

OPEN

# Effectiveness of Therapeutic Community Program on Resilience and Change in Lifestyle in People With Alcohol Use Disorder

Eun Ae Song, RN ○ Hee Kyung Kim, RN, PhD ○ Mihyoung Lee, RN, PhD

## Abstract

The purpose of this study was to examine the effectiveness of a therapeutic community program on resilience and positive change of lifestyle in people with alcohol use disorder. This study used a quasi-experimental study design. The Therapeutic Community Program was conducted daily for 12 weeks from June 2017 to May 2018. Subjects were selected from the Therapeutic Community and a hospital. Of the 38 subjects, 19 subjects belonged to the experimental group and 19 subjects belonged to the control group. Our findings were that the Therapeutic Community Program has improved resilience and promoted global lifestyle changes in the experimental group compared with the control group.

**Keywords:** Alcoholism, Lifestyle, Psychological, Resilience, Therapeutic Community

## INTRODUCTION

Alcohol is frequently used in most of the world (World Health Organization, 2018), and excessive use of alcohol has a negative outcome on individuals and society as a whole (Witkiewitz et al., 2019). Alcohol misuse is associated with a risk of accidents, loss of productivity in the workplace, increased crime, and violence and causes a range of medical complications including infectious

diseases, digestive and cardiovascular diseases, and mental health disorders (Rehm, 2011; World Health Organization, 2018). Alcohol use disorder (AUD) is a chronic disease (Royce, 1989) that causes loss of control and is accompanied by enormous social costs related to performance impairment in daily life, interpersonal problems, and social dysfunction (Rehm, 2011). AUD is a very public mental health problem, affecting many people (Cargiulo, 2007). In South Korea, the lifetime prevalence of AUD was 12.2% (Ministry of Health & Welfare, 2017), which is considered a social problem. It can be difficult to find a treatment approach for AUD because alcohol use coexists with other drug use (Grant et al., 2015) and has complex and heterogeneous phenomena, such as various patterns of alcohol consumption in each person (Coriale et al., 2018).

The therapeutic approach to AUD has been informed by years of empirical studies (Witkiewitz et al., 2019) and generally varies from medical model-based drug treatment to psychosocial treatment such as motivational counseling, cognitive behavioral therapy, and relapse prevention (Coriale et al., 2018; Witkiewitz et al., 2019). In Korea, therapeutic approaches such as pharmacological therapy, self-help groups, social skill training, and cognitive restructuring have also been used (Joo, 2009), and reports have been published on the effectiveness of motivational counseling and cognitive therapy (S. K. Lee, 2019). However, in Korea, AUD has low service utilization and treatment rates (B. H. Lee et al., 2013; Oh et al., 2014), high relapse rates (Seo et al., 2010), and high outpatient treatment cessation rates (S. K. Lee, 2019). In addition, a 12-month follow-up study of people with alcohol dependence or alcohol abuse conducted in the United States found that 61% of men and 63% of women reported at least one recurrence (Zywiak et al., 2006). These repetitive recurrences and low rates of service utilization make it difficult to treat AUD. It is thought that this is why psychosocial treatment is needed in addition to medication or inpatient treatment for AUD and community-based treatment and rehabilitation are important. In Korea, the treatment of AUD has shifted from hospital centered to community centered, and the Therapeutic Community (TC) has emerged as an alternative (S. M. Kim, 2007). The TC is one of the main treatments for alcohol and substance use disorders (Ronel et al., 2013) and is based in the community (Kressel et al., 2000; Leon,

Eun Ae Song, RN, and Mihyoung Lee, RN, PhD, Department of Nursing, Inha University, Incheon, South Korea.

Hee Kyung Kim, RN, PhD, Department of Nursing, Sangji University, Wonju-si, South Korea.

The authors report no conflicts of interest. The authors are responsible for the content and writing of this article.

IRB approval was obtained from the Inha University IRB.

This article is original, not previously published, and not under concurrent consideration elsewhere.

**Correspondence** related to content to: Hee Kyung Kim, RN, PhD, Department of Nursing, Sangji University, 83 Sangjidae-gil, Wonju-si, Gangwon-do 26339, South Korea.

**E-mail:** kheekyung@sangji.ac.kr

This is an open-access article distributed under the terms of the Creative Commons Attribution-No. Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

DOI: 10.1097/JAN.0000000000000492

1995). In the United States, the TC was developed and grew around the DAYTOP Village (DAYTOP), which started in New York in 1963 (Kressel et al., 2000; Leon, 1995), and Korean experts applied the DAYTOP's TC program to Korea (Cha, 2008). A TC is a drug-free resident setting focusing on psychosocial rehabilitation (Malivert et al., 2012) and has emerged as an alternative to mainstream medical and mental health treatments for addiction (Leon, 2010). The TC model views addiction as a disorder of the whole person in all its dimensions and aims for holistic care through communities (Kressel et al., 2000; Leon, 1995). In addition, TC emphasizes mutual self-help and uses the community to positively change the lifestyle and identity of addicts (Leon, 1995, 2000). Drug abusers who completed TC programs had a lower relapse rate and high retention (Jainchill et al., 2000). In addition, after implementing a TC-based drinking-reduction program in Korea, people with AUD reported increased resilience (I. S. Lee et al., 2019). Resilience is the ability to overcome the stress of adversity (Bowes & Jaffee, 2013). Resilience can help someone recover psychologically and show positive outcomes even if they experience serious risks or maladaptive situations in life (Rutter, 2006; Yamashita & Yoshioka, 2016). In previous studies, it has been reported that resilience and alcohol misuse are inversely proportional, and resilience prevents alcohol misuse (Green et al., 2014). AUD is a disease with complex problems, and treatment must address various relapse factors (Yang & Chung, 2010). Resilience strengthens the determination of alcoholic people to continue their efforts to abstain and helps them cope with stressful situations that can lead to drinking (Yang & Chung, 2010). Resilience is a concept that includes individual inheritance and environmental factors (Yamashita & Yoshioka, 2016), and it is expected that the therapeutic environment of the TC will increase the resilience of people with addiction.

The TC model views addiction as not only a matter of continuous substance use but also a social, emotional, behavioral, and cognitive problem (Kressel et al., 2000; S. H. Lee et al., 2012). Thus, the goal of the TC is to enable multidimensional changes that can be summarized as a drug-free lifestyle and individual identity changes (Kressel et al., 2000; Leon, 1995, 2000). It approaches multiple problems of individuals arising from addiction at the developmental, social, and psychological dimensions and pursues change in these multidimensional areas (Kressel et al., 2000; Leon, 1995, 2000). The recovery process of AUD is a continuous process (Cha, 2008), which can be achieved by reforming life attitudes and changing the identity (Leon, 2000). Individuals will be able to develop a healthy lifestyle in a TC that provides a structure and a consistent environment and induces sound living in the individual (Leon, 2000).

The critical point of treatment for AUD is usually 12 weeks (Melnick et al., 2001), and the TC also conducts an initial orientation to the program during the first 12 weeks. Twelve weeks is when the dropout rate is reduced and borders on the full-scale treatment stage (Shin, 2011). Therefore, changes in resilience and lifestyle during this period are significant in establishing a plan for rehabilitation and recovery processes (Melnick et al., 2001). This study aimed to evaluate the effective-

ness of TC programs on resilience and change of lifestyle among individuals with AUD. We hypothesized that the Resilience scale (RS) and the Client Assessment Scale (CAS), which means the lifestyle change of the experimental groups participating in the TC program, will increase compared with the control group.

## METHOD

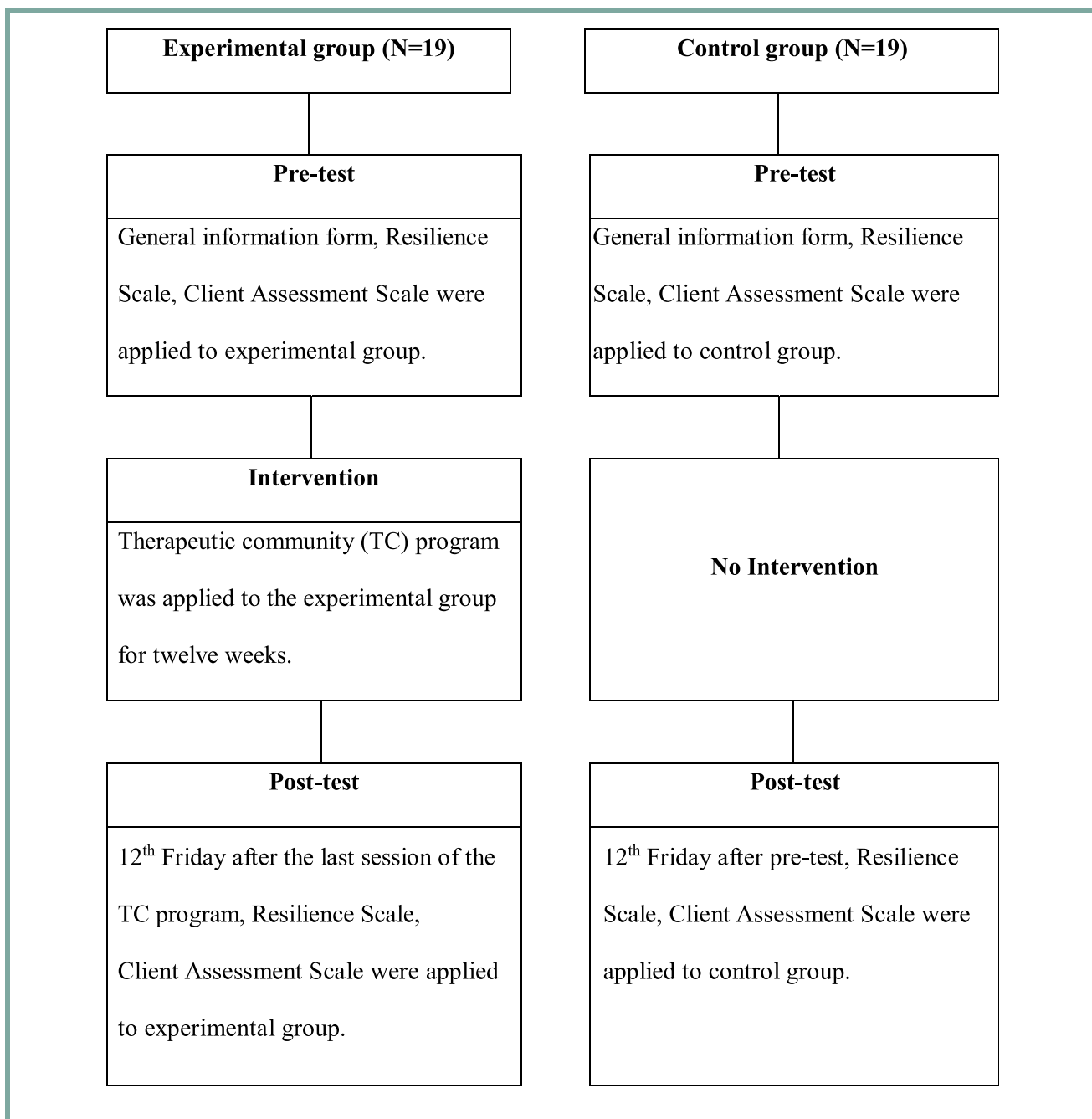
### Study Design

This study was designed as a quasi-experimental nonequivalent control design (see Figure 1). In the study, the TC program for alcoholic people was applied to the participants in the experimental group for 12 weeks. A TC program was developed based on DAYTOP, one of the oldest and largest TCs in the United States (Kressel et al., 2000). The author revised DAYTOP's TC program to an outpatient TC for people with AUD in Korea. The program was conducted 8 hours every day for 12 weeks. It consisted of a morning meeting, an encounter group, a seminar, an Alcoholics Anonymous (AA) meeting, art therapy, a static group, one-on-one counseling, and a department activity (see Table 1). The program used three tools for holistic change: a behavioral management tool, which included a morning meeting, an encounter group, writing a growth diary, and establishing a plan for the week; an emotional and psychological management tool, which included individual counseling, a static group, and art therapy; and an intellectual and spiritual development tool, which included an AA meeting, a seminar, and reading the philosophy of the TC. Participants in the experimental group attended the TC every morning at 9 a.m. and stayed in the structured program of the TC until 5 p.m. The study protocol was approved by the Inha University Institutional Review Board (No. 170511-1A).

### Participants

Our research was conducted after the approval of an administrator in a mental rehabilitation facility applying the TC for men with AUD and units of a hospital in Incheon, South Korea. Among the participants in this study, the experimental group is composed of alcoholic men recovering in the TC. With AUD, men and women have significant differences in risk factors for alcohol use, types of problems, and reasons for recurrence (Greenfield et al., 2007). Accordingly, most community rehabilitation programs operate separate programs for men and women, and in this study, men with AUD were selected as research participants. Recruitment flyers indicating the study's purpose, participation method, and a contact number were posted on bulletin boards. The voluntary consent form was explained to participants in the study, and their written consent was obtained.

The sample size of this study was decided using G\*Power 3.1. The effect size of the TC program was 0.91 using mean differences on the CAS ( $13.4 \pm 2.2$ ,  $15.9 \pm 3.2$ ; Cha, 2008). Power analysis was carried out with a significance level of  $\alpha = .05$  and power = .85 using a one-tailed *t* test. As a result, there was a total sample size of 38 individuals, with 19 in the control group and 19 in the experimental group. In consideration of potential dropouts, 23 people were recruited for each group.



**Figure 1.** Research design.

The control group was admitted to a local alcohol addiction hospital and voluntarily agreed to participate in the study after explaining the purpose of the study. The study was completed with 19 participants in both the control and experimental groups after four people dropped out from each group.

### Measures

**General Information Form** The general information form includes eight questions, consisting of six questions about the sociodemographic characteristics of participants and two questions about when drinking started and period from diagnosis.

**Resilience Scale** The RS was used to measure the level of resilience. It was developed by Wagnild and Young (1993), and approval to use this scale was obtained via email with the payment of a license fee. This scale is composed of 25 items measured on a 7-point scale and has two factors with “personal competence” and “acceptance of self and life.” The total score ranges between 25 and 175 points. High scores indicate good resilience. The Cronbach's alpha coefficient for the original scale was .91. Concurrent validity of the RS was good in the Life Satisfaction Index ( $r = .30, p < .001$ ), the Philadelphia Geriatric Center Morale Scale ( $r = .28, p < .001$ ), and the Beck

**TABLE 1** Contents of the TC Program

Day of the Week	Monday	Tuesday	Wednesday	Thursday	Friday
09:00–09:20	Sobriety test, morning exercise, contemplation				
09:20–09:30	Pre-morning meeting				
09:40–10:40	Morning meeting				
10:40–11:00	Post-morning meeting				
11:00–12:00	Department activity (maintenance, business office, kitchen)				
12:00–13:00	Lunch				
13:00–14:00	Department head meeting	Contemplation			
14:00–15:00	One-to-one counseling	AA	AA's 12 steps	Peer encounter group	Weekly plan
15:00–15:20		Break time			
15:20–16:20		Exercise	Seminar	Static group	Art therapy
16:20–17:00		Community meeting			
TC = Therapeutic Community; AA = Alcoholics Anonymous.					

Depression Inventory ( $r = -.37, p < .001$ ; Wagnild & Young, 1993). The Cronbach's alpha coefficient of RS was reported to be .88 in those adult children of alcoholic parents (H. K. Kim & Lee, 2011). In our study, the Cronbach's alpha coefficient of the RS was .77 for the total scale.

**Client Assessment Scale** The CAS was used to measure the change of lifestyle in the individual during treatment. The ultimate goal of the TC is to change the individual's lifestyle (Kressel et al., 2000; Leon, 1995); this scale was developed to measure client progress in the TC and evaluate the effectiveness of the TC program (Kressel et al., 2000). This scale includes four dimensions and 14 items on a 5-point scale. The CAS measures clinical progress in TC with developmental dimension, socialization dimension, psychological dimension, and community member dimension (Kressel et al., 2000). Developmental dimensions include maturity (self-regulation, social management), responsibility (accountability, meeting obligations), and values (integrity, right living). Socialization dimensions consist of drug/criminal lifestyle (social deviancy), maintains images (social vs. antisocial lifestyle), work attitude (attitude appropriate for the work world), and social skills (ability to relate to people). Psychological dimensions include cognitive skills (awareness, judgment, insight, reality testing, decision making, and problem-solving skills), emotional skills (communication and management of feeling states), and self-esteem/self-efficacy (sense of well-being). Community member dimensions consist of understanding program rules, philosophy, and structure; community engagement and participation; attachment; investment and stake in the community; and role model (lives by example, teaching others). The total score ranges between 14 and 70 points. High scores indicate a more effective recovery process. Cronbach's alpha coefficient for the original scale was .87. Criterion validity of the CAS was good with Alcohol Recovery Scale ( $r = .793, p < .05$ ; Rhee & Kim, 2016). In the past, the CAS was used only for residents of the TC, but it reported that the CAS is useful to evaluate

the recovery of people with AUD in the community (S. H. Lee et al., 2012; Rhee & Kim, 2016). The Cronbach's alpha coefficient for the original scale was .87 (Kressel et al., 2000), and the Cronbach's alpha coefficient of CAS was reported to be .86 in the Korean TC program (Cha & Chun, 2009). In our study, the Cronbach's alpha coefficient of the CAS was .84 for the total scale.

**Procedure** Data were collected from June 1, 2017, to May 31, 2018. In the study, pretest and posttest data were collected by the researcher through a self-report questionnaire. The pretest data of both groups were collected using the General Information Form, RS, and CAS. The posttest data of the experimental group were collected using the RS and the CAS and on the 12th Friday after the last session of the TC program. Posttest data of the control group were collected using the RS and the CAS 12 weeks after the pretest. After completing the posttest, the control group was guided to participate in the TC program. The inclusion criteria for the study were individuals aged 18 years or older who had been diagnosed with AUD by a psychiatrist according to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, were able to communicate and read questionnaires, lacked another psychiatric diagnosis, and were not experiencing acute withdrawal symptoms.

### Statistical Analysis

The statistical analyses were conducted using the IBM SPSS/WIN 25.0 software program. Frequency, percentage, mean, and standard deviation were used as general characteristics of participants. The pretest homogeneity of the control group and of the experimental group were analyzed using an independent  $t$  test and a  $\chi^2$  test. In the case of the  $\chi^2$  test, >20% of cells in all variables had an expected frequency of <5, and thus there was a need to interpret the significance of the test results. Accordingly, a significance probability ( $p$ ) based on Fisher's exact test was used. Cronbach's alpha coefficient was used for the reliability analysis of the scales used in the study.

## RESULTS

Thirty-eight people completed the study, 19 in the experimental group and 19 in the control group. The average age of the experimental group was 52.84 years ( $SD = 8.70$ ), and that of the control group was 52.21 years ( $SD = 10.16$ ). The average age of first drinking of the experimental group was 20.47 years ( $SD = 3.97$ ), and that of the control group was 21.53 years ( $SD = 4.75$ ). There were no statistically significant differences between the general characteristics of the experimental and control groups. The general characteristics of the participants are presented in Table 2.

There were no significant differences in RS scores and CAS scores between the experimental and control groups at baseline (see Table 3). Consequently, the experimental and control groups were homogeneous at baseline in terms of pretest resilience and change of lifestyle.

The results of the difference in dependent variables between the experimental and control groups are presented in Table 4. After completing the TC program, total RS scores for the experimental group increased from 115.68 ( $SD = 17.70$ ) to 129.95 ( $SD = 18.03$ ) points, which was a statistically significant

improvement compared with the control group ( $t = 2.24$ ,  $p = .03$ ). In addition, the mean acceptance of self and life score, which is a subscale of RS, of the experimental groups increased more than the control group after 12 weeks, to a statistically significant extent. Another subscale, the personal competence score of experimental group, increased more than the control group, but this was not significant.

After the TC program was implemented, total CAS scores in the experimental group increased from 46.58 ( $SD = 6.14$ ) to 53.53 ( $SD = 5.86$ ) points, which was a significant improvement compared with the control group ( $t = 2.88$ ,  $p < .01$ ). In addition, of the four dimensions of CAS, psychological and community member dimension scores of the experimental groups statistically significantly increased more than the control group after 12 weeks. In other dimensions, the developmental and socialization dimension scores of the experimental group increased more than the control group, but not to a significant extent.

## DISCUSSION

The TC program improved the resilience and promoted global lifestyle changes among people with AUD in the experimental

**TABLE 2** Homogeneity of General Characteristics

Characteristics	Categories	<i>n (%) or M ± SD</i>		$\chi^2$ or <i>t</i>	<i>p</i>
		Exp. ( <i>n</i> = 19)	Cont. ( <i>n</i> = 19)		
Age (years)		52.84 ± 8.70	52.21 ± 10.16	22.66	.59
First drinking age (years)		20.47 ± 3.97	21.53 ± 4.75	11.47	.64
Marital status	Single	4 (21.1)	4 (21.1)		1.00
	Married	5 (26.3)	5 (26.3)		
	Divorced	9 (47.4)	9 (47.4)		
	bereaved	1 (5.3)	1 (5.3)		
Living status	Living with family	12 (63.2)	11 (46.7)		.93
	Living alone	7 (36.8)	8 (53.3)		
Educational status	Elementary	1 (5.3)	2 (10.5)		.57
	Middle school	3 (15.8)	1 (5.3)		
	High school	8 (42.1)	11 (57.9)		
	University	7 (36.9)	5 (26.3)		
Religion	Yes	14 (73.7)	14 (73.7)		.31
	No	5 (26.3)	5 (26.3)		
Subjective economic status	High	1 (5.3)	1 (5.3)		1.00
	Middle	2 (10.5)	2 (10.5)		
	Low	16 (84.2)	16 (84.2)		
AUD diagnosis period (years)	Less than 5	4 (21.1)	5 (26.3)		.89
	6–10	6 (31.6)	8 (42.1)		
	10–15	5 (26.3)	3 (15.8)		
	16–20	3 (15.8)	2 (10.5)		
	More than 21	1 (5.3)	1 (5.3)		

Exp. = experimental group; Cont. = control group; AUD = alcohol use disorder.

**TABLE 3 Homogeneity of Dependent Variables**

Characteristics	Categories	<i>M ± SD</i>		$\chi^2$	<i>p</i>
		Exp. ( <i>n</i> = 19)	Cont. ( <i>n</i> = 19)		
Resilience	Total score	115.68 ± 17.70	96.26 ± 35.10	31.33	.45
	Personal competence	79.21 ± 11.60	65.78 ± 23.50	35.33	.19
	Acceptance of self and life	36.47 ± 7.15	30.47 ± 12.60	25.66	.22
Change in lifestyle	Total score	46.58 ± 6.14	43.95 ± 10.10	23.33	.33
	Developmental dimension	10.52 ± 1.38	9.42 ± 3.00	10.84	.21
	Social dimension	12.42 ± 2.31	12.36 ± 2.08	6.96	.54
	Psychological dimension	10.15 ± 2.08	9.36 ± 3.00	6.28	.79
	Community member dimension	13.47 ± 2.06	12.70 ± 3.70	8.63	.66

Exp. = experimental group; Cont. = control group.

group. This is similar to the previous findings that showed TC programs are effective in reducing substance use (Malivert et al., 2012) and improve quality of life and mental health (Babaie & Razeghi, 2013).

In this study, the TC program produced increased scores on the RS in the experimental group. This result is consistent with a previous report that a drinking-reduction program based on the TC model increased RS scores in the experimental group (I. S. Lee et al., 2019). The study reported that understanding oneself through the program, receiving positive feedback from colleagues in the group, developing coping strategies,

and practicing communication skills increased the resiliency of subjects (I. S. Lee et al., 2019). This means that resilience is a dynamic process that can be developed and changed by the interaction between individuals and the environment (Luthar et al., 2000). The structural characteristics of the TC are thought to have influenced this. The TC uses communities to induce social and psychological changes in individuals and as a “community as method” to learn to change oneself through the community (Kressel et al., 2000; Leon, 1995, 2000). It is thought that the environment of the TC has influenced the resilience to cope with high-risk situations despite the

**TABLE 4 Difference in Dependent Variables Between the Experimental and Control Groups**

Characteristics	Categories	Groups	Pretest	Posttest	Difference	<i>t</i>	<i>p</i>
			<i>M ± SD</i>	<i>M ± SD</i>	<i>M ± SD</i>		
Resilience	Total score	Exp. ( <i>n</i> = 19)	115.68 ± 17.70	129.95 ± 18.03	14.26 ± 19.72	2.24	.03
		Cont. ( <i>n</i> = 19)	96.26 ± 35.10	109.21 ± 35.98	12.94 ± 30.87		
	Personal competence	Exp. ( <i>n</i> = 19)	79.21 ± 11.60	83.57 ± 14.78	4.36 ± 13.83	1.50	.14
		Cont. ( <i>n</i> = 19)	65.78 ± 23.50	74.31 ± 22.39	8.52 ± 21.13		
	Acceptance of self and life	Exp. ( <i>n</i> = 19)	36.47 ± 7.15	46.36 ± 6.44	9.89 ± 9.56	3.00	<.01
		Cont. ( <i>n</i> = 19)	30.47 ± 12.60	35.26 ± 14.73	4.78 ± 10.94		
Change in lifestyle	Total score	Exp. ( <i>n</i> = 19)	46.58 ± 6.14	53.53 ± 5.86	6.94 ± 6.73	2.88	<.01
		Cont. ( <i>n</i> = 19)	43.95 ± 10.10	46.84 ± 8.22	2.89 ± 12.40		
	Developmental dimension	Exp. ( <i>n</i> = 19)	10.52 ± 1.38	11.20 ± 1.85	0.73 ± 2.30	0.89	.38
		Cont. ( <i>n</i> = 19)	9.42 ± 3.00	10.63 ± 2.47	1.20 ± 3.66		
	Social dimension	Exp. ( <i>n</i> = 19)	12.42 ± 2.31	14.21 ± 2.41	1.78 ± 2.83	1.34	.18
		Cont. ( <i>n</i> = 19)	12.36 ± 2.08	13.15 ± 2.40	0.78 ± 2.85		
	Psychological dimension	Exp. ( <i>n</i> = 19)	10.15 ± 2.08	12.10 ± 2.05	1.94 ± 2.12	3.53	<.01
		Cont. ( <i>n</i> = 19)	9.36 ± 3.00	9.73 ± 2.07	0.36 ± 3.68		
	Community member dimension	Exp. ( <i>n</i> = 19)	13.47 ± 2.06	15.94 ± 2.43	2.47 ± 3.35	2.69	<.01
		Cont. ( <i>n</i> = 19)	12.7 ± 3.70	13.31 ± 3.49	0.52 ± 4.75		

Exp. = experimental group; Cont. = control group.

physical, psychological, and social vulnerabilities that have occurred as a result of AUD (Jean, 2007). This is a result supporting the premise that treatment in the TC creates a social and psychological environment that helps people recover (Babaie & Razeghi, 2013). Furthermore, resilience is consistent with the explanation in that it includes inherent factors of individuals and environmental factors acquired in various situations (Yamashita & Yoshioka, 2016). Residents of the TC expressed a subjective perception of recovery in the treatment community as a “change generator” and experienced emotional support and stability through group support (Ronel et al., 2013). They also experienced the full consideration and acceptance of staff, whose support influenced them to maintain their recovery (Ronel et al., 2013). This is in line with the fact that social support is statistically correlated with resilience (Woo, 2015), and social support helps reduce drinking rate and also helps in recovery.

The resilience measured in this study consists of personal competence and acceptance of self and life (Wagnild & Young, 1993). Personal competence means self-reliance, independence, determination, invincibility, mastery, resourcefulness, and perseverance (Wagnild & Young, 1993). Acceptance of self and life means adaptability, balance, flexibility, and a balanced perspective of life (Wagnild & Young, 1993). The 12-week TC program increased only the acceptance of self and life score, which is a statistically significant subfactor of resilience. The results suggest that the emotional and psychological management tools (individual counseling, static group, art therapy) and the intellectual and spiritual development tools (12 steps, AA meeting, seminar, reading philosophy of TC) of a TC program have more influence on the acceptance of self and life factor among the resilience of people with AUD. However, further studies are needed on the specific program of the TC that affects resilience. Resilience is the ability to mediate negative effects and promote adaptation in pain (Wagnild & Young, 1993), a protective factor of an individual to cope with the adversity of life (Eraslan Çapan, 2018). Resilience reduces the risk of AUD (Long et al., 2017) and promotes the ability to maintain recovery continuously without relapse even in the negative consequences with AUD (Jean, 2007). Therefore, a resilience enhancement intervention is needed to promote the abstinence and recovery of people with AUD.

So far, very few studies have applied TC and looked at lifestyle changes. However, the statistically significant increase in pretest CAS score of the experimental groups compared with the control group in this study shows that an actual change occurred in the multidimensional area of life through the TC (S. H. Lee et al., 2012). This is consistent with a study that found the higher the level of change in lifestyle achieved through the TC, the higher the level of awareness of drinking problems and the practice of change behavior, and the lower the ambivalence regarding change (S. H. Lee et al., 2012). It was also similar to research that saw lifestyle changes as a result of learning or relearning how to live a positive lifestyle free from alcohol (Leon, 2000). Therefore, this study showed that the TC program is effective in promoting positive changes in the lifestyle of people with AUD in the community.

The change of developmental and social dimensions among the subvariables of the CAS increased in the experimental group, but not by a statistically significant amount. This was consistent with the results of the TC program for homeless people with AUD (S. H. Lee et al., 2012), but not with the results of community (Cha, 2008). In addition, studies of 107 subjects residing in the TC program showed significant static correlations between residence periods and lifestyle levels, and no significant changes in the developmental and social dimensions of lifestyle levels were consistent with the findings (S. H. Lee et al., 2012). Such changes in the developmental and social dimensions through the TC programs have not shown consistent results, which are thought to be because of the difficulty of estimating these changes in a short period. In particular, the developmental dimension means the growth and evolution of individuals in the recovery process (Kressel et al., 2000), and thus 12 weeks is not enough. Therefore, further research on each dimension of lifestyle standards is needed.

The psychological dimension scores increased more in the experimental group than in the control group, to a statistically significant extent. This dimension of lifestyle means basic cognitive and emotional skills and is a factor that is linked with improvements in the areas of anxiety, depression, and self-esteem (Kressel et al., 2000). The psychological dimension is estimated to have increased because of the application of emotional and psychological management tools such as individual counseling, static group, and art therapy. These improvements in psychological outcomes have been reported in previous studies. Australian residents who stayed in a TC for more than 3.5 years had reduced depression, anxiety, and stress; this was true in both those who completed the TC program and those who did not (Harley et al., 2018). The mental health and quality of life of drug abusers who stayed at a TC for more than 6 months were improved (Babaie & Razeghi, 2013). These findings reflect the fact that the individual's psychological characteristics determine the response to treatment (Foulds et al., 2017). In addition, it is related to the report that the psychological dimension has the highest effects on change behavior for improving drinking problems (S. H. Lee et al., 2012) and lifestyle changes are related to experiencing positive self-efficacy and healing (Leon, 2000). Furthermore, considering the shorter TC participation period of this study's participants compared with prior studies, it can be thought that the TC program does not need to have a long period to ensure its effectiveness, but further research is needed.

The community member dimension scores of those in the experimental groups increased more than those in the control group, to a statistically significant extent. This dimension is related to the community and individual relationships and means an individual's engagement in TC programs (Kressel et al., 2000). Changes in this dimension include understanding and acting on the rules of the program and the philosophy of TC as well as being role models for each other (Kressel et al., 2000). The participants of this study experienced the position according to department activities by learning the structure and rules of TC for 3 months. It is thought that

these activities promoted the development of the community member dimension.

## CONCLUSION

This study found that the TC program was effective in improving resilience and inducing developmental, social, and psychological changes in lifestyle as well as abstinence from alcohol among Korean men with AUD. The individual with alcoholism needs to adapt to the community and rehabilitate their daily life after hospital treatment. A TC can lead them to form a healthy lifestyle that can maintain their sobriety and help them continue the process of recovery with a new identity. Therefore, the TC program can be considered a helpful nursing intervention to promote recovery and retention for an individual with AUD in the community. The role of the nurses has expanded to the community, and a TC can be applied as a direct nursing intervention that provides outpatient care and treatment to individuals with alcoholism whose treatment is discontinued or who are experiencing repeated recurrence. In addition, nurses can be role models for people with AUD, as therapists and as educators and counselors in the TC. The results of this study suggest that the TC program can be a direct coping strategy for the recovery and growth of people with AUD living in the community. In addition, a network system between hospitals and communities should be established to ensure a continuum of care for people with AUD.

The limitation of this study is the inability to ensure randomization. Because of community characteristics, random assignment was difficult to achieve during the process of recruiting subjects. Furthermore, this study did not conduct follow-up tests to verify the persistence of effectiveness. Future studies are needed to identify the long-term effects and change process of the TC program. In addition, the external variables that affect the recovery of people with AUD in the community were not fully controlled for. It is necessary to diversify recovery-related factors and verify the relationship between each variable.

## REFERENCES

Babaie, E., & Razeghi, N. (2013). Comparing the effects of methadone maintenance treatment, therapeutic community, and residential rehabilitation on quality of life and mental health of drug addicts. *Addiction & Health*, 5(1–2), 16–20.

Bowes, L., & Jaffee, S. R. (2013). Biology, genes, and resilience: Toward a multidisciplinary approach. *Trauma, Violence & Abuse*, 14(3), 195–208. <https://doi.org/10.1177%2F1524838013487807>

Cargiulo, T. (2007). Understanding the health impact of alcohol dependence. *American Journal of Health-System Pharmacy*, 64(3), S5–S11. <https://doi.org/10.2146/ajhp060647>

Cha, J. G. (2008). *Therapeutic community program on recovering process, stage of change and serum cortisol level in alcoholics* [Unpublished doctoral dissertation]. The Catholic University.

Cha, J. G., & Chun, Y. M. (2009). The reliability of measurement the effectiveness of therapeutic community programs to alcoholics' recovering. *Journal of Korean Society of Alcohol Science and Health Behavior*, 10(1), 65–80.

Coriale, G., Fiorentino, D., De Rosa, F., Solombrino, S., Scalese, B., Ciccarelli, R., Attilia, M., Musetti, A., Fiore, M., & Ceccanti, M. (2018).

Treatment of alcohol use disorder from a psychological point of view. *Rivista di Psichiatria*, 53(3), 141–148. <https://doi.org/10.1708/2925.29416>

Eraslan Çapan, B. (2018). Secure attachment and forgiveness: The mediating role of psychological resilience. *Hacettepe University Journal of Education*, 33(2), 1–13 <http://dx.doi.org/10.16986/HUJE.2017030459>

Foulds, J., Newton-Howes, G., Guy, N. H., Boden, J. M., & Mulder, R. T. (2017). Dimensional personality traits and alcohol treatment outcome: A systematic review and meta-analysis. *Addiction*, 112(8), 1345–1357. <https://doi.org/10.1111/add.13810>

Grant, B. F., Goldstein, R. B., Saha, T. D., Chou, S. P., Jung, J., Zhang, H., Pickering, R. P., Ruan, W. J., Smith, S. M., Huang, B., & Hasin, D. S. (2015). Epidemiology of DSM-5 alcohol use disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions III. *JAMA Psychiatry*, 72(8), 757–766. <https://doi.org/10.1001/jamapsychiatry.2015.0584>

Green, K. T., Beckham, J. C., Youssef, N., & Elbogen, E. B. (2014). Alcohol misuse and psychological resilience among U.S. Iraq and Afghanistan era veterans. *Addictive Behaviors*, 39(2), 406–413. <https://doi.org/10.1016/j.addbeh.2013.08.024>

Greenfield, S. F., Brooks, A. J., Gordon, S. M., Green, C. A., Kropp, F., McHugh, R. K., Lincoln, M., Hien, D., & Miele, G. M. (2007). Substance abuse treatment entry, retention, and outcome in women: A review of the literature. *Drug and Alcohol Dependence*, 86(1), 1–21. <https://doi.org/10.1016/j.drugalcdep.2006.05.012>

Harley, M., Pit, S. W., Rees, T., & Thomas, S. (2018). Completion rates and psychosocial intervention effectiveness in an Australian substance use therapeutic community. *Substance Abuse Treatment, Prevention, and Policy*, 13(1), 1–11. <https://doi.org/10.1186/s13011-018-0170-5>

Jainchill, N., Hawke, J., Leon, G. D., & Yagelka, J. (2000). Adolescents in therapeutic communities: One-year posttreatment outcomes. *Journal of Psychoactive Drugs*, 32(1), 81–94. <https://doi.org/10.1080/02791072.2000.10400214>

Jean, H.Y. (2007). *A plan to increase resilience for alcoholics's recovering* [Unpublished master's thesis]. Busan National University.

Joo, J. (2009). Korean culture of heavy drinking and directions on policy related to alcoholism. *Journal of Public Welfare Administration*, 19(1), 73–115.

Kim, H. K., & Lee, M. (2011). Factors influencing resilience of adult children of alcoholics among college students. *Journal of Korean Academy of Nursing*, 41(5), 642–651 <http://dx.doi.org/10.4040/jkan.2011.41.5.642>

Kim, S.M. (2007). *A phenomenological research on the recovering counselors' lived experiences in the field of alcoholism* [Unpublished doctoral dissertation]. Ewha Womans University.

Kressel, D., Leon, G. D., Palij, M., & Rubin, G. (2000). Measuring client clinical progress in therapeutic community treatment: The therapeutic community client assessment inventory, client assessment summary, and staff assessment summary. *Journal of Substance Abuse Treatment*, 19(3), 267–272. [https://doi.org/10.1016/s0740-5472\(00\)00108-2](https://doi.org/10.1016/s0740-5472(00)00108-2)

Lee, B. H., Kim, H. S., Seo, J. S., Shin, Y. C., Ki, S. W., Kim, S. G., Joe, K. H., Lee, K. S., Choi, S. W., Chon, Y. H., Roh, S. W., Oh, H. S., Yoon, H. G., Han, C. W., Jo, S. J., Kim, D. J., Park, A. R., Lee, S. B., & Lee, H. K. (2013). Korean addiction treatment guidelines series (I): Development of Korean guidelines for the treatment of alcohol use disorder. *Journal of Korean Neuropsychiatric Association*, 52(4), 263–271.

Lee, I. S., Lee, M., Kim, H. K., & Lee, E. J. (2019). Effectiveness of a drinking-reduction program on drinking behavior, stages of change, drinking refusal self-efficacy, and resilience in Koreans with moderate alcohol use disorder. *Archives of Psychiatric Nursing*, 33(2), 189–195. <https://doi.org/10.1016/j.apnu.2018.12.001>

Lee, S. H., Kim, H. J., & Shin, S. M. (2012). The influences the level of lifestyle has on the rehabilitation of the addiction of the alcoholics who are in a therapeutic community using the DAYTOP model. *Korean Journal of Counseling*, 13(1), 311–324.

Lee, S. K. (2019). Motivational enhancement therapy and cognitive behavioral therapy for alcohol use disorders. *Journal of Korean Neuropsychiatric Association*, 58(3), 173–181. <https://doi.org/10.4306/jknpa.2019.58.3.173>



- Leon, G. D. (1995). Therapeutic communities for addictions: A theoretical framework. *International Journal of the Addictions*, 30(12), 1603–1645. <https://doi.org/10.3109/10826089509104418>
- Leon, G. D. (2000). *The therapeutic community: Theory, model and method*. Springer.
- Leon, G. D. (2010). Is the therapeutic community an evidence-based treatment? What the evidence says. *Therapeutic Communities*, 31(2), 104–128.
- Long, E. C., Lönn, S. L., Ji, J., Lichtenstein, P., Sundquist, J., Sundquist, K., & Kendler, K. S. (2017). Resilience and risk for alcohol use disorders: A Swedish twin study. *Alcoholism, Clinical and Experimental Research*, 41(1), 149–155. <https://doi.org/10.1111/acer.13274>
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543–562. <https://doi.org/10.1111/1467-8624.00164>
- Malivert, M., Fatséas, M., Denis, C., Langlois, E., & Auriacombe, M. (2012). Effectiveness of therapeutic communities: A systematic review. *European Addiction Research*, 18(1), 1–11. <https://doi.org/10.1159/000331007>
- Melnick, G., Leon, G. D., Thomas, G., Kressel, D., & Wexler, H. K. (2001). Treatment process in prison therapeutic communities: Motivation, participation, and outcome. *The American Journal of Drug and Alcohol Abuse*, 27(4), 633–650. <https://doi.org/10.1081/ADA-100107660>
- Ministry of Health & Welfare. (2017). *The survey of mental disorders in Korea*. [http://www.mohw.go.kr/react/gm/sgm0701vw.jsp?PAR\\_MENU\\_ID=13&MENU\\_ID=1304080701&CONT\\_SEQ=357654](http://www.mohw.go.kr/react/gm/sgm0701vw.jsp?PAR_MENU_ID=13&MENU_ID=1304080701&CONT_SEQ=357654)
- Oh, S. H., Han, C. W., Seo, J. S., Joe, K. H., Lee, H. K., Yoon, H. G., Choi, S. W., Kim, H. S., Lee, B. H., & Lee, K. S. (2014). Korean addiction treatment guidelines (III): Psychosocial treatment of alcohol use disorder. *Journal of Korean Neuropsychiatric Association*, 53(4), 221–227. <https://doi.org/10.4306/jknpa.2014.53.4.221>
- Rehm, J. (2011). The risks associated with alcohol use and alcoholism. *Alcohol Research & Health*, 34(2), 135–143.
- Rhee, Y., & Kim, S. Y. (2016). Validity verification of a Korean version of recovery scale (client assessment summary) for alcoholics. *Journal of the Korea Academia-Industrial Cooperation Society*, 17(11), 386–394. <https://doi.org/10.5762/KAIS.2016.17.11.386>
- Ronel, N., Elisha, E., Timor, U., & Chen, G. (2013). What do our clients say? Residents' perceptions of recovery in Returno—A Jewish therapeutic community. *Addiction Research & Theory*, 21(4), 295–305. <https://doi.org/10.3109/16066359.2012.721145>
- Royce, J. E. (1989). *Alcohol problems and alcoholism: A comprehensive survey* (Rev. ed.). Tree Press.
- Rutter, M. (2006). Implications of resilience concepts for scientific understanding. *Annals of the New York Academy of Sciences*, 1094(1), 1–12. <https://doi.org/10.1196/annals.1376.002>
- Seo, Y. N., Jeong, H. J., Kim, S. G., Shin, S. H., Wi, S. B., Byun, W. T., & Park, S. (2010). 12-month follow-up rates of alcohol dependent patients at a university hospital. *Journal of Korean Academy of Addiction Psychiatry*, 14(1), 24–28.
- Shin, W. W. (2011). A study on effectiveness of therapeutic community program for homeless alcoholics: Focused on psychosocial changes who maintained treatment for 3 months. *Social Science Studies*, 35(2), 145–179.
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, 1(2), 165–178.
- Witkiewitz, K., Litten, R. Z., & Leggio, L. (2019). Advances in the science and treatment of alcohol use disorder. *Science Advances*, 5(9), eaax4043. <https://doi.org/10.1126/sciadv.aax4043>
- Woo, J. H. (2015). A study of stress and resilience alcoholic: Focused on the mediating effect of social support. *Mental Health & Social Work*, 43(3), 279–303.
- World Health Organization. (2018). *Global status report on alcohol and health 2018*. <https://apps.who.int/iris/handle/10665/274603>
- Yamashita, A., & Yoshioka, S. I. (2016). Resilience associated with self-disclosure and relapse risks in patients with alcohol use disorders. *Yonago Acta Medica*, 59(4), 279–287.
- Yang, Y. M., & Chung, S. C. (2010). The influence of resilience in the relationship between therapeutic factors of Alcoholics Anonymous and abstinence self-efficacy. *Alcohol and Health Behavior Research*, 11(1), 57–75.
- Zywiak, W. H., Stout, R. L., Trefry, W. B., Glasser, I., Connors, G. J., Maisto, S. A., & Westerberg, V. S. (2006). Alcohol relapse repetition, gender, and predictive validity. *Journal of Substance Abuse Treatment*, 30(4), 349–353. <https://doi.org/10.1016/j.jsat.2006.03.004>

---

**Eun Ae Song ORCID ID:** <https://orcid.org/0000-0002-6166-5861>

**Hee Kyung Kim ORCID ID:** <https://orcid.org/0000-0002-3591-2507>

**Mihyoung Lee ORCID ID:** <https://orcid.org/0000-0001-6909-0567>