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Original Article

Effectiveness of Choice Theory Training on Suicidal Tendency

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Abstract

Background and Objective: Suicide is not an uninvited guest entering unannounced rather it always occurs following a previous background. Suicide is interpreted as an action in order to accredit life or give up everything. Suicide happens because of determinism or full anxiety and depression. The present study aimed to investigate the effect of Choice Theory training on the suicidal tendency of first high school male students in Sonqor County, Kermanshah Province, Iran.

Materials and Methods: This quasi-experimental study was conducted using a pretest-posttest design with a control group. The statistical population of the study consisted of all boys of the first high school in Sonqor County, Kermanshah Province, Iran, in the academic year of 2017-18. According to available statistics, about 500 students were studying at six male high schools from which one high school was selected randomly. After implementing the Multiple Attitude Questionnaire of suicidal tendency in adolescents, 30 students were divided into two groups (15 cases per group) randomly. The obtained data were then analyzed through single-variable and multivariate analysis of covariance.

Results: The results of this study showed that the implementation of the Choice Theory Education to first high school male students influenced their suicidal tendency (P<0.01), and suicidal tendency decreased in the students of the experimental group. Furthermore, the results from the comparison of the attraction to death at posttest in two groups by controlling the pretest effect indicated no significant difference between the two groups in terms of the attraction to death scores (F=0.175; P<0.01).

Conclusions: Considering the findings, this intervention is a suitable method to modify the behavior and improve adaptation in male students.

Keywords: Choice theory, Suicide

Background

In adolescence, tangible changes affect a man's self-confidence internally which can lead to suicide because of several mental factors, such as anxiety, disappointment, and in some cases family, as well as social problems. Suicidal behaviors in adolescents and youths are one of the main mental health problems [1]. On the other hand, the prevalence of suicidal attempts among adolescents is increasing amazingly. Its prevalence among high school students reaches 5.3% to 11% [2]. Iran with a suicide rate of six (one case per 100000 population) is the 58th country in the world ratings [3]. Suicide as the most catastrophic consequence of depression is always considered a serious mental health problem with its increasing trend in many countries [4]. Motivation for suicide is probably the tendency to hopelessness, facing insuperable barriers, and severe desire to end something which is supposed as endless and arduous emotional mode, inability to predict any pleasure in life, wishing to not being an extra burden on others [5]. Indeed, suicide is a personal action occurring on behalf of the individual, and social elements play basic roles in its occurrence [6]. The high rate of suicide and its attempts among adolescents highlight the necessity for clinical practices [7]. Perhaps the Choice Theory can explain suicide. From the Choice theory viewpoint, human beings are stimulated from their insides like other living creatures [8]. This means that we choose our

behaviors by ourselves and we are responsible for what we do and feel [9]. The purpose of each behavior is to satisfy one of our five basic needs including 1) love and sense of belonging, 2) survival, 3) power and progress, 4) freedom and independence, 5) fun and pleasure. These needs exist inside all humans and Glasser calls them genetic structures. Man is created with this genetic instruction; however, these needs are satisfied in many special and unique ways. Desires are the way to satisfy the needs [10].

According to this view, man controls his behavior consciously in a way that individual chooses general behavior, and he is responsible for his choices. Man chooses his desires, expectations, thoughts, and beliefs such that they can create the best mode within him. Behavior is the result of human choices [10]. General behavior includes four components; however, they are not separated rather they always move simultaneously. This is an allegory of four wheels of general behavior car. The general behavior car is a symbol of man's emotional system. This is important because the individual takes responsibility for all four dimensions of behavior (action, thinking, feeling, and physiology).

Suicide is also a type of behavior selection by the man himself. Suicidal behaviors in adolescents and youths are one of the main mental health problems [1]. Burns et al. (2006) stated that man is stimulated by basic needs, and all of his behaviors indicate his attempt to control the world in order to satisfy his needs. Man's life is an attempt to satisfy needs and solve the conflicts of needs. Therefore, such an effort provides mental health and welfare for individuals [11]. Research shows that Choice Theory training governs many ineffective behaviors and it changes them. Moreover, it influences the source of control and tolerance [12], quality of life and welfare [13], individual and social negligence [14], wellbeing [15], and innovation [16] effectively.

Objectives
The present study aimed to investigate the effects of the Choice Theory training on the suicidal tendency.

Materials and Methods
This practical study was conducted based on a quasi-experimental research method with a pretest-posttest design and a control group. The statistical population of the study included all first high school male students in Sonqor County, Kermanshah Province, Iran. According to the

available statistics, the number of students was about 500 cases. One school was selected randomly out of all schools in this city. In total, 30 students were selected randomly and divided into two experimental (n=15) and control groups (n=15).

Multiple Attitude Questionnaire of suicidal tendency by Orbach et al. [17] contains 30 questions and was designed to measure the rate of the suicidal tendency among adolescents. This questionnaire assumes that suicide behavior happens as a consequence of a fundamental conflict among attitudes toward life and death. The questionnaire of suicidal tendency includes four sub-scales of attraction to life, repulsion by life, attraction to death, repulsion by death. The questionnaire items are rated based on a 5-point Likert scale. Mousavi has obtained the credibility of the questionnaire and its components by Cronbach's Alfa method [18].

The inclusion criteria were: 1) male gender, 2) junior high school education level, and 3) residency in Sonqor, Iran. On the other hand, the boys who had suicidal behaviors and a history of suicide were excluded from the study.

After characterizing the members of the experimental and control groups, the experimental group underwent Choice Theory training (as the independent variable) during eight 75-min sessions (two sessions per week up to four weeks). The following table summarizes the content of Choice Theory training in eight sessions.

Results
The results of the collected data analysis are presented using descriptive (tables of frequency distribution, graphs, and central tendency indexes [mean±SD]) and inferential statistics (single multivariate covariance analysis and Kolmogorov-Smirnov test to study normal distribution of data and assumptions of implementing covariance analysis).

These findings show an increase in the mean score of the experimental group at posttest. Moreover, graph (2) compares the mean±SD of the attraction to life in the control and experimental groups during pretest-posttest. Furthermore, Table 4 tabulates the mean±SD of repulsion by life in the experimental and control groups during pretest-posttest.

These findings suggest a decrease in the mean score of the experimental group at posttest. Graph (3) compares the mean±SD of repulsion by life between the experimental and control groups at pretest-posttest.

According to Table 4, the mean±SD scores of the attraction to death at pretest in the experimental

Table 1 .Protocol of the effects of choice theory training on suicidal tendency [19].

Session	Content Pretest	Time
First	Members getting acquainted with each other; describing group rules; participating in the discussion; expressing aims and commitments.	30 min
Second	Being familiar with irrational recognition during adolescence and quality of intimate relations; introducing the necessity of need to modern psychology; and describing choice theory.	75 min
Third	Being familiar with basic needs, desire, and relationship of illogical recognition with need, desire, and possession; distributing questionnaire of needs.	75 min
Forth	Being familiar with the reality of behavior, behavioral system, effect of cognition on behavior, as well as the effect of logical and illogical recognition on selecting the way to satisfy needs and reject any excuses.	75 min
Fifth	Describing the effect of satisfying the needs, importance of responsibly behaviors, relationship between illogical recognition and irresponsibility, relationship between logical recognition and responsibility.	75 min
Sixth	Describing the desirable world and concept of general behavior in Choice Theory; describing the original basics of Choice Theory (particularly principle of Choice Theory, responsibility, and reality)	75 min
Seventh	Introducing individual differences; explaining external control and its seven destructive habits; explaining internal control and its seven constructive habits.	75 min
Eighth	Introducing how to use innovation and the process of want, doing, evaluating, options, and plan.	75 min
*	Posttest	30 min

Table 2. Comparison of the mean±SD of attraction to life between the experimental and control groups at pretest-posttest

Variable	Groups	Pretest		Posttest	
		M	SD	M	SD
Attraction to life	Experimental (n=15)	1.59	0.34	4.41	0.256
	Control (n=15)	1.63	0.28	1.61	0.239

Table 3. Comparison of the mean±SD scores of repulsion by life between the experimental and control groups at pretest-posttest

Variable	Groups	Pretest		Posttest	
		M	SD	M	SD
Repulsion by life	Experimental (n=15)	4.18	0.307	1.67	0.282
	Control (n=15)	4.23	0.206	4.18	0.343

Table 4. Comparison of the mean±SD scores of attractions to the death between the experimental and control groups at pretest-posttest

Variable	Groups	Pretest		Posttest	
		M	SD	M	SD
Attraction to death	Experimental (n=15)	4.27	0.329	4.11	0.250
	Control (n=15)	4.24	0.231	4.26	0.308

and control groups are 4.27±0.329 and 4.24±0.231, respectively, which shows no significant difference between the two groups in this regard. Regarding attraction to death at posttest, the mean±SD scores of the experimental and control groups are 4.11±0.25 and 4.26±0.308, respectively. This indicates no significant difference between the scores at posttest and pretest in the experimental group.

As can be observed in Table 5, the mean±SD scores of the repulsion by death at pretest in the experimental and control groups are 0.406±1.59 and 0.183±1.75, respectively, which indicates no significant difference between the two groups in this regard. Furthermore, the mean±SD scores of repulsion by death at posttest in the experimental and control groups were obtained at 4.42±0.211 and 1.81±0.179, respectively. The Kolmogorov-Smirnov test was used in order to ensure the normal distribution of data at pretest-posttest.

The results also revealed that the calculated Z values for variables at pretest-posttest on Alfa level smaller than 0.5 were not significant. Accordingly, the distribution of data related to the above variables is normal. The parametric tests were also used to assess the statistical hypotheses. To test the research hypotheses, the covariance analysis test was applied. Before implementing the covariance analysis, the assumptions of this analysis should be supported and to find any violation from covariance analysis hypotheses, variance homogeneity and regression slope homogeneity were examined. To study variance homogeneities, Levene's test was used.

As it is observed, the F values calculated by Levene's test are 0.041, 0.085, 0.913, and 0.181 for attraction to life, repulsion by life, attraction to death, and repulsion by death, respectively. These values are not meaningful on an Alfa level smaller than 0.05; therefore, the assumption of incorrect variance homogeneity is realized in these variables. Another assumption of covariance analysis is regression line slope.

According to Table 6, the F values of independent variables and covariate are not on Alfa level smaller than 0.05. Therefore it can be concluded

that the regression slope homogeneity assumption is satisfied and covariance analysis can be used.

Tables (4-7) tabulate the mean scores of suicidal tendency dimensions (attraction to life, repulsion by life, attraction to death, and repulsion by death) for the experimental and control groups by controlling the pretest using the univariate covariance analysis at posttest.

As can be observed in Table 7, the results obtained from the comparison of attraction to life at posttest in the two groups by controlling the pretest indicate a significant difference between the two groups in terms of the mean scores of the attraction to life (F=932.23; P<0.0001). Furthermore, the mean score of the attraction to life in the students of the experimental group after participating in the Choice Theory training sessions had increased significantly, compared to those in the control group. About 65.2% of the individual differences in the scores of the posttest of the attraction to

life in the experimental group were associated with the effects of the Choice Theory training. Choice theory training could increase the scores of the attraction to life in the students significantly.

Results obtained from the comparison of the repulsion by life at posttest in two groups by controlling the effect of pretest indicate a significant difference between the two experimental and control groups in terms of the mean scores of repulsion by life (F=463.8; P<0.0001). The mean score of repulsion by life in the experimental group after participating in the training sessions of the Choice Theory had decreased significantly, compared to those in the control group. About 70.4% of the individual differences at the posttest scores of the repulsion by life in the experiment group related to the effect of Choice Theory training, and Choice Theory training could reduce the repulsion by life scores in the students significantly.

Table 5. Comparison of the mean±SD of the repulsion by death between the experimental and control groups at pretest-posttest

Variable	Groups	Pre-test		Post-test	
		M	SD	M	SD
Repulsion by death	Experiment (n=15)	1.59	0.406	4.42	0.211
	Control (n=15)	1.75	0.183	1.81	0.179

Table 6. Interaction of independent variables and covariate

Variables	Change sources	Interaction of F values	Significance level
Attraction to life	Group * Pretest	2.842	0.104
Repulsion by life disgust	Group * Pretest	1.887	0.521
Attraction to death	Group * Pretest	1.539	0.226
Repulsion by death	Group * Pretest	4.799	0.068

Table 7.Results of univariate covariance analysis to study the effects of Choice Theory training on the dimensions of suicidal tendency

Variable	Source	Sum of squares	Df	Average of squares	F	Significance level	Eta square
Attraction to life	Pretest	0.024	1	0.024	0.373	0.546	
	Group	58.731	1	58.731	932.238	0.000	
	Error	1.701	27	0.149	–	–	0.652
	Total	333.050	30	–	–	–	
	Corrected total	60.525	29	–	–	–	
Repulsion by life disgust	Pretest	0.050	1	0.050	0.497	0.487	
	Group	46.752	1	46.752	463.581	0.000	
	Error	2.723	27	0.101	–	–	0.704
	Total	307.546	30	–	–	–	
	Corrected total	50.174	29	–	–	–	
Attraction to death	Pretest	56.033	1	56.033	6.004	0.021	
	Group	1.633	1	1.633	0.175	0.679	
	Error	261.333	27	9.333	–	–	0.006
	Total	364.119	30	–	–	–	
	Corrected total	52.915	29	–	–	–	
Repulsion by death	Pretest	0.000	1	0.000	0.005	0.945	
	Group	47.849	1	47.849	1202.38	0.000	
	Error	1.074	27	0.040	–	–	0.692
	Total	344.369	30	–	–	–	
	Corrected total	52.087	29	–	–	–	

The results from the comparison of the attraction to death at posttest in two groups by controlling the pretest effect indicate no significant difference in the two groups in terms of the attraction to death scores (F=0.175; P<0.01). The mean score of the attraction to death in the students of the experimental group after participating in the Choice Theory training sessions showed no significant difference, compared to those in the control group. According to Table 7, the results from the comparison of the repulsion by life at posttest in the two groups by controlling the pretest effect indicate a significant difference between the two groups in the mean scores of repulsion by life (F=1202.38; P<0.0001).

The mean scores of repulsion by death in the students of the experimental group after participating in the Choice Theory training sessions had increased significantly, compared to those in the control group. About 69.2% of the individual differences at the posttest scores of the repulsion by death in the experimental group had induced by the effects of the Choice Theory training which can increase the scores of repulsion by life in the students significantly.

Discussion

Results from the comparison of suicidal tendency at posttest in the two groups by controlling the pretest influence indicated a significant difference between the two experimental and control groups in terms of the mean scores of suicidal tendency. Moreover, the mean scores of the suicidal tendency in the experimental group after participating in the Choice Theory training sessions had decreased significantly, compared to the control group. The Choice theory training could lower the scores of suicidal tendency in students significantly. To explain this hypothesis, Glasser's treatment emphasizes encouraging the realities of life, as well as recognizing own needs and internal control by focusing on here and present and taking responsibility. Training and learning this theory can enhance our personal liberty and independence in all aspects of life, and it maintains the light of hope in our hearts that is "we are not the resultant forces and external factors, we are not the victims of our pasts, we are not toys for lower layers of brain and hormones, we choose the behaviors that we have done so far". According to the stimulus-response external control psychology, the external elements have no significant role in our behaviors and fates [9].

In the Choice Theory, people learn to take responsibility for their behaviors. In this way, the

Choice theory trains the individual to determine targets in order to satisfy individual needs based on reality. Designing and implementing conscience plans to achieve short- and long-term goals can contribute to the formation of self-regulating strategies.

Adequate recognition, informed targeting, and correct planning which are taught in the choice theory, lead to positive outcomes. Repeating and reinforcing these outcomes can increase self-efficacy [20], success, and hope [21], while it can reduce the individual anxiety against his actions [22]. Finally, this demonstrates that Choice Theory training is effective for students, and it reduces the average suicidal tendency in the experimental group at the posttest, compared to the pretest. Accordingly, considering these findings related to the effectiveness of the Choice Theory training in the experimental group, the choice theory training is an appropriate method to modify family-principals relationships. It seems that it is necessary to apply this method to improve parenting and student upbringings and prevent and reduce their behavioral problems and their compatibilities. Regarding the limitations of this study, one can refer to the lack of control over psychological factors.

Conclusions

Considering the findings, this intervention is a suitable method to modify the behavior and improve adaptation among male students.

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