI scales measure social skills at two emotional (i.e., expression, sensitivity, and control) and social (i.e., expression, sensitivity, and control) levels. These six scales are emotional expression, emotional sensitivity, emotional control, social sensitivity, and social control. Reggio estimated the reliability of the SSI within 0.62 - 0.96 using Cronbach's representation and alpha method (27). In Khojasteh Mehr's study (28), reliability for the 6-point scale and total SSI score within 0.53 - 0.96 was obtained.

### 3.2. Participants

The study's statistical population included the students referred to the Counseling Center of Ferdowsi University of Mashhad with a complaint of depression and were referred to the researcher by a psychiatrist. The inclusion criteria in this study included scores 14 - 28 in the BDI-II.

### 3.3. Statistical Analysis

The results were analyzed by repeated measures analysis of variance and the Kruskal-Wallis and Mann-Whitney U tests using SPSS software (version 23).

### 3.4. Ethical Considerations

Written informed consent was signed by all students. Additionally, the study was approved by the Ethics Committee of Iran University of Medical Sciences, Tehran, Iran ([IR.IUMS.REC.1399.1231](#)). Furthermore, this study has been registered in the Iranian Registry of Clinical Trials ([IRCT20210505051182N1](#)).

## 4. Results

All 41 subjects were within the same age range and education and were studying at the undergraduate level of Ferdowsi University of Mashhad at the time of the study. The mean values of the experimental and control groups were  $22.78 \pm 1.46$  and  $21.92 \pm 1.31$  years, respectively. After IPC and IPT treatments, posttest and follow-up were performed on all three experimental and control groups. Then, the data related to the pretest, posttest, and follow-up were extracted.

This part examines the variable of depression symptoms. First, the assumption of homogeneity of variances was evaluated using Levene's test, the results of which are summarized in [Table 1](#).

As the data in [Table 1](#) shows, none of the stages of depression symptoms is significant because the significance level is greater than 0.05. Therefore, there was a homogeneity of variance between the groups.

The results of [Table 2](#) show that the effect of IPC is significantly different between the control and experimental groups. With these conditions, the variable of depressive symptoms in the four stages of pretest, posttest, 1-month follow-up, and 3-month follow-up, regardless of the study groups, was significantly different. In addition, the interactive effect of time and treatment group was significant. In other words, the mean scores of IPC and IPT were different between the control and experimental groups. Due to the large size of the effects and considering the relationship between the size of the effect and the power of the test,

it can be said that the power of the test was high for this hypothesis.

According to [Table 3](#), there was a significant difference between the two methods of IPC and IPT and the control group; nevertheless, because these two methods were in a subgroup, there was no significant difference between IPC and IPT in reducing the severe symptoms of depression.

This section examines the emotional expression variable. First, the assumption of homogeneity of variances was evaluated using Levene's test, the results of which are summarized in [Table 4](#).

As the data in [Table 4](#) show, at the 1-month follow-up stage, its significance level is equal to 0.001 and less than 0.05; as a result, there is no homogeneity of variance between the groups. Therefore, a non-parametric method should be used to check this hypothesis. Therefore, Kruskal-Wallis and Mann-Whitney U tests were to check this hypothesis.

According to [Table 5](#), in the pretest stage, there was no significant difference between the control and experimental groups due to the significant level equal to 0.237 and more than 0.05. In other words, the two groups were similar in expressing emotion. However, considering the significant level of posttest, 1-month follow-up, and 3-month follow-up, equal to 0.000 and less than 0.05, it can be said that IPC had a significant impact on improving individuals' expression of emotion.

According to the results of the Mann-Whitney U test, a comparison of IPC and IPT groups to the control group in three stages of posttest, 1-month follow-up, and quarterly follow-up showed that their significance level was less than 0.05; therefore, there was a significant difference between IPC and IPT. There are three steps mentioned. However, in comparing the two methods of IPC and IPT in improving emotional expression, considering that the level of significance in all stages of pretest, posttest, 1-month follow-up, and 3-month follow-up was more than 0.05, these two methods were not significantly different in improving emotional expression.

Then, the social skills variable will be investigated. There was no homogeneity of variance between the groups. Therefore, Kruskal-Wallis and Mann-Whitney U tests were used to check this hypothesis. Considering the significance level of the posttest, 1-month follow-up, and 3-month follow-up, equal to 0.000 and less than 0.05, it can be said that IPC had a significant impact on improving individuals' social skills. The comparison of the IPC and IPT groups to the control group in the three stages of posttest, 1-month follow-up, and quarterly follow-up showed that their significance level was less than 0.05. Therefore, there was a significant difference between IPC and IPT. There are three steps mentioned. Nevertheless, in comparing

**Table 1.** Homogeneity of Variances with Levene's Test

| Source of Changes             | F-statistics | Degree of Freedom 1 | Degree of Freedom 2 | Significance Level |
|-------------------------------|--------------|---------------------|---------------------|--------------------|
| <b>Symptoms of depression</b> |              |                     |                     |                    |
| Pretest                       | 0.516        | 2                   | 39                  | 0.600              |
| Posttest                      | 0.903        | 2                   | 39                  | 0.412              |
| 1 month of follow-up          | 3.113        | 2                   | 39                  | 0.054              |
| 3 months of follow-up         | 1.112        | 2                   | 39                  | 0.337              |

**Table 2.** Comparison of Interpersonal Counseling in Different Groups and Courses of Treatment regarding Depressive Symptoms

| Source of Changes                                 | Sum of Squares | Degrees of Freedom | Average of Squares | F-statistics | Significance Level | Effect Size |
|---|----------------|--------------------|--------------------|--------------|--------------------|-------------|
| <b>Counseling and interpersonal psychotherapy</b> | 37943.624      | 3                  | 12647.875          | 1850.149     | 0.000              | 0.979       |
| <b>Control group</b>                              | 369.653        | 6                  | 61.609             | 9.012        | 0.000              | 0.316       |
| <b>Error</b>                                      | 799.828        | 117                | 6.836              |              |                    |             |

**Table 3.** Category between Treatment Method and Groups with Duncan's Test of Depressive Symptoms

| Treatment Method  | Subgroup |         |
|---|----------|---------|
|   | Group 1  | Group 2 |
| <b>Interpersonal counseling and interpersonal psychotherapy</b> | 14.7477  |         |
| <b>Control group</b>  | 15.2781  | 17.0983 |
| <b>Significance level</b>                                       | 0.294    | 1.000   |

the two methods of IPC and IPT in improving social skills, considering that the level of significance in all stages of pretest, posttest, 1-month follow-up, and quarterly follow-up was more than 0.05, these two methods were not significantly different in improving social skills.

### 5. Discussion

The results showed that the experimental group showed a statistically significant improvement in the BDI-II questionnaire after treatment compared to the control group. The analysis of the results showed that IPC intervention was effective in improving depressive symptoms (severity and symptoms). This finding is in line with a study's findings that will be explained. A study by Kontunen (29) used IPC for depression in primary health care patients. The results of the aforementioned study showed that the symptoms of depression in 60% of the subjects significantly decreased. Additionally, the results of another study (30) showed that the symptoms of depression in college students significantly decreased. Sawamura et al. (31) showed that IPC had a significant effect on the improvement of depression in students

with attention deficit hyperactivity disorder in the fourth week. Menchetti et al. (32), in their study, in which they compared the effect of IPC to selective serotonin reuptake inhibitor drugs on the depression of patients in primary care, concluded that IPC has a more significant effect on improving depression than the other group.

The present study's findings are inconsistent with the results of Holmes et al.'s study (33). The IPT has also been effective in improving participants with depression (i.e., reduction of symptoms and severity of symptoms). This result is in agreement with the findings of Meffert et al.'s study (34), which showed that this treatment method was effective in improving depression in women infected with AIDS, and Johnson et al.'s study (17), which showed that IPT reduced symptoms of depression, hopelessness, and symptoms of posttraumatic stress disorder. The effectiveness of IPT in reducing the symptoms and severity of depression in female students at the end of the intervention and 1-month follow-up was shown in a study by Mahan et al. (35), which is consistent with the findings of this study.

As mentioned earlier, one of the problems that depressed individuals suffer from is communication problems. Given that IPT treats depression as a disorder and focuses on interpersonal relationships and social support of the depressed person, it can reduce the symptoms of depression. On the other hand, IPC is an intervention that is extracted from IPT with less time and cost. In this study, no significant difference was observed between the two groups, and according to this data, it can be concluded that this treatment can be used for immediate interventions in the early stages of health care. This result is also in line with the results of Kontunen et al.'s study (36), which compared the effectiveness of these two treatment methods in improving health in primary care. The results obtained

**Table 4.** Homogeneity of Variances with Levene's Test

| Source of Changes           | F-statistics | Degree of Freedom 1 | Degree of Freedom 2 | Significance level |
|-----------------------------|--------------|---------------------|---------------------|--------------------|
| <b>Emotional expression</b> |              |                     |                     |                    |
| Pretest                     | 0.156        | 2                   | 39                  | 0.856              |
| Posttest                    | 3.722        | 2                   | 39                  | 0.031              |
| 1 month of follow-up        | 5.455        | 2                   | 39                  | 0.007              |
| 3 months of follow-up       | 4.965        | 2                   | 39                  | 0.011              |

**Table 5.** Comparison between Groups with the Kruskal-Wallis Test

| Examination Group                                    | Average Ratings | Chi-square Test | F-statistics | Significance Level |
|--|-----------------|-----------------|--------------|--------------------|
| <b>Pretest of emotional expression</b>               |                 | 2.880           | 2            | 0.237              |
| IPC  | 30.65           |                 |              |                    |
| IPT  | 25.15           |                 |              |                    |
| Control group  | 22.21           |                 |              |                    |
| <b>Posttest of emotional expression</b>              |                 | 28.018          | 2            | 0.000              |
| IPC  | 32.56           |                 |              |                    |
| IPT  | 34.91           |                 |              |                    |
| Control group  | 10.53           |                 |              |                    |
| <b>1 month of follow-up of emotional expression</b>  |                 | 19.844          | 2            | 0.000              |
| IPC  | 34.79           |                 |              |                    |
| IPT  | 29.97           |                 |              |                    |
| Control group  | 13.24           |                 |              |                    |
| <b>3 months of follow-up of emotional expression</b> |                 | 18.672          | 2            | 0.000              |
| IPC  | 35.09           |                 |              |                    |
| IPT  | 29.12           |                 |              |                    |
| Control group  | 13.79           |                 |              |                    |

Abbreviations: IPC, interpersonal counseling; IPT, interpersonal psychotherapy.

from this study indicated that IPC is as effective as IPT in improving depression and its symptoms. In this intervention, by improving stress management and communication skills, students are taught the necessary ability to communicate in different social fields. In addition, improving the management of emotions through their identification and management increases the ability to solve problems, which in turn improves the relationship with new situations and individuals.

The next variable examined for the first time in this study was the effectiveness of IPC in emotional expression. The IPC had a significant effect on improving emotional expression. Given that there was no significant difference between IPC and IPT in improving emotional expression, it can be considered that this finding is consistent with the findings of Ferizi Nezafat et al.'s study (12) that showed that IPT is effective in students' expression of emotion. It can be concluded that IPC has been as effective in improving emo-

tional expression as much as IPT. What theorists mean by expressing emotion is not a mere expression of it; nevertheless, the ability of a person to understand what a psychological event brings to him/her and the feelings and emotions that it evokes within him/her. This issue can be considered one of the foundations of IPT, and it addresses and mentalizes the dimensions of an external experience within and the inner psychological experience. Emotional expression in this treatment is a psychological tool that protects individuals from disorders, such as depression, and makes them continue to be safe from depression after leaving the group.

One of the most important variables that play a significant role in interpersonal relationships is social skills, examined at two emotional and social levels. The results obtained for this variable are consistent with the results of Glanton Holzhauer et al.'s study (37), indicating that IPT has significantly improved social skills in women with

headaches. On the other hand, the absence of a significant difference in this variable between IPC and IPT indicates the consistency of these results with the results of the aforementioned study and shows the effectiveness of IPC in improving social skills. Since expressing emotion and the ability to communicate through education can be improved, and one of the most important factors in individuals suffering from depression is a deficiency in these skills, it can be expected that improving these skills can help reduce the symptoms of depression. This result is consistent with the data obtained from the present study.

### 5.1. Limitations

Although the present study tried to overcome some of the basic methodological weaknesses of the studies conducted in this field, this investigation is confined by limitations, such as the limited sample size, which reduced the generalization of the results to a larger society. The follow-up period was 3 months, and all the participants were from Mashhad, which might affect the generalization of the results. Finally, the inclusion criterion of the participants was that they were students, which limited the examination and generalization of the results to other members of the society.

### 5.2. Suggestions

According to the current study, to guide future studies, suggestions, such as an increase in the follow-up period, comparison to other short-term and standard treatments, comparison of group and individual therapy, and check on the effectiveness and use of community samples, are put forward.

### 5.3. Conclusions

The results of this study showed that both treatment methods could affect the treatment outcome of individuals suffering from depression symptoms. The changes made in the treatment groups remained constant until the follow-up phase. The comparison of the two treatments showed no significant difference between the two treatments in the variables of emotional expression and social skills. In general, according to the obtained results, it is recommended to use IPC in improving depression symptoms due to the ease of implementation and training of therapists and less financial and time costs. Moreover, the availability of further individuals is more suitable.

### Footnotes

**Authors' Contribution:** Study concept and design: A. A. and J. N.; Analysis and interpretation of the data: A. A. and

J. N.; Drafting of the manuscript: B. G.; Critical revision of the manuscript for important intellectual content: B. G., A. A., and A. A.; Statistical analysis: J. N.

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**Data Reproducibility:** The data presented in this study are uploaded during submission as a supplementary file and are openly available for readers upon request.

**Ethical Approval:** This study was approved under the ethical approval code of the Iran National Committee for Ethics in Biomedical Research ([IR.IJUMS.REC.1399.1231](#)).

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