



Effectiveness of Spiritual Intelligence in Resilience and Responsibility of Students

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Received 2018 November 23; Revised 2019 May 26; Accepted 2019 May 29.

Abstract

Background: Spiritual intelligence is one of the important and influential variables in many psychological characteristics including resilience and responsibility.

Objectives: Based thereon, the present study was conducted with the objective of determining the effectiveness of spiritual intelligence training in responsibility and resilience of secondary high school students in the city of Baghmalek.

Methods: The present study was a semi-experimental study with pretest-posttest design and experimental/control groups. The research population included all secondary high school students from Baghmalek city during 2017 - 2018. Finally, 60 students were selected by the multistage cluster sampling method and randomly assigned to experimental and control groups. Data collection was done using the Connor-Davidson resilience scale (CD-RISC) and Kordlou's responsibility questionnaire. The experimental group participated in eight 90-min sessions for spiritual intelligence instruction while the control group was placed in a waiting list and did not receive any instructions. After the termination of the sessions, both of the groups were subjected to posttest.

Results: The results indicated that there was a linear significant relationship between the pretest and posttest scores of resilience ($F = 56.32, P < 0.001$) and the pretest and posttest scores of responsibility ($F = 12.98, P = 0.004$) in the experimental and control groups. The results of univariate analysis for resilience ($F = 15.55, P < 0.001$) and responsibility ($F = 7.14, P = 0.016$) as dependent variables were found significant. Thus, spiritual intelligence instruction increased resilience and responsibility in students.

Conclusions: Spiritual intelligence training could be an appropriate interventional method for enhancing the students' responsibility and resilience considering the society's need for committed and flexible students who can resist problems and challenges.

Keywords: Spiritual Intelligence, Education, Resilience, Responsibility, Students

1. Background

Any period of life can be categorized based on some root issues like biological, psychological, and social matters. Amongst the issues that specifically, but not necessarily, come about during the second decade of life are having a relationship with the opposite sex, occupational awareness, values' growth, responsible autonomy, unraveling affective knots in relationships with parents, releasing from the parents' dependency and control, acquisition of new identity, expression of conflicts, fear of independent decision-making, and accepting responsibility (1). Besides the abovementioned issues, students are also exposed to much pressure due to their heavy lesson contents, parents' extreme expectations, limitedness of the available time and some other factors (2). Therefore, paying attention to the students' problems, issues, and interventions related to them is of great importance in this regard.

Moreover, ongoing daily problems and matters may cause serious damages to adolescents so that neglecting their issues and concerns might lead to more severe psychological disorders in adulthood (3). Resilience is one of the factors that can moderate the stressful events and psychological disorders and make these incidents have lower effects on individuals (4). Resilience facilitates the likelihood of success at school even with the existence of challenging and threatening conditions resulting from preliminary characteristics, conditions, and experiences (5). Resilience increases the capacity for overcoming acute dangers, challenges, and pressures as part of the academic life in all students who experience the levels of weak performance, discomfort, challenges, and failures in their academic process (6). In lieu of seeking solitude and seclusion, students having resilience establish relationships with friends, peers, and family members, share their problems with them, and request their assistance at any time it is deemed neces-

sary (7). These individuals can acquire such capabilities as restoration and recovery, optimism, skills of turning problems to learning and growth opportunity, perseverance, self-esteem, creation of healthy protective network, development of affective and supernatural competencies, independence in decision-making, sense of humor, and coping abilities in the face of problems and conflicts (8). Moreover, in confrontation with problems and issues, one of the most important issues is the adolescent students' responsibilities because human beings are the only creatures that enjoy thinking, contemplation, and free will (9). Responsibility is a practical feeling in applying the abilities and endeavoring for remaining compatible and adaptive to the people and inconsistency with it, would be a sort of breaking the law and rejecting the responsibilities and duties (10). Research indicates that responsibility in every society causes the regulation of social and human relations and increases the altruism and sympathy while in case of being absent, the society members would become indifferent to one another, feel alienation, and simply bypass the social harms (11). In Glasser's mind, the humans' problems and their disorders stem from not accepting responsibility since the acceptance of responsibility makes them unable to satisfy their essential needs based on correct and humanistic conditions (12). It was based on this same premise that studies identified proper coping methods like spiritual coping styles or enjoyment of spiritual intelligence in synergizing the efforts and struggles of an individual for overcoming the problems, crises, and calamities (13). That is because spiritual intelligence is a collection of adaptation capacities in the mind based on nonphysical and sublime aspects of reality and this same issue causes an individual's psychological resistance and compatibility via winning the God's satisfaction (14). Furthermore, the results of studies indicate the idea that spiritual intelligence not only predicts adaptation, but also facilitates the individuals' abilities in solving problems and achieving their goals (15).

Spiritual intelligence can aid an individual to choose the correct path of accomplishing objectives in the face of crises and problems considering the personal priorities and values. Since adolescence is a critical and sensitive period in regard of the path of life decisions, besides widening the spiritual solutions and methods of coping with pressures and hardship, it seems to relieve the individuals from their distresses and crises (16). Studies in specific groups, such as offspring of parents with major depressive disorder (17), abused children (18), and families with a dead parent (19), and studies of the effectiveness of the applied domains of spirituality in adolescents' adaptation and flexibility confirm the existence of a positive relationship between spirituality and resilience. Thus, the enjoy-

ment of spiritual intelligence characteristics and having hope in God at crisis time help an individual better cope with conditions and alleviate his/her psychological distress (20). Besides resilience in behavior, it can bring about an increase in resistance to stress, cause self-awareness and deeper insight of life and assist an individual to live a more purposeful life (21). In addition, spiritual intelligence training can be a proper strategy for increasing students' responsibility because the results of various studies have signified the effectiveness of spirituality in commitment and the sense of duty in university students (22), social responsibility in nurses (23), and mental health among primary school teachers (16). Therefore, adolescence is a valuable period for learning responsibility. Adolescents like to have more independence and make decisions on their own regarding some of their values and behavioral methods and enjoy going to school, engage in educational activities, face fewer problems, psychological pressures, and conflicts in their inter-group relationships with the others, peer students, and teachers, and experience fewer conflicts, psychological pressures, and problems in the family.

2. Objectives

To this end, the present study aimed at investigating the effectiveness of psychological constructs of spiritual intelligence, which is influenced by individuals' religious attitudes, in students' resilience and responsibility so that more insight could be gained in this regard considering the scarcity of research in this domain.

3. Methods

3.1. Participants

This was a semi-experimental study with pretest-posttest design and experimental/control groups. The study population included all students from secondary high schools in the city of Baghmalek during the academic year 2017 - 2018. In this study, 60 students were selected using the multistage cluster sampling method. First, two male-only and female-only high schools were selected based on a simple randomization method from among high schools in the city. In sum, 445 students were schooling in these two high schools. All of the participants were subjected to pretest before the initiation of training sessions using the study instruments (25-item Connor-Davidson resilience scale (CD-RISC) and Kordlou's responsibility questionnaire). Sixty students were selected from among students who had acquired scores of lower than the mean on pretest (the mean score of the resilience scale is 50 and the mean score of the responsibility questionnaire

is 225). The selected students were randomly assigned to experimental ($n = 30$) and control ($n = 30$) groups. Since the statistical power ($1 - \beta$) was more than 80% and alpha (α) was less than 0.05, the sample size was calculated to be 60 people (24). Both of the groups were subjected to pretest. Then, the experimental group's members separately participated in eight 90-min sessions for spiritual intelligence training at their education setting whereas the control group was placed in a waiting list and did not receive any instructions. One month after the termination of the educational sessions, both of the groups were subjected to posttest. The content of spiritual intelligence training sessions is presented in Table 1. It is worthy to mention that high school students were selected for the study because of considerations such as their age characteristics (growth crisis), social conditions, and the influence of social network system, as well as the psychoanalytical nature of the spiritual intelligence protocol.

3.2. Instruments

3.2.1. Connor-Davidson Resilience Scale (CD-RISC)

This scale was prepared by Connor and Davidson in 2003 for measuring the ability to cope with pressure and threat. Mohammadi et al. adjusted it to be used in Iran in 2006. The scale has 25 items on a five-point scale (never, rarely, sometimes, often, and always from zero to four). The sum of all the 25 items' scores constitutes the total score of the scale. In this questionnaire, the minimum and maximum scores are 0 and 100, respectively. Bahrami and Zahedi obtained a reliability coefficient equal to 0.89 for this scale using Cronbach's alpha coefficient and also obtained a scale validity rate in a range from 0.14 to 0.64 based on testing the correlation of each item with the total score of all the items (25). In one study, the scale reliability was computed based on Cronbach's alpha and split-half methods and the reliability coefficients were obtained as 0.83 and 0.77, respectively. The researcher evaluated the face and content validity, as well as reliability, to ensure the study instrument. The face and content validity were confirmed by expert professors at the Psychology Department of the Humanities Faculty. The reliability of the instrument was computed equal to 0.82 in an experimental test using software amongst the study sample based on Cronbach's alpha.

3.2.2. Responsibility Questionnaire

To assess responsibility, Kordlou's responsibility questionnaire (2011) was utilized. This questionnaire contains 79 items and eight subscales (responsibility at school, responsibility at home, absence and delay in going to school, internal commitment, external commitment, and feeling

of security, self-esteem and attachment). The questionnaire has been designed for individuals above 15 years of age. The first subscale assesses the students' activities inside and outside the school; the second subscale measures the students' responsibilities at home; the third subscale evaluates the absence frequency and delay of the students in going to school, and the fourth and fifth subscales explore the students' responsibility on internal and external commitment, feeling of security, self-esteem, and attachment. In this questionnaire, the scale is scored based on a Likert-type scale. The minimum and maximum scores are 79 and 395, respectively. Kordlou calculated the questionnaire's reliability rates equal to 0.88 and 0.86 through Cronbach's alpha and split-half methods, respectively, and a validity rate equal to 0.90 (26). In a study for determining the validity of the responsibility scale, a confirmatory analysis was carried out using moment structure analysis software (AMOS V. 5.5 based on SPSS V. 18) on the items of the questionnaire and its practical structure was affirmed. It was found based on the confirmatory factor analysis that all the items had a good factor load and all of the coefficients were found with a high standard of over 30%. Moreover, the test's validity was reported equal to 0.82 by determining the correlation between the questions in Kordlou's inventory (27).

3.3. Statistical Analyses

Data analysis was done using multivariate and univariate analysis of covariance by SPSS software.

4. Results

Overall, 60 participants were eligible for this study. The participants included 30 boys and 30 girls aged 14 to 17 years. The demographic characteristics of the participants are shown in Table 2.

The data presented in Table 3 show the mean scores of resilience and responsibility obtained for the spiritual intelligence instruction group as compared to those acquired for the control group from pretest to posttest.

In an investigation of the between-group differences in the posttest scores of resilience and responsibility, the multivariate analysis of covariance (MANCOVA) was the first test of choice in order to control for the pretest effect according to the research plan. However, based on the fact that data distribution normality and groups' variance homogeneity are the primary presumptions of analysis of covariance, the Kolmogorov-Smirnov test was utilized for investigating the data distribution normality before offering the analysis of covariance results. The data distribution normality was confirmed for the dependent variable

Table 1. Instructional Sessions of Spiritual Intelligence

Session	Activities
First session: spirituality	Introducing the group members, expression of sessions' regulations, definition, necessity of spirituality, effect of spirituality on interpersonal relations, characteristics of spiritual human beings, spiritual needs, coping methods and spiritual support, presenting assignments
Second session: spiritual intelligence	Reviewing assignments, spiritual intelligence definition and its comparison with common intelligence, signs of spiritual intelligence, applications of spiritual intelligence, characteristics of spiritual intelligence, stages of spiritual intelligence, advantages and techniques of strengthening spiritual intelligence, presenting assignments
Third session: awareness	Reviewing the homework, defining awareness, self-awareness, factors influencing self-awareness, barriers to self-awareness, types of self-awareness, spiritual awareness functions with examples and images, giving assignments
Fourth session: sublimity	Reviewing assignments, defining sublimity, increasing sublime awareness, spiritual sublimity, sublime growth, examples and signs of sublime growth, examples and effects of sublimity underdevelopment, presenting assignments
Fifth session: personal meaning	Personal meaning, necessity of determining a goal in life, role of spirituality in the achievement of goals, assigning meaning to all activities even failures, production and increasing of personal meaning, presenting assignments
Sixth session: critical thinking	Reviewing assignments, definition, necessity of the existence of supreme power, role of critical thinking in humans' achievement of meaning in life, criticizing one's own thoughts about the goal of creation, life after death, global peace, meaning of events through brainstorming techniques, mental imagination, role-playing
Seventh session: problem-solving	Problem-solving with spiritual approaches, spiritual orientation, offering acceptable solutions, usefulness of problem-solving and stages of problem-solving with a spiritual approach using brainstorming, presenting assignments
Eighth session: forgiveness	Forgiveness in a spiritual approach from behavioral aspects, types of forgiveness, pre-stages of forgiveness (objective, emotional, and cognitive), stages of forgiveness (thoughts, affective feelings, tendency towards and decision on forgiveness, practical expression), outcomes of forgiveness

Table 2. Demographic Characteristics of the Participants

Groups	Gender			Grade		
	Male	Female	Tenth	Eleventh	Pre-University	
Experimental	15	15	12	11	7	
Control	15	15	11	12	7	

Table 3. Descriptive Data of Dependent Variable in Different Groups at the Pretest and Posttest Phases

Dependent Variables, Groups, Phase	Mean ± SD	Min	Max
Resilience			
Spiritual intelligence instruction			
Pretest	53.86 ± 16.71	23	84
Posttest	71.76 ± 11.40	43	88
Control			
Pretest	53.63 ± 14.97	9	76
Posttest	55.43 ± 18.84	16	93
Responsibility			
Spiritual intelligence instruction			
Pretest	219.46 ± 22.17	173	256
Posttest	225.86 ± 22.71	181	270
Control			
Pretest	224.20 ± 19.83	188	265
Posttest	231.90 ± 21.37	193	285

in both rounds of the test. In addition, the results of Lewin test regarding the equality of variances of the experimental and control groups' scores on the study variables indicated that the study scales enjoyed the variance homogeneity. Investigating the linear relationship between the pretest and posttest scores, the results indicated that there

was a linear significant relationship between the pretest and posttest scores of resilience ($F = 56.32, P < 0.001$) and the pretest and posttest scores of responsibility ($F = 12.98, P = 0.004$). Considering the significance of the presumption, the linear relationship between the pretest and posttest scores of the study variables was confirmed. Then, the re-

gression coefficients' homogeneity test was run to determine the interaction between the pretest scores of the dependent and independent variables. The interaction was insignificant for the dependent variable resilience ($F=2.86$, $P=0.06$) and for the independent variable responsibility ($F=1.25$, $P=0.29$). Therefore, it can be claimed that the assumption indicating the homogeneity of regression coefficients held true.

All the four multivariate statistics pertaining to Pillai's trace, Wilk's Lambda, Hotelling trace, and Roy's largest root were significant at a 99% confidence level ($P < 0.01$). In other words, there was a significant difference at least in one of the dependent variables between the scores of experimental and control groups at the posttest stage ($P < 0.01$). Considering the fact that all the four multivariate tests were significant, the turn came afterward for the investigation of the idea that whether each of the dependent variables had separately influenced by the independent variable or not. Due to the same reason, next, the univariate test of one-way analysis of covariance (ANCOVA) was applied to investigate the effect of the dependent variable on each of the dependent variables.

Based on Table 4, the results of the univariate test were significant ($P < 0.01$) for each of the dependent variables; hence, hypotheses were confirmed and spiritual intelligence training had a significant effect on the students' resilience ($F=15.55$, $P < 0.001$) and responsibility ($F=7.14$, $P=0.016$).

5. Discussion

The results of the present study signified the effectiveness of spiritual intelligence instruction in responsibility and resilience of secondary high school students and training could make significant differences. The results of the present study also showed that the intervention of spiritual intelligence instruction was effective in the enhancement of students' resilience, which was consistent with the results of prior studies that investigated the effectiveness of spiritual intelligence in resilience and hardiness of individuals (17, 20, 21), as well as the studies that dealt with the relationship between religiosity and resilience (28).

It can be stated in elucidating the abovementioned results that providing students with proper instructions for spiritual intelligence enabled them to better exercise abstinence in satisfying their needs concerning their high tendency in the adolescence period toward self-regulation and self-control. As a result, they exhibited better performance upon being exposed to tension and problems in regulating and managing their emotions. Accordingly, they became more able to fight difficulties because they

had been provided with more effective coping strategies following spiritual intelligence training.

It can be also stated that individuals with high spiritual intelligence considered life as meaningful and purposeful; hence, they tended to interpret life happenings in the light of a more general meaning and became less frustrated. Therefore, they dealt more comfortable with life and exercised more tolerance in confrontation with life pressures upon being exposed to life crises and challenges. Thus, spiritual intelligence instruction to students helped them become adapted to life situations and give importance to interpersonal relations and purposiveness in life so as to be able to be more resilient. Accordingly, they exhibited a positive and optimal performance before life problems envisaged as a constant process of learning (29).

In the present study, spiritual intelligence instruction was found to exert a significant effect on enhancing the students' responsibility. This was in compliance with the results of studies investigating the effectiveness of spiritual intelligence instruction in changing the attitudes of students towards narcotics for their feeling of responsibility for themselves and others. Moreover, the current study was in compliance with the results of studies that evaluated the effectiveness of changes in nurses' attitudes, behaviors, and performance in support of patients for remaining accountable to the elimination of their needs (30) and studies that reported the staff's success on correct guidance, optimal participation, and modification of their duties (31).

It can be stated in elaborating the above-mentioned results that students having lower responsibility for a reason have been able to elevate this positive feature in themselves through being provided with proper instructional situations. The reason behind is that spiritual intelligence is a psychological construct influenced by individuals' religious attitudes. Hence, it not only increases the feeling of individual and social commitment and responsibility of the students, but also helps an individual not to fall in negligence and ignorance on the life path. Moreover, spiritual intelligence instruction enables students to treat others, even those having different conflicting attitudes, in such a way that they consider them as committed and self-sufficient and in this way, the others become attracted to them and welcome cooperation with them.

5.1. Conclusions

It can be reasoned based on the present study findings that spiritual intelligence instruction is an effective method and an important spiritual source for empowering students in resolving the confronted problems and challenges. By institutionalization of religious and spiritual tendencies, adolescents can pursue their own life with

Table 4. Results of ANCOVA on the Mean Posttest Scores of Dependent Variables

Indicator	SS	df	MS	F	P Value
Resilience	3741.55	1	3741.55	15.55	< 0.001
Responsibility	4523.61	1	4523.61	7.14	0.016

personal meanings, find a social personality along with commitment and purposefulness, and become resistant, healthy, happy, and generative individuals in confrontation with problems, challenges, and psychological pressures so as to be able to play their own part of satisfying society's needs. Thus, spiritual intelligence instruction is recommended for the enhancement of students' responsibility and resilience as a proper intervention method.

Footnotes

Authors' Contribution: Study concept and design, acquisition of data, analysis and interpretation of data, and statistical analysis: Ali Javadi Nejad; administrative, technical, and material support, study supervision: Alireza Heidari and Farah Naderi; critical revision of the manuscript for important intellectual content: Saeed Bakhtiyar Pour and Fariba Hafezi.

Conflicts of Interests: No conflict of interests is declared.

Ethical Approval: The study was approved by the Ethics Committee of Islamic Azad University, Ahvaz Branch (IR.IAU.AHVAZ.REC.1396.009).

Funding/Support: No funding is declared.

Patient Consent: Questionnaires were filled out with the parents' satisfaction and written informed consent was obtained from the parents of the students to participate in this study.

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