The Efficacy of a Transactional Analysis Training Program for Married University Students' Spiritual Intelligence: A Randomized Controlled Study

Kuo Zhang, Dengfeng Wang*

ABSTRACT
Attention to the various dimensions of intelligence and their role in different psychological, communicational, social and marital processes are becoming widespread and prominent day by day. We conducted a randomized trial in three dispute resolution councils in Xining, western China. We used the scale spiritual intelligence capacity as an indicator of perceived spiritual intelligence and the scale communication skills as an important communication-related outcome variable. The changes in mean spiritual intelligence capacity were significantly higher in the experimental condition than in the control condition. Furthermore, the changes in mean verbal, listening and feedback skills were significantly higher in the experimental condition than in the control condition. An intervention involving transactional analysis training significantly improved perceived spiritual intelligence among married students during the events of life.

Key Words: Transactional Analysis, Spiritual Intelligence, Married Students, Communication Skills

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Introduction
The concept of spiritual intelligence was first raised by Stevens in 1996 and expanded in 1999 by Emmons. Emmons (2000) describes spiritual intelligence as an adaptive application of spiritual information to solve everyday problems and the process of achieving a goal. Zohar and Marshall (2000) also define spiritual intelligence as an intelligence that gives meaning and value to solving problems. According to Gardner (1999), spiritual intelligence includes a set of abilities and potentials that use spiritual resources to increase well-being and adaptability and minimizes adaptive behavior the likelihood of developing competitive objectives that cause conflicts (Duan et al., 2018; Gao et al., 2017; Ge et al., 2017; Ge et al., 2018; Liu, 2017; Wang et al., 2018; Xie et al., 2018). Based on this view, spirituality may be conceptualized as a cognitive-motivational term that represents a set of adaptive and sources skills that facilitate the process of solving problem (marital problems) and achieving a goal (Sisk, 2002). Some of the capabilities, characteristics and components of spiritual intelligence such as tolerance, self-awareness, spiritual experience and forgiveness (Sisk and Torrance, 2001; Zohar and Drake, 2000) can be related to a very wide range of problems and issues that are separate from existential spiritual issues (Emmons, 2000). For example, it may be used for conceptualizing, solving communication problems, marital conflicts, and marital satisfaction (Altun et al., 2017; Banerjee et al., 2017; Demir et al., 2017; Elbendary et al., 2018; Rizvi and Saleh, 2018; Ullah et al., 2018).

Most studies in this area is related to the
The relationship between religion, spirituality and mental health, and in most of these studies, there is a positive relationship between religious beliefs, spirituality and mental health (Vaughan, 2002; Tsaousis & Nikolaou, 2005), coping strategies, problem-solving techniques and compatibility (King, 2008), stress and depression (Mascaro N, Rosen, 2005), mental health (Saad et al., 2010), and emotional intelligence (Ayranci, 2011). Many studies have shown that there is a high correlation between spiritual intelligence, life aim, life satisfaction and health (Rostami and Gol, 2014; Koohbanani et al., 2013; Mohammadyari, 2012). Mahooni et al., (1999), for example, found that when married couples attribute their relationship to holy aspects, they have more marital satisfaction and less conflict and can better solve their problems (Al-Turki and Baskin, 2017; Ghayas et al., 2017; Saranya et al., 2017; Tas et al., 2017; Tawfik et al., 2017; Yuzbasioglu et al., 2017).

Spiritual intelligence can grow like any other intelligence (King, 2008). One of the theories that focuses on various intelligence components and has provided practical solutions to interpersonal issues, is transactional analysis or that Berne provided in the second half of the twentieth century (Bell et al., 2018; Cui et al., 2018; Knita et al., 2018; Safaei-Ghomi et al., 2018). Transactional analysis is basically a theory based on the notion that a major part of life goes on interpersonal exchanges and interactions. Burne (2010) believes that the application of transactional analysis is fundamentally different in the study of marital relationships and social links. In these situations, transactional analysis can provide useful and convincing predictions and revisions (AlGhamdi et al., 2017; Elshafie et al., 2017; Iyer et al., 2017; Khan et al., 2017; Makni et al., 2017; Yildiz et al., 2017). In transactional analysis, more attention is paid to human relationships, and it is believed that if individuals have healthy, positive and satisfactory relationships with each other and replaces it in destructive, negative and degrading relationships, they will be able to reduce their psychological pressures and others and enjoy their lives. Corey (2015) believes transactional analysis is an interactive treatment method that focuses on cognitive and rational cognitive aspects of treatment processes and aims to raise one’s awareness and ability to decide and change the life flow of individuals (McClements, 2018; Pivoto et al., 2018; Ramos Gandolfi et al., 2018).

Because of spiritual intelligence is related to the inner life of mind and soul and its relation to the world and included the capacity for deep understanding of existential questions and insights into multiple levels of consciousness, therefore, training and its enhancement can lead to internal and spiritual awareness and internal satisfaction of individuals, and the consideration of these conditions explains the need for this study. On the other hand, it should be noted that few studies examined the relationship between transactional analysis strategies and spiritual intelligence among couples. This paper examines a transactional analysis training program for married university students' spiritual intelligence. An additional objective was to examine communication skills as an important communication-related outcome variable. In this paper we focus on the following hypotheses: 1) transactional analysis training program is beneficial in spiritual intelligence capacity for married university students during the events of life, and 2) transactional analysis training program is beneficial in communication skills.

**Methods**

**Participants**

Between April 2015 and September 2016, 53 married students were recruited into an experimental study across three dispute resolution councils in Xining, western China. We determined the inclusion criteria, including age 25-45 years and duration of marriage at least 5 years, in discussion with the married students. Married students were only approached with the consent of legal counsel, and we obtained a written informed consent for the study. Participants randomized in the control condition received no intervention, whilst participants in the experimental condition received a transactional analysis training program by a research officer. We recruited 53 married students from the 74 approached, with 28 randomized to the intervention condition and 25 to the control condition.

**Intervention**

The aim of the transactional analysis training program was to facilitate access to an appropriate treatment service. Synopsis of group counseling for transactional analysis was shown in Table 1.
There was no dropout. In another study, an alpha coefficient of two variables: spiritual intelligence capacity and communication skills were calculated for participants in the experimental and control conditions filled in questionnaires measuring the two variables: spiritual intelligence capacity and communication skills. There was no drop out.

Procedure
Married university students in the experimental condition received a transactional analysis training program, but students in the control condition received no intervention. Before the transactional analysis training program as pretest and 2 weeks after the transactional analysis training program all 53 married university students participated in experimental and control conditions filled in questionnaires measuring the four variables: spiritual intelligence capacity and communication skills. There was no drop out.

Measures
To investigate the spiritual intelligence capacity and communication skills associated with intervention, spiritual intelligence capacity and communication skills were calculated for participants in the experimental and control conditions at baseline and directly 2 week after the intervention.

Spiritual intelligence capacity
The Self-Reporting Spiritual Intelligence Scale, developed by King (2008), consisted of 24 items and ranged on a 5-option Likert scale. Higher scores mean high spiritual intelligence or the existence of such capacity. An alpha coefficient of 95% and reliability of 84% was obtained using Exploratory Factor Analysis in a sample of 619 students from the University of Trent Canada in 2007. In another study, an alpha coefficient of 92% and reliability of 92% was obtained using Confirmatory Factor Analysis.

Communication skills
We used the communication skills scale of the communicative skill questionnaire as indicator of perceived stress as an important communication-related outcome variable (Stacey Paula et al., 2006). The scale covers verbal skills, listening skills, and feedback skills, each with 6 items. The scale ranged from 1 (completely opposed) to 5 (completely agree). Its score varies between 18 and 90, and the score of 90 represents the highest communication skill.

Results
Sample characteristics
Table 2 demonstrates that the mean gender of the married university students was 32.1% male and 67.9% female with a mean age of 32.4 (SD= 3.15) years. They all were married at least 5 years. Participants were studying psychology (about 54.7%), medicine (about 30.2%) and other subjects (about 15.1%).

Intervention effects
The effect of transactional analysis training programme on perceived spiritual intelligence was measured using the $2 \times 2$ MANOVA. Table 3 demonstrates the correlations between the four dependent variables (spiritual intelligence capacity, verbal skills, listening skill, and feedback skills) and intervention effects.
skill) at baseline (before intervention, 6 days after intervention).

**Table 2. Characteristics of participants (age, gender, job, and education)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>All</th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 53</td>
<td>n = 28</td>
<td>n = 25</td>
</tr>
<tr>
<td>Age, mean (SD)</td>
<td>32.4 3.15</td>
<td>32.6 3.11</td>
<td>32.17 3.5</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>17 32.1%</td>
<td>10 35.7%</td>
<td>7 28%</td>
</tr>
<tr>
<td>Female</td>
<td>36 67.9%</td>
<td>18 64.3%</td>
<td>18 72%</td>
</tr>
<tr>
<td>Married year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10</td>
<td>8 15.1%</td>
<td>6 21.4%</td>
<td>2 8%</td>
</tr>
<tr>
<td>5-10</td>
<td>45 84.9%</td>
<td>22 78.6%</td>
<td>23 92%</td>
</tr>
<tr>
<td>Field of Study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>29 54.7%</td>
<td>16 57.1%</td>
<td>13 52%</td>
</tr>
<tr>
<td>Medicine</td>
<td>16 30.2%</td>
<td>9 32.1%</td>
<td>7 28%</td>
</tr>
<tr>
<td>Other</td>
<td>8 15.1%</td>
<td>3 10.7%</td>
<td>5 20%</td>
</tr>
</tbody>
</table>

**Table 3. Means, standard deviations, and zero-order correlations at before intervention (n = 53)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual intelligence</td>
<td>11.41</td>
<td>1.32</td>
<td>0.46**</td>
<td>0.04**</td>
<td>0.48**</td>
</tr>
<tr>
<td>capacity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal skills</td>
<td>4.33</td>
<td>2.11</td>
<td>0.46**</td>
<td>0.53**</td>
<td>0.48**</td>
</tr>
<tr>
<td>Listening skill</td>
<td>3.13</td>
<td>2.52</td>
<td>0.49**</td>
<td>0.53**</td>
<td>0.48**</td>
</tr>
<tr>
<td>Feedback skill</td>
<td>5.42</td>
<td>3.05</td>
<td>0.51**</td>
<td>0.44**</td>
<td>0.48**</td>
</tr>
</tbody>
</table>

**Table 4. Average scores of Spiritual intelligence capacity and communications skills for experimental and control condition**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Experimental condition (n=10)</th>
<th>Control condition (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Spiritual intelligence</td>
<td>Time 1</td>
<td>11.38</td>
</tr>
<tr>
<td>capacity</td>
<td>Time 2</td>
<td>15.27</td>
</tr>
<tr>
<td>Verbal skills</td>
<td>Time 1</td>
<td>4.22</td>
</tr>
<tr>
<td></td>
<td>Time 2</td>
<td>7.18</td>
</tr>
<tr>
<td>Listening skill</td>
<td>Time 1</td>
<td>3.39</td>
</tr>
<tr>
<td></td>
<td>Time 2</td>
<td>6.44</td>
</tr>
<tr>
<td>Feedback skill</td>
<td>Time 1</td>
<td>5.39</td>
</tr>
<tr>
<td></td>
<td>Time 2</td>
<td>8.19</td>
</tr>
</tbody>
</table>

**Figure 1. Mean before/after intervention dependent variables in control condition**

**Figure 2. Mean before/after intervention dependent variables in experimental condition**

**Table 5. Multiple analyses of variance for training and time**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Training</th>
<th>Time</th>
<th>Time × Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual intelligence</td>
<td>Partial η²</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>capacity</td>
<td>F</td>
<td>0.02</td>
<td>3.25**</td>
</tr>
<tr>
<td>Verbal skills</td>
<td>Partial η²</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0.55</td>
<td>6.10</td>
</tr>
<tr>
<td>Listening skill</td>
<td>Partial η²</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0.34</td>
<td>5.12*</td>
</tr>
<tr>
<td>Feedback skill</td>
<td>Partial η²</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0.61</td>
<td>6.14**</td>
</tr>
<tr>
<td>Overall</td>
<td>Partial η²</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0.41</td>
<td>5.19*</td>
</tr>
</tbody>
</table>

*p < 0.05, **p < 0.01

The results of mean and standard deviation scores at before intervention and after intervention for both groups are demonstrated in Table 4. The average scores of spiritual intelligence capacity, verbal skills, listening skill and feedback skill have significantly increased in the experimental condition than in the control condition.

In Table 5, our data for the transactional analysis effects shows the significant time effect for increase of spiritual intelligence capacity, F(1,50) = 3.25 (p < 0.01), listening skill, F(1,50) = 5.12 (p < 0.05), and feedback skill, F(1,50) = 6.14 (p < 0.01). The results for the transactional analysis effects also show the significant time × Training effect for increase of spiritual intelligence capacity, F(1,50) = 4.11 (p < 0.05), verbal skill, F(1,50) = 7.21 (p < 0.05), and feedback skill, F(1,50) = 5.33 (p < 0.05).
Discussion
The purpose of this study was to investigate the effectiveness of transactional analysis training program on married university students' spiritual intelligence. The results of this study showed that the transactional analysis training program increases the level of students’ spiritual intelligence. This finding is consistent with the results of Lundblad & Hansson's (2006) study. Their study showed that communication skills training and conflict resolution to couples who have difficulty marital interactions improve couples’ marital relationships, reduce the conflicts, and increase their mental health. Our finding also is consistent with the results of Murakami et al.,'s (2009) study.

Some researchers believe that transactional analysis training is one of the most effective psychological theories that contribute to the growing trend of happiness in individuals by helping to solve problems in human relationships (Napper, 2009). Changing the way of looking at life, taking into account the dimensions of ourselves and others, leads to a better quality of life and the discovery of a new way of life filled with joy and joy (Boholst, 2003). Transactional analysis can be one of the most suitable ways for mental health and an effective way to promote happiness in married people's life (Murakami et al., 2009). Mei (2010) examined the relationship between transactional analysis training and the level of happiness created in students and concluded that the transactional analysis training increases the amount of happiness in students. Further, Andromico's (1985) study demonstrated that the transactional analysis training has positive effects on married couple life and provides a source of satisfaction in their life.

Shulnik (2012) examined the effect of the transactional analysis theory and measured the happiness of couples. He concluded that there is a significant difference between pre-test and post-test in married women and men and their pleasure and self-esteem in relation to each other were increased. Copeland and Borman (2012) also measured the impact of behavioral behavior education on students and concluded that this method improves the factors related to their happiness. In their study, this training made the students more enjoyable, more effective, and more effective than before.

Spiritual intelligence leads to the completion of interpersonal and interpersonal areas for distance between themselves and others and was increased in different ways. Spiritual intelligence also facilitates conversation between reason and feeling (Zohar & Marshall, 2001). Spiritual intelligence is about the science of self-management and responsibility towards oneself. It also deals with the ability to recognize things that we can do, or the ways in which problems can be solved through it (Vaughan, 2002). King (2008) describes spiritual intelligence as a deep awareness that an individual becomes increasingly aware of in terms of physical, mental, and mental dimensions. He believes that transactional analysis training increases self-awareness and thus spiritual intelligence.

Given the high, spiritual intelligence can be enhanced by various exercises of attention, changing emotions and strengthening moral behaviors. In this process, a person can increase his spiritual intelligence using various exercises of attention, strengthening adult behaviors and overcome his limitations and intellectual disabilities.

References

Wang D., The Efficacy of a Transactional Analysis Training Program for Married University Students’ Spiritual Intelligence: A Randomized Controlled Study


Safaeei-Ghomi J, Enayat-Mehri N, Eshteghal F. 4-(4′-Diamino-di-phenyl)-sulphone supported on hollow magnetic mesoporous Fe3O4@ SiO2 NP: As a reusable and efficient catalyst for the synthesis of ethyl 2-amino-5, 10-dihydro-


