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The Influence of Group Training of Healthy Life Style on Psychological Well-Being and Symptoms of Mental Disorders Using psychodrama

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ABSTRACT

This research was aimed at studying the influence of group training of healthy life style on psychological well-being and symptoms of mental disorders using psychodrama in female dormitory students at University of Isfahan, performed in first semester of 2013-2014 academic year. This was a semi-empirical research with pretest-posttest and control group follow up. The statistical population included all new coming female dormitory students in BA level. A group of 140 students were selected randomly and completed mental disorder Symptoms Checklist-90-revised (SCL-90-r) and the Ryff Scale of Psychological Well-Being. A total of 32 participants with high scores in SCL-90-r and low scores in psychological well-being scales were selected and divided randomly into two 16-subject groups of test and control. The test group was subject to eight training sessions of healthy life style intervention, each lasting 90 minutes, and the control group did not receive the intervention. The results indicated that performing this intervention using psychodrama has led to a significant increase in psychological well-being dimensions, and a significant decrease in symptoms of mental disorders among the participant students compared with the control group ($P < 0.001$). The results were confirmed after a two-month follow-up, emphasizing the training of healthy life style in dormitories.

KEYWORDS: Training of Healthy Life Style, Psychodrama, Psychological Well-Being, Symptoms of Mental Disorder

1. INTRODUCTION

Mental health is the knowledge and art of helping people become compatible with their environment and find more acceptable ways to solve their problems by creating correct mental and emotional methods [1]. The WHO has estimated that 450 million people are infected with one type of mental disorder worldwide. The reports indicate that one fourth of the people is infected by one or slighter to intense mental disorders. About 13% of the disability years of life are due to these disorders, which will increase to 15% by 2020.

With the advent of positive psychology movement emphasizing positive features and the development of individual abilities in mental health, a group of psychologists has employed psychological well-being term instead of mental health. They believe that this term brings the positive dimensions to mind more than the other [2]. In fact, psychological well-being deals with how and why people experience positive modes such as positive cognitive judgments and positive affective reactions.

It is inferred that life style is associated with psychological well-being and mental health. Life style is the usual everyday activity accepted by people in their lives affecting people's health [3, 4]. The literature review indicates that researchers intend to enable people to enhance their psychological well-being and cope up with their behavioral or emotive problems and/or reduce them by reforming the incompatible features of the life style through training the healthy life style to them.

Ghasemi et al. [5], indicated in a study that the group therapy based on the quality of life, decreased depression, the embodiment symptoms, and social malfunctioning in posttest and follow-up, but it had no effects on the subject's anxiety. This therapy affected the mental well-being in the emotive dimension, increasing positive emotion and reducing negative emotion in the post-test, but had no effect on the cognitive dimensions of the subjects. According to Lotfi and Karimi [6] also, it was indicated that training the life style components by Adleri enhances the mental health in students. According to Feinstein and Feinstein [7] in "psychotherapy for health and a change in life style", it was concluded that the emotions, cognitions, behaviors, interpersonal and system psychotherapy model was more effective and applicable than the theoretical, emotive, primary preventive therapy model of intervention for creating a change in life style.

Numerous studies have been performed about the influence of psychodrama on different aspects of mental health. For example, according to Dogan [8] was indicated that holding sessions of psychodrama would improve the anxious attachment style in the youth significantly in their intimate relationships. Considering the literature and regarding that the usage of psychodrama was not applied for training healthy life style, especially the female students' life style living in the dormitory in Iran, this research was aimed at studying the influence of group training of healthy life style on psychological well-being and symptoms of mental disorder using psychodrama in female students.

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2. MATERIAL AND METHODS

The statistical population included all new coming female students in BA level from 18 to 20 year's old living in the dormitories of University of Isfahan. The random sampling Method was applied for a volume of 140 members. The research type was applied, and the method was semi-empirical research with pretest-posttest and control group follow up. A total of 32 students were divided into two 16-member groups of test and control. The sample volume is considered 15 members at least for empirical research [9].

The independent variables were the life style training course using psychodrama and direct training of the healthy life style. This training course was performed in 4 sessions. Each psychodrama sessions with life style content contained the following main steps: warm-up (preparation), enactment, and sharing (end). The members were getting ready for enactment using special verbal and nonverbal techniques of the warm-up step [10]. Then in the enactment step, the subjects appropriate for some members enacted each session, and the appropriate techniques for this step were applied. In sharing step, discussions were held on concepts related to the session subject regarding the enacted situations, and the achievements and presented concepts in each session were concluded. The direct training of healthy life style was performed in 4 sessions as presented in table 1.

Table 1. The description on sessions of direct training of healthy life style

Session	Content
1st	Dimensions of healthy life style: elaborating on dimensions of healthy life style
2nd	Healthy eating and sleeping, and healthy life style: elaborating on the relation between healthy eating and sleeping with healthy life style
3rd	Physical activities and sports, and taking responsibilities on health and healthy life style: elaborating on the relation between taking responsibilities on health and sports with healthy life style
4th	Performing the posttest for ending the sessions and an aggregation evaluation

The Ryff Scale of Psychological Well-Being and Symptom Checklist-90-revized (SCL-90-r) were applied to collect information in this research. The Ryff Scale of Psychological Well-Being contains 84 items (Hosrow et al., cited by Ahmadi [11]. It tests the following six factors and measures the total score as the psychological well-being score: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. It is a type of self-assessment test with statements scored on a scale of 1 to 6, from strong disagreement to strong agreement. In a research, the internal integrity was obtained 0.92 through calculating the Cronbach's Alpha, and the correlational coefficient was obtained 0.76 through retest for the whole scale. It ranged from 0.67 to 0.73 for the subscales all of which were significant on $p < 0.001$ level. The reliability was obtained 0.95 using Cronbach's Alpha here.

Symptom Checklist-90-revised (SCL-90-r) is a questionnaire with a 5-point scale, which assesses the amount of sadness from 0 (none) to 4 (intense). Various reliabilities were reported from 0.77 to 0.98 in different studies, and its validity was high [12]. The reliability was obtained 0.98 using Cronbach's Alpha.

The Ryff Scale of Psychological Well-Being and Symptom Checklist-90-revised (SCL-90-r) questionnaires were performed on 140 participants. A total of 32 participants with low scores in Ryff questionnaire and high scores in SCL-90-r were selected and divided randomly into two 16-member groups of test and control. Then the independent variable of training the healthy life style using psychodrama in 8 sessions of 1.5hour (90 minutes) was performed on the test group on a weekly basis(4 sessions using psychodrama and 4 sessions of direct training). It is necessary to note that the training program of life style components with psychodrama by Foroushani Ahmadi et al. [13] and the direct training program based on the health enhancer life style theory contained 6 substantive components in this research. Both groups were subject to posttest after the sessions and the follow up step was performed two months later.

3. RESULTS

The score averages and standard deviations for both groups in pretest and posttest steps for the psychological well-being and mental disorders are recorded in tables 2 and 3 respectively.

The results of Table 2 above indicate that the average in psychological well-being components for each group was higher in posttest and follow up than pretest in all components and the whole psychological well-being scale in both groups.

The results of Table 3 indicate that the average for symptoms of mental disorder components for each group was lower in posttest and follow-up than pretest for the test group and higher for the control group. It was higher in the pretest for the test group and lower for the control group in all components except for paranoid thoughts and the obsessive–compulsive disorder, which was higher in pretest.

In the inferential statistics part, the Multivariate analysis of covariance (MANCOVA) was applied in order to study the influence of training healthy life style on psychological well-being and symptoms of mental disorders in female students. The group membership including both on test and control group levels as independent variable, the pretest of the mental disorder symptoms and psychological well-being as covariate variable, and the posttest scores as dependent variables were entered the equation.

First, the related presuppositions were studied before this analysis. Therefore, the box related test results for analyzing the equality of the observed covariance matrixes of the dependent variables were analyzed on dependent variable levels, first. The statistic insignificance indicates the equality of the observed covariance matrixes of the dependent variables on dependent variable levels. Table 4 indicates the results of Box test for studying the equality of the variable covariance.

Table 2. Average and standard deviation of psychological well-being components for each group in pretest and posttest and follow-up steps

Psychological Well-being Components	Group	Number	Pretest		Posttest		Follow-up	
			Average	SD	Average	SD	Average	SD
Autonomy	Control	16	41.62	6.27	50.87	7.20	49.81	6.57
	Test	16	41.18	12.346	53.18	5.76	53	5.04
	Total	32	41.40	9.634	52.03	6.52	51.04	5.98
Environmental Mastery	Control	16	47.14	10.78	49.00	10.69	48.56	11.39
	Test	16	48.78	13.66	57.18	11.33	56.12	10.40
	Total	32	47.96	12.13	53.09	11.61	52.34	11.40
Personal Growth	Control	16	47.75	8.12	54.50	9.43	53.43	5.99
	Test	16	49.45	8.60	64.18	10.29	62.81	11.25
	Total	32	48.60	8.27	59.34	10.88	58.12	10.06
Self-acceptance	Control	16	44.02	11.55	49.25	9.60	48.37	12.23
	Test	16	45.00	13.84	59.18	8.09	57.31	9.77
	Total	32	44.51	12.55	54.21	10.09	52.84	11.80
Positive Relations with Others	Control	16	41.77	8.21	49.81	10.73	49	10.81
	Test	16	42.00	9.91	57.18	6.97	56	6.16
	Total	32	41.88	8.96	53.50	9.66	52.5	9.36
Purpose in Life	Control	16	40.87	9.04	52.37	48.10	52.12	11.08
	Test	16	43.50	11.20	61.43	10.26	61.87	11.47
	Total	32	42.19	10.10	56.90	11.20	57	12.15
Total of Psychological Well-being	Control	16	298.56	42.3	305.81	44.27	301.31	45.1
	Test	16	305.31	60.03	353	44.60	347.12	41.17
	Total	32	301.93	51.20	329.40	49	324.21	48.42s

Table 3. Average and standard deviation of SCL-90-r scale for each group in pretest and posttest and follow-up steps

Components of Mental Disorder Symptoms	Group	Number	Pretest		Posttest		Follow-up	
			Average	SD	Average	SD	Average	SD
Physical Complaints	Control	16	16.61	6.92	18.87	10.30	17.62	10.32
	Test	16	18.12	9.05	6.68	4.46	10.56	4.83
	Total	32	17.36	7.96	12.78	9.97	14.09	8.70
Obsession and Compulsion	Control	16	17.25	4.32	18.87	7.29	17.87	7.93
	Test	16	19.18	7.45	9.68	6.63	11.50	4.32
	Total	32	18.21	6.07	14.28	8.29	14.68	7.06
Sensitivity in Relations	Control	16	16.81	4.46	19.81	5.81	17.06	6.27
	Test	16	18.43	4.91	8.37	6.15	8.68	3.62
	Total	32	17.62	4.68	13.78	8.05	12.87	6.59
Depression	Control	16	29.59	7.26	30	7.42	28	9.29
	Test	16	33.31	10.05	10.93	5.81	12.25	5.17
	Total	32	31.45	8.83	20.46	11.69	20.12	10.89
Anxiety	Control	16	15.43	6.69	19.5	7.32	16.25	7.86
	Test	16	15.62	5.43	5	2.96	7.12	4.06
	Total	32	15.53	5.99	12.25	9.18	11.68	7.71
Aggression	Control	16	7.81	3.44	12.87	4.96	10.37	5.99
	Test	16	7.75	4.44	3.56	2.60	5	2.68
	Total	32	7.78	3.91	8.21	6.13	7.68	5.32
Morbid Fear	Control	16	8.81	3.93	10.31	7.27	11.43	14.54
	Test	16	9.31	2.93	4.43	2.42	5.75	2.20
	Total	32	9.06	3.42	7.37	6.11	8.59	10.63
Paranoid Thoughts	Control	16	10.56	3.99	11.43	2.78	10.37	3.75
	Test	16	9.12	3.87	5.25	2.72	6.06	2.51
	Total	32	9.84	3.94	8.34	4.14	8.21	3.83
Psychosis	Control	16	13.31	4.49	16.37	7.90	15.06	8.02
	Test	16	15.49	5.12	5.93	4.31	7.12	3.72
	Total	32	14.40	4.86	11.15	8.20	11.09	7.35
Extra Questions	Control	16	10.93	3.56	10.62	6.04	9.06	6.11
	Test	16	11.50	4.27	4.62	2.33	4.81	2.40
	Total	32	11.21	3.88	7.62	5.44	6.93	5.05
Total of Mental Disorder Symptoms	Control	16	153	31.25	168.06	51.73	153.12	62.9
	Test	16	164.06	34.10	64.5	27.28	87.78	25.12
	Total	32	158.53	32.66	116.28	66.50	116	60.35

Table 4. Results of Box test for equality of the variables covariance

Variables	Box	F	Significance Level
Psychological Well-being	27.73	1.03	0.41
Mental Disorder Symptoms	129.03	1.48	0.12

The results in the table above indicated that this test was not significant for both variables at 0.05 (<0.05). Therefore, the presupposition of covariance equality is confirmed, and MANCOVA can be applied for testing these variables. The results of Levin's test for studying the equality of variable variances was analyzed in the next step. The statistic insignificance indicates the equality of variable variances. The results indicated that all components except physical complaints and aggression ($p < 0.05$) had equal variances for mental disorder symptoms variable, and the presupposition of equality of variances was generally confirmed for this variable ($p > 0.05$). All psychological well-being components also had equal variances and the presupposition of variance equality was generally confirmed for this variable ($p > 0.05$).

Hypothesis 1: Life style training influences the psychological well-being dimensions of female students at University of Isfahan

Table 5 indicates the obtained results from MANCOVA test. This test indicates that a significant difference occurred generally in psychological well-being of both test and control groups after training the healthy life style. According to Table 5, the first hypothesis is confirmed stating that life style training influences the psychological well-being dimensions of female students at University of Isfahan ($p > 0.05$). However, the intersubject influences test was applied to study the significance of each psychological well-being dimension for the control and test groups. Table 6 indicates these results.

Table 5. The obtained results from MANCOVA test

MANCOVA Test	Value	F	Df1	Df2	Significance	Influence Level	Statistical Power
Pillai's trace	0.43	2.45	6	19	0.063	0.43	0.68
Wilks' lambda	0.56	2.45	6	19	0.063	0.43	0.68
Hotelling's Effect	0.77	2.45	6	19	0.063	0.43	0.68
Roy's largest root	0.77	2.45	6	19	0.063	0.43	0.68

Table 6. The results of the one way Ancova in the posttest step

Resource	Dependent Variables	Chi2 Total	Df	Chi2 Average	F	Significance	Influence Level	Statistical Power
Membership	Autonomy	24.41	1	24.41	0.57	0.45	0.02	0.11
	Environmental Mastery	406.91	1	406.91	4.99	0.03	0.17	0.57
	Personal Growth	568.40	1	568.40	7.72	0.01	0.24	0.76
	Self-acceptance	684.45	1	684.45	12.06	0.002	0.33	0.91
	Positive Relations with Others	359.15	1	359.15	6.22	0.02	0.20	0.66
	Purpose in Life	333.58	1	333.58	3.64	0.05	0.13	0.45

As the results in the above table indicate, this test is significant for environmental mastery, personal growth, self-acceptance, positive relations with others, and purpose in life, dimensions ($p > 0.05$). These results mean that training the healthy life style has led to a significant increase in these five dimensions in female students, and the intervention was influential. Regarding the influence level of intervention on these dimensions, it was indicated that the training of healthy life style is more influential on the students' self-acceptance, as 33% of self-acceptance scores was related to group membership and the effect of training intervention. The research results indicated that no significant differences was observed among the test and control groups in autonomy, environmental mastery, self-acceptance, and positive relations with others, after two months and in the follow-up stage. Therefore, the significance level is very close to 0.05 levels.

Hypothesis 2: The life style training influences the mental disorder Symptoms of female students at University of Isfahan

Table 7 indicates the results obtained from the MANCOVA test for this analysis. This test indicates that after an experimental intervention in mental disorder symptoms, a significant difference occurred between the test and control group in general.

Table 7. The obtained results from MANCOVA test

MANCOVA Test	Value	F	Df1	Df2	Significance	Influence Level	Statistical Power
Pillai's trace	0.88	8.47	10	11	0.001	0.88	0.99
Wilks' lambda	0.11	8.47	10	11	0.001	0.88	0.99
Hotelling's Effect	7.70	8.47	10	11	0.001	0.88	0.99
Roy's largest root	7.70	8.47	10	11	0.001	0.88	0.99

As seen in the table 7, all four MANCOVA tests are significant for studying the general significance of this model (p >0.05). In other words, these results indicate that intervention and training of healthy life style were significant on the test group in general, and the second hypothesis is confirmed stating that the life style training influences the mental disorder Symptoms of female students at University of Isfahan (p >0.05). The intersubject influences test was also applied to study the significance of each mental disorder symptom dimensions among control and test groups, also. Table 8 indicates these results.

Table 8. The results of the one way Mancova test

Resource	Dependent Variables	Chi2 Total	Df	Chi2 Average	F	Significance	Influence Level	Statistical Power
Group Membership	Physical Complaints	514.616	1	514.616	8.24	0.009	0.29	0.78
	Obsession and Compulsion	458.134	1	458.134	9.65	0.006	0.32	0.84
	Sensitivity in Relations	643.370	1	643.370	15.31	0.001	0.43	0.96
	Depression	2496.074	1	2496.074	55.13	0.000	0.73	1.00
	Anxiety	916.448	1	916.448	31.99	0.000	0.61	1.00
	Aggression	428.396	1	428.396	22.93	0.000	0.53	0.99
	Morbid Fear	237.678	1	237.678	8.60	0.008	0.30	0.79
	Paranoid Thoughts	143.267	1	143.267	17.20	0.000	0.46	0.97
	Psychosis	382.005	1	382.005	10.31	0.004	0.34	0.86
	Extra Questions	181.607	1	181.607	7.86	0.011	0.28	0.76

As indicated in the table above, this test is significant for every mental disorder symptoms (all 9 components) (p >0.01). These results mean that the training of healthy life style leads to a significant decrease in all mental disorder symptom dimensions in female students, and the intervention was fully influential. It was also indicated that training of healthy life style is more influential on reducing student depression, anxiety, and aggression regarding the influence level of intervention on these dimensions. The results indicated no significant differences between physical complaints and morbid fear in test and control groups after two months in the follow-up stage; therefore, the significance level of physical complaints is very close to p >0.05 level.

4. DISCUSSION AND CONCLUSION

The results indicated that the training intervention of healthy life style using psychodrama was significantly influential on five psychological well-being dimensions in posttest step, and the two-month follow-up confirmed the results. The training intervention of healthy life style using psychodrama was significantly influential on mental disorder symptom dimensions in posttest step, and the two-month follow-up confirmed the results. It can therefore be said that life style is a special personal method of being, coping up, and working in the surrounding world, and supports the personal logic to find the best way to achieve the desired purposes [14]. The results of this research are in line with the results of other life style studies, including Pooladfar and Ahmadi [15], Hoseini et al. [16] and Ghaffarinezhad and Pooya [17]. The short term of the study (two months) and the personal differences in the participant motivation levels were among the limitations of this research, which must be considered in generalizing the findings. It is therefore suggested that the life style training be applied as a general and macro program to prevent mental illnesses. The life style training should be included in academic curriculum to enhance living and increase life well-being.

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