

# The effectiveness of treatment based on an integrative self-analysis approach on psychological capital, psychological well-being, ego strength, and difficulty in regulating emotion in people suffering from covid-19 bereavement

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## ABSTRACT

**Objective:** The purpose of this study was to investigate the effectiveness of treatment based on an integrative self-analysis approach on psychological capital, psychological well-being, ego strength, and difficulty in regulating emotion in people suffering from covid-19 bereavement.

**Methods and Materials:** The current research method is quasi-experimental and the design used in this research is a pre-test-post-test design with a control group and a two-month follow-up. A pre-test-post-test plan was designed with a control group and an experimental group. Using the purposive sampling method, 30 eligible people were selected and randomly assigned to the experimental and control groups. After that, the experimental group received treatment based on the integrative self-analysis approach but the control group did not receive any intervention. Data collection tools included Psychological Capital Questionnaire (PCQ), Ryff Psychological Well-Being Scale Short Form (1980), Garnefski and Kraaij's Emotion Regulation Scale (2006) and psychosocial inventory of ego-strengths (PIES). In order to statistically analyze the data, descriptive statistics (mean and standard deviation) and inferential statistics (analysis of variance with repeated measurements) were used. In this research, SPSS-26 software was used to perform statistical tests.

**Findings:** For the effect of the between-group factor, the F-value calculated for the group effect is significant at the level of 0.05 ( $P < 0.05$ ). As a result, there is a significant difference between the average scores of pre-test, post-test and follow-up scores of psychological capital in the two experimental and control groups. Also, the results of the follow-up Bonferroni test showed that there is a significant difference between the scores of psychological capital, psychological well-being, ego strength, and difficulty in emotional regulation in the stages of pre-test and post-test, pre-test and follow-up ( $P < 0.05$ ). Also, the results of the follow-up test showed

that there is no significant difference between the scores of the research variables in the post-test stage compared to the follow-up stage ( $P < 0.05$ ).

**Conclusion:** The results showed that the treatment based on the integrative self-analysis approach was significantly effective on psychological capital, psychological well-being, ego strength and difficulty in emotion regulation, and these effects were stable in the follow-up phase.

**Keywords:** *Integrative self-analysis approach, psychological capital, psychological well-being, ego strength, difficulty in emotion regulation.*

## 1. Introduction

The prevalence of COVID-19 has not only led to disruptions in daily functioning but also to deaths resulting from the disease. One of the main challenges for survivors who have lost a loved one due to COVID-19 is the grieving process, as maintaining social distancing measures to prevent the spread of the virus has disrupted the usual grieving process and reduced emotional and social support from friends and acquaintances. Therefore, it seems that the long-term and debilitating grief and sorrow resulting from the death of loved ones due to COVID-19 may have increased (León & Guzmán-Saldaña, 2023).

Life events and experiences can affect individuals' psychological well-being (Valle et al., 2016). Psychological well-being is a type of satisfaction according to social psychologists (Kim et al., 2021), defined as the attainment of potential full capacity and includes satisfaction with life, positive and negative affect, and happiness (Christner et al., 2021). According to Ryff, the structure of psychological well-being is defined as the realization of each person's true potential and consists of six components: purposeful life, positive relationships with others, personal growth, self-acceptance, independence or autonomy, and mastery of the environment (Luo & Hancock, 2020).

In such circumstances, psychological capital should be considered as an important and fundamental characteristic. If individuals in society benefit from it, they show less vulnerability to stressful events and experience higher satisfaction and well-being, ultimately reducing the likelihood of being harmed (Santisi et al., 2020). Psychological capital is a set of internal resources and assets that usually represent a person's positive evaluation of conditions and the likelihood of success based on these resources. It consists of four positive psychological resources: self-efficacy, optimism, resilience, and hope (Zhou et al., 2018).

Ego strength also indicates an individual's capacity to tolerate stress without experiencing paralyzing anxiety and is related to a sense of competence and self-sufficiency in personal and social domains. Since the ego is responsible for

managing the psychological system, all psychological problems arise when the ego cannot fulfill its responsibilities. In general, our ability to cope with life, i.e., our psychological balance, depends on the ability and power of the ego to overcome various pressures that come its way (Mishra, 2013).

On the other hand, emotion regulation can lead to a reduction in negative consequences of COVID-19 as well as better adaptation to loneliness and maintaining psychological well-being (Gubler et al., 2021). Generally, emotion regulation can be defined as processes through which individuals can influence what emotions they have, when they have them, how they experience and express them (Panayiotou, Panteli, & Leonidou, 2021). Overall, it seems that low psychological well-being is associated with less emotion regulation strategies, weak emotional clarity, and non-acceptance of emotions, while the ability to regulate emotions can be helpful due to the accompanying control of behavior and self-acceptance (Vuillier et al., 2021).

Today, providing effective care and interventions for individuals who have been affected by COVID-19 has become a global challenge (Eisma et al., 2021). One of the newly used psychological interventions is integrative self-analysis therapy. In the integrative self-analysis approach, it is believed that the underlying layers of our psychological insecurity and pain create our fears and anxieties, so fear is the root of all insecurities. In the upper layers of the human psychological iceberg, there are conscious emotions and feelings that are usually unpleasant and harmful, and individuals can talk about them at the peak of the mountain. In the lower part of this peak, there is a type of insecurity that causes pain (Solimannejad et al., 2019).

Given that grief disorder seems to be one of the common negative consequences during the COVID-19 pandemic, providing interventions to strengthen individual capacities can be helpful. Although the effectiveness of integrative self-analysis therapy has been somewhat effective in terms of psychological capital, psychological well-being, ego strength, and emotion regulation difficulties, there is a gap in that the effectiveness of this therapy has not been directly examined on the variables mentioned in individuals with

grief disorder due to COVID-19. Therefore, the present study aimed to examine the effectiveness of integrative self-analysis therapy on psychological capital, psychological well-being, ego strength, and emotion regulation difficulties in individuals with grief disorder due to COVID-19.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present research was a quasi-experimental study using a pre-test post-test design with a control group and a two-month follow-up. The pre-test post-test design was implemented with one experimental group and one control group. Using purposive sampling, 30 eligible individuals were selected and randomly assigned to the experimental and control groups. The experimental group received integrative self-analytical therapy, while the control group did not receive any intervention.

### 2.2. Measures

#### 2.2.1. Psychological Capital

To measure psychological capital, a 24-item questionnaire developed by Luthans et al. (2007) with four subscales of self-efficacy, hope, resilience, and optimism will be used. The response scale used for this questionnaire in this study is a six-point Likert scale (completely disagree=1 to completely agree=6). Luthans et al. (2007) has examined the validity and reliability of this questionnaire along with 25- and 12-item forms of psychological capital and provided evidence of the validity and reliability of this questionnaire. Luthans et al. (2011) also reported a positive and significant correlation between psychological capital and self-efficacy ranging from 0.48 to 0.54, hope ranging from 0.40 to 0.61, resilience ranging from 0.48 to 0.55, and optimism ranging from 0.47 to 0.50 as evidence of concurrent validity. The construct validity of this questionnaire has also been examined and confirmed (Luthans et al., 2007).

#### 2.2.2. Psychological Wellbeing

The original form psychological wellbeing scale was designed by Ryff and his colleagues with 120 items and six subscales of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each question is scored on a spectrum from completely disagree (scored as 1) to completely agree

(scored as 6). A higher score indicates a higher level of psychological well-being. In this study, the short 18-item form, which was created by Ryff and Singer (2014), was used. They reported correlations between the subscales of the 18-item form and the 120-item form ranging from 0.70 to 0.89 (Ryff & Singer, 2014).

#### 2.2.3. Cognitive Emotion Regulation

The Cognitive Emotion Regulation Questionnaire (CERQ) developed by Garnefski and Kraaij (2006) is an 18-item tool that measures cognitive regulation strategies in response to threatening events and life stressors on a five-point Likert scale ranging from 1 (never) to 5 (always) across nine subscales: self-blame, other-blame, rumination, catastrophizing, positive refocusing, positive reappraisal, putting into perspective, acceptance, and refocus on planning. A higher score indicates greater use of that cognitive strategy. The alpha coefficient for the subscales of this questionnaire has been reported to be in the range of 0.71 to 0.81, and the test-retest reliability of the subscales has been reported to be in the range of 0.48 to 0.61 over a 14-day interval (Garnefski & Kraaij, 2006).

#### 2.2.4. Ego Strength

The Psychological Inventory of Ego Strength (PIES) developed by Markstrom and Marshal (2007) measures eight ego strengths, including hope, will, purpose, competence, fidelity, love, care, and wisdom, through 64 items on a five-point Likert scale ranging from 1 (not at all like me) to 5 (very much like me) and the scoring is reversed for the following items: 4, 6, 10, 11, 12, 14, 16, 21, 22, 23, 25, 26, 27, 29, 30, 34, 36, 38, 40, 42, 43, 44, 47, 48, 50, 51, 55, 58, 61, 64. A higher score on this test indicates a higher level of ego strength. The individual's score on this questionnaire is obtained by summing their scores on the items. Markstrom and Marshal (2007) reported the formal, content, and structural validity of this questionnaire and also reported a Cronbach's alpha reliability coefficient of 0.68 (Markstrom & Marshall, 2007). Additionally, in the study by Parviz et al. (2016), the reliability of this questionnaire was reported to be 0.64 using the Cronbach's alpha method (Parviz et al., 2016).

## 2.3. Interventions

### 2.3.1. Integrative Self-analysis Therapy

The content of integrative self-analysis therapy sessions was based on a protocol prepared by the researchers, which is summarized as follows (Table 1):

**Table 1**

*Integrative Self-analysis Therapy Sessions*

Session	Content
1	Introduction of members to each other, conducting a pre-test, stating the goals of the educational sessions, explaining the rules and regulations, explaining the integrative self-analysis approach and the need to pay attention to the impact of loss and grief on the psychological well-being and psychological resources of individuals during the COVID-19 pandemic crisis.
2	Teaching self-awareness through teaching inner psychological considerations / interpersonal considerations (relationships and interactions) / comparing human psychology to an iceberg / paying attention to personal history / paying attention to existential fears, presenting assignments.
3	Reviewing the assignment of the previous session, familiarizing with the emotional repertoire in individuals. The nature of failure. Familiarity with loss-pain. Improving pains, harmful emotional states and emotions, using relevant techniques, presenting assignments.
4	Reviewing the assignment of the previous session, explaining the nature of needs and the necessity of fulfilling them, familiarity with psychological needs such as the need for survival, security, trust and confidence, power or competence, presenting assignments.
5	Reviewing the assignment of the previous session. Familiarity with psychological needs such as the need for growth and progress / attention and affirmation / relationship / self-determination and freedom (independence) / appropriate arousal and tension (recreation) / solitude and depth / need for spirituality / need for a sense of worth, presenting assignments.
6	Brief review of the previous session, familiarity with the nature of fear, familiarity with types of fear, presenting assignments to address the harm caused by internal events.
7	Reviewing the assignment of the previous session. Explaining to individuals that life stories are a reflection of their experiences and that distorted thoughts are the basis of stories. Presenting techniques to correct distorted thoughts and unhealthy stories, presenting assignments.
8	Reviewing the assignment of the previous session. Techniques were presented and practiced in this session to correct distorted thoughts and unhealthy stories in order to improve mental health. Presenting assignments.
9	Reviewing the assignment of the previous session. The mechanism of compensatory mechanisms was explained to couples. Several important defensive mechanisms were explained and practiced, and techniques were presented to reduce the harm caused by harmful mechanisms. Presenting assignments.
10	Reviewing the assignment of the previous session. The nature of worthlessness and low self-esteem was explained. The impact of worthlessness on the individual and how it exacerbates worthlessness. What are the positive components of self-worth and positive thinking in individuals? Self-worth and self-esteem techniques were taught and practiced. Presenting assignments.
11	Summary and review of previous sessions. Discussion about the power of human choice. Obtaining feedback from members about these sessions, answering questions, conducting a post-test.

## 2.4. Data analysis

In order to statistically analyze the data, descriptive statistics (mean and standard deviation) and inferential statistics (analysis of variance with repeated measurements) were used. In this research, SPSS-26 software was used to perform statistical tests.

**Table 2**

*Descriptive statistics (M= Mean; SD= Standard Deviation)*

Group	Variable	Index	Pre-test	Post-test	Follow-up
Experimental	Self-efficacy	M	15.00	21.47	20.40
		SD	4.29	3.60	4.17
Control	Self-efficacy	M	14.80	14.47	16.07
		SD	3.90	5.54	5.69
Experimental	Resilience	M	15.93	19.47	19.20
		SD	3.73	2.92	3.78
Control	Resilience	M	15.60	14.93	15.67
		SD	2.97	3.94	3.94

## 3. Findings and Results

Descriptive indices (mean and standard deviation) of psychological capital scores in the experimental and control groups are presented in the pre-test, post-test, and follow-up stages.

Experimental	Hope	M	13.27	19.67	20.67
		SD	2.43	3.27	1.91
Control	Hope	M	12.80	11.27	12.47
		SD	2.01	3.31	3.60
Experimental	Optimism	M	16.87	20.87	20.93
		SD	3.80	2.80	3.01
Control	Optimism	M	16.13	15.13	16.40
		SD	2.92	4.52	5.42
Experimental	Autonomy	M	7.60	10.67	11.33
		SD	2.85	2.99	3.44
Control	Autonomy	M	7.47	7.20	8.13
		SD	2.77	3.45	3.34
Experimental	Mastery	M	5.07	11.20	12.67
		SD	2.12	2.60	2.09
Control	Mastery	M	5.33	4.00	5.60
		SD	1.95	3.02	3.14
Experimental	Growth	M	8.80	12.13	12.80
		SD	3.84	2.67	2.24
Control	Growth	M	8.00	6.93	8.13
		SD	2.73	3.84	3.42
Experimental	Positive relationships	M	8.13	10.00	10.53
		SD	1.60	1.69	1.19
Control	Positive relationships	M	8.27	8.00	8.13
		SD	1.28	1.31	1.77
Experimental	Purpose	M	8.80	11.00	11.40
		SD	1.47	1.69	1.55
Control	Purpose	M	8.67	8.53	8.80
		SD	1.45	1.60	1.82
Experimental	Self-acceptance	M	8.53	10.87	11.27
		SD	1.77	1.77	1.49
Control	Self-acceptance	M	8.40	8.20	8.20
		SD	1.55	1.61	1.61
Experimental	Ego strength	M	161.87	180.00	184.27
		SD	16.96	20.56	18.17
Control	Ego strength	M	160.27	157.60	159.73
		SD	14.77	15.18	18.61
Experimental	Adaptive emotion regulation	M	22.53	31.87	30.67
		SD	4.44	4.87	5.05
Control	Maladaptive emotion-regulation	M	23.47	23.07	24.80
		SD	5.10	7.48	7.70
Experimental	Adaptive emotion regulation	M	22.73	18.20	18.20
		SD	4.77	4.26	5.33
Control	Maladaptive emotion-regulation	M	23.27	23.93	24.33
		SD	4.46	7.05	5.79

According to Table 2, the mean scores in the integrative self-analytical approach group in the post-test stage showed an increase compared to the pre-test scale. Based on the results presented in the table, it can be claimed that the integrative self-analytical approach treatment has led to an increase in psychological capital, psychological well-being, ego strength, and a decrease in emotional regulation difficulties in individuals affected by COVID-19 grief. Prior to conducting the mixed analysis of variance test with repeated measures, the necessary assumptions for this test were examined. The results of the Shapiro-Wilk test showed

that the significant levels obtained for each of the research variables, which were greater than 0.05, confirmed the null hypothesis and the variable data in all three stages were normal, and parametric tests could be used for their analysis. Additionally, the results of the Levene's test showed that the hypothesis of variance equality for all variables was established ( $p > 0.05$ ). The results of the Mauchly's test showed that the sphericity hypothesis was not established ( $p < 0.05$ ). Therefore, the Greenhouse-Geisser correction was used.



**Table 3**

*Analysis of variance with repeated measurements for between-group effects*

Variable	SS	df	MS	F	Sig	Effect size
Self-efficacy	407.39	1	407.39	4.00	0.01	0.18
Resilience	314.13	1	314.13	4.37	0.01	0.19
Hope	1081.64	1	1081.64	26.56	0.001	0.59
Optimism	418.95	1	418.95	5.64	0.001	0.23
Autonomy	204.62	1	204.62	3.77	0.02	0.17
Mastery	791.20	1	791.20	24.33	0.001	0.57
Group	433.84	1	433.84	8.31	0.001	0.31
Positive relationships	72.80	1	72.80	5.67	0.001	0.23
Purpose	94.40	1	94.40	5.55	0.001	0.23
Purpose	134.64	1	134.64	7.95	0.001	0.30
Ego strength	8722.73	1	8722.73	4.31	0.01	0.19
Adaptive emotion regulation	745.78	1	745.78	2.82	0.04	0.13
Maladaptive emotion regulation	1082.11	1	1082.11	6.64	0.001	0.26

The results of the Table 3 show that the calculated F-value for the between-group factor is significant at the 0.05 level ( $p < 0.05$ ). Therefore, there is a significant difference between the mean scores of psychological capital in the pre-test, post-test, and follow-up stages in the two experimental and control groups. Additionally, the results of the Bonferroni follow-up test were calculated to examine the differences between the means in the treatment stages. The results showed that there was a significant difference between the psychological capital scores, psychological well-being, ego strength, and emotional regulation difficulties in the experimental group in the pre-test to post-test, pre-test to follow-up, and post-test to follow-up stages ( $p < 0.05$ ). Furthermore, the results of the follow-up test showed that there was no significant difference between the research variable scores in the post-test stage compared to the follow-up stage ( $p > 0.05$ ).

#### 4. Discussion and Conclusion

The aim of the present study was to investigate the effectiveness of integrative self-analytic therapy on the psychological capital, psychological well-being, ego strength, and emotion regulation difficulties of individuals suffering from grief due to COVID-19. The results showed that integrative self-analytic therapy was significantly effective in improving psychological capital, psychological well-being, ego strength, and emotion regulation difficulties, and these effects were sustained during the follow-up phase. The findings of this study are consistent with previous studies (Lange, 2021; León & Guzmán-Saldaña, 2023; Luo

& Hancock, 2020; Solimannejad et al., 2019). In the process of integrative self-analytic therapy, counseling helps clients who are troubled by their limiting emotions and thoughts to strive for balance, reasonable challenge, self-control, and mindful living. When the inner pains and cries of clients are heard well, empathy, validation, and trust as a reasonable bond between them and their counselor or therapist occur. Such a conversation is a bond of communication and, like all bonds, is a dynamic flow of transformations. If the therapist creates an effective and meaningful listening, the reasons and ways of the client's behavior will be revealed. Meaningful listening means active listening with attention, feeling understood, and providing a safe exchange of the client's cognitive and behavioral aspects with the therapist more freely (Christensen & Doss, 2017; Solimannejad et al., 2019). Without creating a space full of attention, validation, and of course neutrality (free from judgment) against attacks, accusations, and negative transfers, emotional release of clients will be less successful. Such a process should be actively and effectively sought in listening. In this process, a soft and psychological relationship is formed. Sometimes in such a listening, even verbal expressions of emotions are not necessary, but the states and changes themselves will be the speaker of the person. It seems that in such a situation, a kind of freedom is formed, and there is no pressure to understand. A free process, a pressure-free conversation, and an empathetic understanding will be formed, which will also be enjoyable. The formation of such a space facilitates the expression of pains and grows a mechanism of internal self-regulation, where each party can

talk without pressure and control. In this approach, it is believed that the foundation of everything said is a feeling of worthlessness - a feeling of worth in the individual. In other words, if the individual feels valuable, he/she will be able to change this process for himself/herself. In addition to accepting one's existing fears and confronting them properly, by recognizing the repetitive story of one's life and making appropriate changes in it and replacing appropriate mechanisms, one takes care of one's emotional repertoire and maintain it.

## 5. Limitations and Suggestions

The main limitation of this study is related to external validity, as the statistical population of the study consisted of a specific group of individuals, namely those suffering from COVID-19 grief in Isfahan city, so the possibility of generalizing the results to the entire population is limited. In addition, data collection in this study was based on self-report scales. Therefore, another limitation of this study is related to measurement, as feedback or self-reported opinions of individuals about themselves obtained from these tests may differ from what we can actually observe in their behavior. Furthermore, the research design was quasi-experimental and therefore does not have the advantages of true experimental designs.

Given the greater impact of integrative self-analysis therapy on individuals suffering from COVID-19 grief, it is

recommended that psychologists use this treatment extensively. Based on the findings of this study, health psychologists and individuals active in the field of health and hygiene are recommended to enhance the mental health of individuals suffering from COVID-19 grief by designing and implementing appropriate methods inspired by integrative self-analysis therapy. It is suggested that multiple studies be conducted using psychologists and psychotherapists in various psychological and clinical centers to provide a suitable platform for comparing results and better applying this therapeutic approach. It is also recommended to train specialists by relevant organizations in the field of research treatments with the aim of conducting educational workshops by experts for vulnerable groups.

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## Declaration of Interest

The authors of this article declared no conflict of interest.

## Ethics principles

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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