Effects of a Peer Gatekeeper Training Program on Existential Spiritual Well-being, Interpersonal Relationships, Depression, and Suicidal Ideation in Female High School Students

Hee Sook Kim\textsuperscript{1} Eun Jeong Shin\textsuperscript{2} Sung Hee Lee\textsuperscript{1*}

\textsuperscript{1}College of Nursing, Kyungpook National University, Daegu, Korea
\textsuperscript{2}Graduate school of Nursing Department, Kyungpook National University, Daegu, Korea.

Abstract. This study aimed to investigate the effects of a peer gatekeeper training program on existential spiritual well-being, interpersonal relationships, depression, and suicidal ideation in female high school students. Participant pool included forty-four female high school students. The study was conducted over a period of three months. To test the effects of the peer gatekeeper training program, participants were divided into two groups, an experimental group (N=22) and a control group (N=22). The program was only conducted with the experimental group, but the survey was administered to both groups. Data were analyzed on SPSS/WIN 22.0 using a chi-squared test, t-test, Fisher’s exact test, and ANCOVA. Existential spiritual well-being and interpersonal relationships were significantly higher in the experimental group (F=14.43, p<.001, F=17.60, p<.001 respectively) and depression were significantly lower (F=4.31, p=.010) as compared with the control group. Findings from this study indicate that peer gatekeeper training programs can be utilized for female high school students and effectively improve their existential spiritual well-being and interpersonal relationships while lowering depression.

Keywords: Adolescence, Spirituality, Interpersonal Relations, Depression

1 Introduction

High school students are late in the adolescent stage of the life cycle, during which physical maturation occurs rapidly. However, this is also the stage when individuals experience identity crises [1]. This can lead to the experience of negative emotions such as inferiority, anxiety, anger, and depression [2]. Female students tend to experience more depression than male students when they are stressed [3].

\*Corresponding Author: Sung Hee Lee, Kyungpook National University.
Tel: +82-53-420-4935, E-mail: leesh@knu.ac.kr
Depressed adolescents tend to have very passive social interactions and cannot receive appropriate social support. It follows that these adolescents feel more lonely and discouraged, have lower self-confidence levels, and are at high risk of developing suicidal ideation [3]. Amongst students of all ages, female high school students have the second highest rate of suicidal ideation (32.5%), behind female middle school students.

Spiritual well-being is a strong variable that can protect adolescents from suicidal thoughts [4]. Existential spiritual well-being (ESWB) enhances an individual’s positive thoughts, improves internal defenses, and helps one have a more positive social relationships; ESWB also has a strong negative correlation with response to stress, despair, depression, suicide, and personality disorders [5,6]. Additionally, ESWB greatly impacts interpersonal relationships, especially during adolescence. As a result, adolescents who have strong interpersonal relationships receive support from others and are more capable of overcoming life obstacles resulting in significantly lower risk of completed suicide [3].

Previous studies on adolescent suicide mainly focused on other factors relevant to suicide, including self-esteem, spirituality, social support, interpersonal relationships, communication, stress, and depression [1,6,7]. Few studies on programs that alleviate such issues were found.

This study conducted a peer gatekeeper training program (PGTP), which is a group counseling program focused on identifying female students’ strong traits and alleviation of conflicts between female students. This study examined the effects of ESWB, interpersonal relationships, depression, and suicidal ideation on female high school students and provides recommendations for future adolescent suicide prevention programs.

1.1. Purpose

The purpose of this study was to determine the effects of ESWB, interpersonal relationships, depression, and suicidal ideation on female high school students through participation in a PGTP.

2. Methods

2.1. Study design

A non-equivalent control group pretest-posttest design was used to determine the effects of a PGTP on female high school students, in the following domains ESWB, interpersonal relationships, depression, and suicidal ideation.

2.2. Participants

Eligible participants were interviewed and consented to participate in the study. The
participant pool consisted of female high school students in S female high school located in D city. A total of 46 participants were recruited in two ways. First, we identified students who were classified as needing attention through results of the Adolescent Mental Problem Questionnaire-II (AMPQ-II) and who were registered in the school counseling system. Students who met eligibility requirements were recruited through several methods (e.g., at large, posters, or via school counselors). The sample size required for ANCOVA using a one-sided significance level (α) of .05, .80 statistical power (1 – β), and an effect size (d) of .80 was calculated using G*Power 3.1. Results indicated that 42 subjects (21 subjects in each group) were needed for this study. Therefore, 23 students were recruited for each sample group, totaling 46 participants to account for dropouts. One participant was excluded from the experimental group because of classes and a second excluded from the control group due to illness. The final participant count was 22 students in the experimental group and 22 students in the control group.

2.3. Assessments

2.3.1 Existential spiritual well-being (ESWB)

To measure ESWB, Paloutzian and Ellison’s spiritual well-being scale was used [5]. Park and You previously validated this scale in Korea [8]. The scale consists of 20-items evaluating two dimensions of spiritual well-being: religious spiritual well-being and existential spiritual well-being. Ten items specifically measuring existential spiritual well-being were identified and used for this study. Each item was rated on a 6-point Likert scale. Consequently the possible score range was 6 to 60 points. Higher scores indicate higher existential spiritual well-being. Cronbach's alpha reliability coefficient was .87, the same as found by Park and You [8].

2.3.2. Interpersonal relationships

To measure interpersonal relationships, the Relationship Change Scale as modified by Moon was used [9]. The scale consisted of a total of 25 questions. Each question was rated on a 5-point Likert scale and the possible scores ranged from 25 to 125 points. The higher the score, the better an individual's interpersonal relationships. Cronbach's alpha reliability coefficient was .91 in this study, higher than the .88 reported by Moon [9].

2.3.3. Depression

To measure depression, the Korean version of the Center for Epidemiological Studies-Depression scale (CES-D) [10] based on the earlier version by Radloff [11] was used. It measures the frequency of common depressive symptoms over the course of the week prior to administration. The inventory comprised 7 items on depressive emotions and 4 on positive emotions. Two other items focus on interpersonal
relationships and another 7 cover physical symptoms. The questions are measured using a 4-point Likert scale. Each item was scored between 0 (rarely or none of the time, less than one day) and 3 (all of the time, 5–7 days). Scores on negative emotion items were reverse-coded in calculations of total score, which range from 0 to 60. Higher values indicate higher depressive symptomology. Internal consistency and reliability were strong in this study (Cronbach’s $\alpha = .89$).

### 2.3.4. Suicidal ideation

Five questions were used to construct the suicidal ideation scale. Scale items were drawn in part from the Suicide Probability Scale (SPS) developed by Cull and Gill [12] and validated in Korea by Kye [13]. This scale contains 31 items across 4 subscales (negative self-evaluation, hostility, hopelessness, & suicidal ideation). Each item was rated on a 5-point Likert scale. Consequently, the mean scores range between 5 and 25. Higher scores indicate higher suicidal ideation. Cronbach's alpha reliability coefficient was 0.94 in the current study, higher than the .73 measured in the study by Kye [13].

### 2.4. Peer gatekeeper training program (PGTP)

A suicide prevention program developed by researchers in 2011 and supported by the office of education in D city was based upon this PGTP. Researchers on this study are experts in the field of suicide prevention, with past experience in the scientific aspects and clinical practice of suicide prevention. PGTP was modified and extended to 10 sessions in order to expand focus on improving interpersonal relationships. Participants were asked to attend a total of 10 program sessions, twice a week, for 50 minutes each session.

Topics and key activities for each session included (a) session 1: general overview of the PGTP, establishment of program rules, and encouraging interaction between participants; (b) sessions 2 to 5: focus on participants realizing the value of their existence, as well as the life surrounding them (“We’re precious”); (c) sessions 6 and 7: identifying reasons why the students were exhausted, teaching those students a healthy perspective on suicide, and identifying signs of suicidality in friends (“Why do we struggle in life?”); and (d) sessions 8 to 10: how to help friends who show signs of suicide and how to become a peer gatekeeper for themselves (“We are peer gatekeeper”).

### 2.5. Data collection

Data were collected from September 2, 2013 through November 5, 2013. First, we visited S high school to explain the purpose of the study and the training programs to students to, determine if they were willing to cooperate. All students classified as needing attention based upon AMPQ-II results were first invited to participate in this study through a phone call from a school counselor. Another method of recruiting
participants was by way of a poster stating, “I’m a gatekeeper for a female high school,” which was displayed in hallways and classrooms with program information, such as e-mail addresses and telephone numbers. Registered participants were then randomly assigned into the experimental or control group, using a coin toss. Data were collected through measurements completed in the first and last sessions of the program, at the remote library away from the classrooms. Two research assistants were aware of the purpose of the research and were selected from a graduate program in nursing. The research assistants were trained on the methods and procedures for collecting data. After the post-survey was given to the control group, all participants in the control group were provided with the booklet containing the PGTP, which was developed for this study to comply with ethical rules.

2.6. Statistical analyses

Data were analyzed with SPSS software (version 22; IBM Corporation: Armonk, NY, USA). Descriptive statistics (frequencies, percentages, means, and standard deviations) were run for the general characteristics. Bivariate group comparisons were performed using chi-squared tests, Fisher’s exact tests, and t-tests for general sample characteristics and dependent variables. To determine the effects of PGTP, differences in the ESWB, interpersonal relationships, depression, and suicidal ideation levels were analyzed using an ANCOVA.

3. Results

3.1. General characteristics and homogeneity test between groups

There were no significant differences between the experimental group and the control group for the following general characteristics: birth order, number of close friends, satisfaction with school life, academic achievement, presence of father’s occupation, presence of mother’s occupation, suicide incidence in the neighborhood. Significant differences did exist in the economic status of two groups before the intervention (p<.018).

3.2. Effects of PGTP

Results of the ANCOVA, with elimination of pretest and economic status, showed a significant difference in mean scores of ESWB, interpersonal relationships, and depression between the two groups after intervention (F=14.43, p<.001; F=17.60, p<.001; F=4.31, p=.010, respectively). Meanwhile, with regard to the effect of PGTP on suicidal ideation, the ANCOVA showed no significant difference between the two groups after the intervention (Table 4).
Table 1. Effects of PGTP

<table>
<thead>
<tr>
<th>Variables</th>
<th>Exp.(n=22)</th>
<th>Cont.(n=22)</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M±SD</td>
<td>M±SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESWB</td>
<td>45.59±7.74</td>
<td>41.73±4.93</td>
<td>14.43</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>94.18±14.74</td>
<td>91.14±10.42</td>
<td>17.60</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>relationships</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>12.14±10.63</td>
<td>11.95±7.69</td>
<td>4.31</td>
<td>.010</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>6.50±2.13</td>
<td>6.86±2.55</td>
<td>2.59</td>
<td>.066</td>
</tr>
</tbody>
</table>

F value of ANCOVA with pre-test value as covariate
Exp.= Experimental group; Con.=Control group

4. Conclusion

Results of this study revealed no differences between the two groups in terms of ESWB, interpersonal relationships, and depression before the intervention but a statistical difference following participation. PTGP, in this study, contained a variety of activities including MBTI, which is a differentiated intervention approach as compared with previous studies.

In light of these findings, it is argued that application of PGTP among female high school students not only improved their ESWB and interpersonal relationships, but also reduced depression. Furthermore, these findings provide baseline data for developing nursing interventions to improve protective factors against suicidal ideation in adolescents within local communities.

On the basis of research findings, the following issues are suggested. First, a repeat study is recommended to verify the continuity of effects of PTGP on protective factors against suicidal ideation in female high school students. Second, with regard to the effects of PGTP on suicidal ideation, future studies on depressed students or students prone to suicidal ideation are suggested.

References

3. Kang SH, Moon ES, Cha MY. The structural relationships among life events stress, social
support, depression, and suicidal ideation: a comparison of boy and girl high school students. The Korean Journal of Educational Psychology. 2011;25(2):277-293.


