



“Suicide CARE” (Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea): An Update

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Objective In 2011, “Suicide CARE” (Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea) was originally developed for the early detection of warning signs of suicide completion, since there is a tendency to regard emotional suppression as a virtue of Korean traditional culture. A total of 1.2 million individuals completed the training program of “Suicide CARE” in Korea.

Methods More sophisticated suicide prevention approaches according to age, sex, and occupation have been proposed, demanding for a more detailed revision of “Suicide CARE.” Thus, during the period from August 2019 to February 2020, “Suicide CARE” has been updated to version 2.0. The assessments on domestic gatekeeper training programs for suicide prevention, international gatekeeper training programs for suicide prevention, psychological autopsy interview reports between 2015 and 2018, and the evaluation of feedback from people who completed “Suicide CARE” version 1.6 training were performed.

Results We describe the revision process of “Suicide CARE,” revealing that “Suicide CARE” version 2.0 has been developed using an evidence-based methodology.

Conclusion It is expected that “Suicide CARE” version 2.0 be positioned as the basic framework for many developing gatekeeper training programs for suicide prevention in Korea in the near future.

Psychiatry Investig 2020;17(9):911-924

Key Words Suicide Prevention Program, Gatekeeper Intervention, “Suicide CARE,” Revision, Korea.

INTRODUCTION

Suicide is the most important public mental health issue in Korea.¹⁻⁴ From 2003 to 2016, Korea has reported the highest

suicide rate among the Organization for Economic Cooperation and Development (OECD) countries. Since Lithuania joined the OECD in 2017, the highest suicide rate among the OECD countries, in just a year, was reported by Lithuania. Thus, Korea reported the second-highest suicide rate among the OECD countries. However, the statistics for suicide have remained troubling, as follows: As of 2018, the death rate due to suicide per 100,000 persons was 26.6 in Korea, which was much higher than the average suicide death rate of 11.6 in the other OECD countries.⁵ Recently, the “National Suicide Prevention Action Plan” of Ministry of Health and Welfare of Korea has aimed to reduce suicide death rate to less than

Received: May 7, 2020 Accepted: June 29, 2020

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20 per 100,000 persons by 2022 and total completed suicides to less than 10,000 persons per year.⁶ A recent systematic review reported that restricting access to lethal means and conducting school-based awareness programs were sufficiently evidenced to prevent suicide. In addition, effective pharmacological and psychological treatments for depression, gatekeeper training, education of physicians, and internet and helpline support have been proposed as evidence-based suicide prevention strategies. However, screening in primary care and general public education and media guidelines are insufficiently evidenced in the prevention of suicide.⁷ Most importantly, gatekeeper training has been considered to be an effective suicide prevention strategy for young people by the Center for Disease Control and Prevention. In terms of gatekeeper training programs for suicide prevention, social workers, caregivers, and churchmen should identify people with a high risk of suicidality and connect them with psychosocial support systems.⁸

In Korea, evidence-based suicide prevention strategies have been developed as follows: The first suicide prevention program for the members of the Korean Medical Association was held in 2010. In addition, in terms of gatekeeper training, the Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea was originally developed by the Korea Association for Suicide Prevention, under the support of the Life Insurance Philanthropy Foundation in 2011.⁹ Thus, “Suicide CARE” was developed for the early detection of danger signals of suicide completion, since there is a tendency to regard emotional suppression as a virtue of Korean traditional culture. The gatekeeper training program has been popularly referred to as “*Bo-Deud-Mal (Bogo Deudgo Malhagi)*” in Korean and translated to “Suicide CARE” (“Careful observation,” “Active listening,” and “Risk evaluation and Expert referral”) in English. “Suicide CARE” provides specific guidelines regarding gatekeeper intervention for people with a high risk of suicide. In addition, the gatekeeper training program has been divided into three parts according to the name as follows: “Careful observation” covers the detection of verbal and non-verbal signals for suicidal intents. “Active listening” aims to actively hear the cause of suicidal intention, and “Risk evaluation and Expert referral” involves referring suicidal persons to psychiatric professionals. After the first demonstration of “Suicide CARE” in January 2013, an executive committee, which consisted of its developing team, was established by the Korea Suicide Prevention Center. Based on the principle that any individual could complete the program free of charge, education was mainly provided through community mental health welfare centers nationwide. The instructors were limited to mental health professionals with more than two years of suicide prevention work experience, and they completed a 2-day course of “Suicide CARE” with faculty supervision. Instructors were

provided with instructor manuals with detailed information on contents, and gatekeepers were provided with the contents of workbooks, video clips, and role plays. It was designed to simulate the experience of the activity. The certificates of completion for “Suicide CARE” were downloaded through the website of the Korea Suicide Prevention Center (adapted from <http://www.spckorea.or.kr/index.php>). By 2019, 1.2 million individuals had completed life-saving education.¹⁰

In addition, the gatekeeper training program was revised to provide individually differentiated programs focusing on specific groups, including young people, office workers, and the army, navy, and air forces, under the support of the Ministry of Health and Welfare, in 2014. The revised version number of the gatekeeper training program was marked as 1.6 (not 2.0) because the revisions made were modest. “Suicide CARE” version 1.6 consists of a workbook, transcript of the lecture, and video clips to improve gatekeeper training.¹¹ As shown in Figure 1, each part named “Careful observation,” “Active listening,” and “Risk evaluation and Expert referral” is represented by an individual image, in “Suicide CARE” versions 1.0 and 1.6, respectively.^{9,11} A telephone survey of 800 people who had completed the educational course of the program in 2013 re-

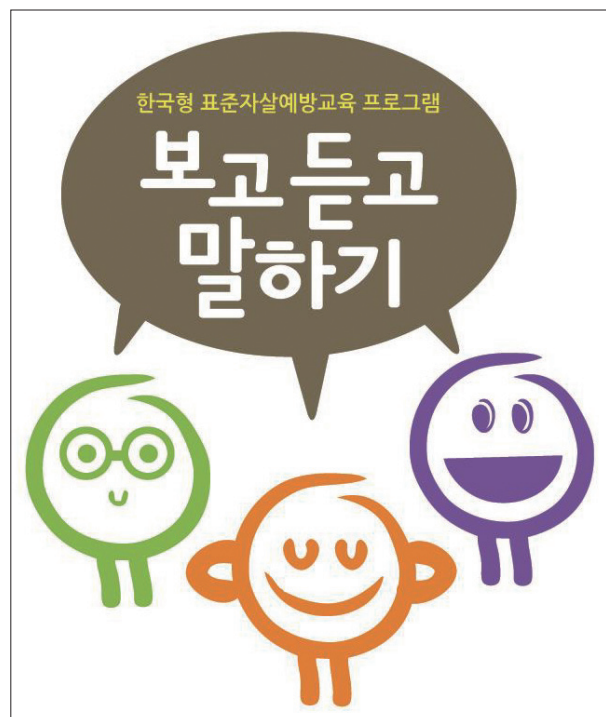


Figure 1. Image representing “Careful observation,” “Active listening,” and “Risk evaluation and Expert referral” in “Suicide CARE” versions 1.0 and 1.6. Adapted from “Suicide CARE” (Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea) version 1.5 Workbook. Seoul: Korea Association for Suicide Prevention & Korea Suicide Prevention Center, 2014, according to the Creative Commons license.^{9,13} From left to right, characterized images symbolize the “Careful observation,” “Active listening,” and “Risk evaluation and Expert referral” parts.

ported that the gatekeeper's intervention for suicide prevention could be favorably supported by "Suicide CARE" version 1.6.¹⁰ Owing to the considerable amount of time since its initial creation, it was required that "Suicide CARE" should be revised entirely. It is also necessary that the revised gatekeeper training program should be underpinned by current study findings and empirical knowledge. In addition, the gatekeeper training program must be revised based on psychological autopsy interview findings¹² in the most recent 5 years in Korea. Since suicide has been the most common cause of death among those in their 10s, 20s, and 30s, and the second most common among those in their 40s to 50s in Korea, it has been presumed that the development of age-group-based differentiated suicide prevention approaches is urgently needed. Thus, "Suicide CARE" was revised from version 1.6 to 2.0, between August 2019 and February 2020, by the multidisciplinary team including psychiatrists, psychologists, and social workers. The revision has been mainly based on the numerous domestic and international gatekeeper training programs for suicide prevention and the recent psychological autopsy findings of Korea. Therefore, in this paper, we aim to present the detailed revision process of "Suicide CARE" from version 1.6 to 2.0.

METHODS

Under the support of Korea Suicide Prevention Center, which is a designated agency of the Ministry of Health and Welfare, during the period from August 2019 to March 2020, "Suicide CARE" has been revised from version 1.6 to 2.0. The revision process consisted of: 1) reviews about domestic gatekeeper training programs for suicide prevention, 2) reviews about international gatekeeper training programs for suicide prevention, 3) reviews about psychological autopsy interview reports, 2018, and 4) reviews about feedback from persons who completed "Suicide CARE" version 1.6.

RESULTS

Domestic gatekeeper training programs

As shown in Table 1, the Korea Suicide Prevention Center has managed a registration system for domestic gatekeeper training programs to introduce evidence-based suicide prevention interventions.¹³ In addition, the Korea Suicide Prevention Center has certified the evidence levels of domestic gatekeeper training programs. Thus, 68 different programs have been certified. The certification criteria are classified into SECTION 1, SECTION 2, and SECTION 3 as follows: SECTION 1 denotes the suicide prevention intervention in which the content and efficacy are evidenced by a structured empirical study (randomized controlled study or non-randomized controlled

study). SECTION 2 denotes expert consensus-based interventions or recommendations in the general setting. SECTION 3 denotes interventions or recommendations in special settings (i.e., public awareness and promotion programs, education or training programs, protocols or guidelines, and screening tools). A review of the current domestic gatekeeper training programs reveals the following limitations: First, as shown in Table 1, most of the domestic gatekeeper training programs were certified as low-level. Among 68 different programs, 89.7% (n=61) were defined as SECTION 3, whereas 8.8% (n=6) were defined as SECTION 2. Only 1.5% (n=1) of the programs was defined as SECTION 1, according to the criteria of the Korea Suicide Prevention Center.¹⁶ Second, it has been speculated that the domestic gatekeeper training programs for suicide prevention are in a state of contention with many differing views. In addition, more than half of the programs were developed by institutions located in the National Capital region (i.e., Seoul, Incheon, Gyeonggi-do). Most of the domestic gatekeeper training programs are available only for targeted regional residents and not for non-targeted regional residents. Thus, to overcome these limitations, it has been suggested that a new domestic gatekeeper training program with a high level of evidence and a national range of availability should be developed. Most programs commonly focus on enhancing gatekeepers' understanding of the risk and protective factors of suicide to connect high-risk suicidal persons with mental professionals early. In addition, all programs are free of charge. Herein, it has been proposed that the revised version of "Suicide CARE" should be supported by high-level evidence available nation-wide and focused on gatekeepers' early detection and management of suicidal risk.

International gatekeeper training programs

Suicide Prevention Resource Center (SPRC), Resources and Programs (available from: <http://www.sprc.org/resources-programs>)⁷⁸ were searched from inception until October 30th, 2019. As shown in Table 2, we reviewed the international government-initiated suicide prevention programs, including the Office Worker Suicide Prevention Policy (World Health Organization), data from the Bureau of Labor in Quebec (Canada), Montreal police officer's Together for Life (Canada), suicide prevention model for office workers (Canadian Association for Suicide Prevention), Victorian Work-Related Fatality Database (VWRFD) (Australia), MATES in Construction: construction worker suicide prevention (Australia), and others. In addition, we reviewed the international private corporate-initiated suicide prevention programs, including the Applied Suicide Intervention Skills Training (ASIST), Question, Persuade, Refer (QPR), Working Minds, and others. We extracted common factors, characteristics,

Table 1. Domestic gatekeeper training programs for suicide prevention

Program	Development institution	Highlight	SECTION
Suicide Reporting Recommendation Guideline 3.0 ¹⁴	Korea Suicide Prevention Center	Principles of suicide-related reporting	2
Suicide Prevention Education Program for Senior Service Provider ¹⁵	Korea Suicide Prevention Center	Educate senior service providers on the characteristics of elderly and risk factors of elderly suicide	3
Cognitive Behavioral Program for Suicidal Attempter ¹⁶	Korea Suicide Prevention Center	Understand cognitive distortion, automatic thoughts, and emotional response and behavior of suicide attempters, education on cognitive behavioral programs for prevention of suicidal reattempts	3
‘Suicide CARE’ for Air Force ¹⁷	Korea Suicide Prevention Center	Suicide prevention education program for the air force, understanding of suicide, and training gatekeepers of air force	3
Senior Suicide Prevention Education Program ¹⁸	Korea Suicide Prevention Center	Understand geriatric depression and suicide, Improve awareness on senior suicide prevention	3
Suicide Prevention Education Program for Office Worker ¹⁹	Korea Suicide Prevention Center	Understand the risk factors of suicide, self-assessment, and suicidal signs, conduct suicide prevention interventions	3
Suicide Prevention Education for Emergency Medical Worker ²⁰	Korea Suicide Prevention Center	Understand psychiatric assessment and interview principles of suicide, introduce suicide screening tools and suicide-related pharmacotherapy and physical restraints, conduct suicide-related emergency medical services	3
Suicide Prevention Gatekeeper Education Program ²¹	Korea Suicide Prevention Center	Understand high-risk suicidal groups, detect high-risk suicidal groups, educate helping skills of gatekeepers	3
Senior Suicide Prevention Gatekeeper Education Program ²²	Korea Suicide Prevention Center	Educate on suicide prevention for the elderly, train gatekeepers, enhance the mental health of the elderly	3
Crisis Management Protocol for Suicide and Mental Disorder ²³	Seoul Suicide Prevention Center	Integrated crisis management service system, continuous management service system for mental hospitals and community mental health welfare centers	2
Suicide Crisis Intervention Handbook ²⁴	Seoul Suicide Prevention Center	Systemize the intervention strategies through understanding suicide, education on suicidal risk assessment, 6-step counseling and intervention skills	3
Suicide Prevention Gatekeeper Training Program ²⁵	Seoul Suicide Prevention Center	Understand suicide, establish strategies for suicide prevention, gatekeeper work activity	3
Manual for Counseling and Self-Help Group for Survivor of Bereavement by Suicide ²⁶	Seoul Suicide Prevention Center	Understand counseling and self-help groups for bereaved survivors of suicide	2
Suicide Prevention Education for Emergency Worker ²⁷	Seoul Suicide Prevention Center	Enhance gatekeepers’ intervention skills for high suicidality, control the quality of community-based suicide prevention services	3
Suicide Prevention Professional Training Program ²⁸	Seoul Suicide Prevention Center	Understand skill, application, and supervision of motivation enhancement interviews	3
Gatekeeper Training Program for Teacher ²⁹	Seoul Suicide Prevention Center	Train teachers on suicide risk assessment of adolescents	3
Adolescent Suicide Crisis Intervention Manual for Teacher and Official ³⁰	Incheon Suicide Prevention Center	Be aware of problem of adolescent suicide, prevent adolescent suicide, provide for adolescents with suicidality, interconnection of adolescent-related institutions	3
School-Based Suicide Postvention Program ³¹	Seoul Mental Health Welfare Center	Understand the psychological conflicts about school-related suicide	3
Suicide Prevention Program of Community Resident Participation ³²	Gangseo-gu Mental Health Welfare Center, Seoul	Detect suicide problems within the community, establish leadership, increase community resident suicide prevention activities	3

Table 1. Domestic gatekeeper training programs for suicide prevention (continued)

Program	Development institution	Highlight	SECTION
Mental Health Promotion and Happiness Enhancement Thank You Program ³³	Seongdong-gu Mental Health Welfare Center, Seoul	Through increasing positive emotions, decrease suicidality of psychiatric patients with suicidal ideation, suicidal attempters, and bereaved survivors of suicide	3
'Mind Cane' ³⁴	Busan Mental Health Welfare Center	10-session cognitive behavioral therapy for elderly with depressive mood and suicidal ideation	3
Psychological Emotion Support Recommendation for Official Whose Client Commit Suicide ³⁵	Busan Mental Health Welfare Center	Recommend institution response (i.e., situation report, administrative management) and psychological emotional support (i.e., case supervision, work cooperation, vacation support, counseling support for psychological conflicts)	2
Psychological Support for Survivor of Bereavement by Suicide ³⁶	Incheon Mental Health Welfare Center	Understand bereaved survivors of suicide	3
Senior Suicidal Crisis Management Manual ³⁷	Incheon Mental Health Welfare Center	Understand suicide by elderly and interventions in actual practice	3
'Suicide Prevention and Crisis Intervention Manual' for Suicide Prevention Official ³⁸	Incheon Mental Health Welfare Center	Understand suicide, crisis management, emergency intervention principle, and case management	2
Adolescent Life Respect Education ³⁹	Daegu Mental Health Welfare Center	Prevent adolescent suicide, educate intervention skill for suicide	3
Senior Life Respect Education Program, 'Life Charger' ⁴⁰	Daegu Mental Health Welfare Center	Understand the definition of life chargers, detect suicidal ambivalence and signs	3
Crisis Intervention Program of Gwangju ⁴¹	Gwangju Mental Health Welfare Center	Detect suicidal crisis signs, increase interviewing skills of suicide prevention officials	3
'Life Zone' ⁴²	Buk-gu Mental Health Welfare Center, Gwangju	Structured education program for instructor training, train gatekeepers to help high-risk suicidal groups	3
'Mind Friends' ⁴³	Buk-gu Mental Health Welfare Center, Gwangju	Understand the protective and risk factors of adolescent suicide and depressive symptoms	3
'What's Up?' ⁴⁴	Dong-gu Mental Health Welfare Center, Gwangju	Understand the suicidal risk of adolescents, understand suicidal signs	3
Group Program Manual for Survivor of Bereavement by Suicide ⁴⁵	Gyeonggi-do Mental Health Welfare Center	Systemize standardized service of a group program for the bereaved survivors of suicide, facilitate a group of the survivors of suicide in the community, provide an education program for grief	3
Life Loving Teen Teen Class 3.0 ⁴⁶	Gyeonggi-do Mental Health Welfare Center	Understand rational ideas about suicide, help an adolescent friend with suicide ideation	1
Life Loving Teen Teen Class Gatekeeper ⁴⁷	Gyeonggi-do Mental Health Welfare Center	Understand life-loving and the value of life	3
Student Suicide Prevention Intervention Program, 'M-love' ⁴⁸	Gyeonggi-do Mental Health Welfare Center	Provide an opportunity of emotional expression, return to ordinary life through a normal grief reaction	3
Gold Medal Case Management Program ⁴⁹	Suwon Mental Health Welfare Center, Gyeonggi-do	Divide and construct goal behaviors into gold, silver, and bronze medals, based on conditioning theory	3
Adolescent Suicide Prevention Gatekeeper Training Program, 'Between Friends' ⁵⁰	Suwon Mental Health Welfare Center, Gyeonggi-do	Understand the factors influencing suicidal ideation, suicidal signs, protective factors against suicide, and helping methods for friend	3
Life Respect Manual ⁵¹	Seongnam Mental Health Welfare Center, Gyeonggi-do	Problem-solving manual for persons with suicidal ideation	3

Table 1. Domestic gatekeeper training programs for suicide prevention (continued)

Program	Development institution	Highlight	SECTION
Suicide Prevention Gatekeeper Education Program ⁵²	Seongnam Mental Health Welfare Center, Gyeonggi-do	Develop a suicide prevention gatekeeper education for citizens of Seongnam	3
Support Guidebook for Survivor of Bereavement by Suicide ⁵³	Seongnam Mental Health Welfare Center, Gyeonggi-do	Understand community-based support services for bereaved survivors of suicide	3
Life Respect Green Village ⁵⁴	Hwaseong Mental Health Welfare Center, Gyeonggi-do	Equip a safe deposit box of agricultural chemicals	3
Gatekeeper Training Program for Police Officer ⁵⁵	Chungcheongbuk-do Mental Health Welfare Center	Recognize statistical data of police officer suicide	3
Gatekeeper Training Program for Firefighter ⁵⁶	Chungcheongbuk-do Mental Health Welfare Center	Recognize statistical data of firefighter suicide	3
Emergency Kit Emergency Box ⁵⁷	Chungcheongbuk-do Mental Health Welfare Center	1. Emergency kit (a tool to cope with physical emergency situations) 2. Emergency box (suicidal risk assessment, crisis intervention, refer to medical institutions, and others)	3
‘Suicide Crisis Management Manual’ ⁵⁸	Chungcheongbuk-do Mental Health Welfare Center	Suicide crisis management manual for 112, 119, and community mental health welfare centers	2
Life Savor Training Program ⁵⁹	Chungcheongbuk-do Mental Health Welfare Center	Understand suicide and suicide prevention	3
Chungbuk Stop of Suicide (SOS) Project ⁶⁰	Chungcheongbuk-do Mental Health Welfare Center	Suicidal crisis intervention program for policemen, firefighters, and mental health welfare center officials	3
Running Life ⁶¹	Chungcheongnam-do Mental Health Welfare Center	Suicide prevention education for adolescent, adults, and seniors	3
Motivation Enhancement Cognitive Behavioral Program 2.0, ‘Empathy 3’ ⁶²	Gumi Mental Health Welfare Center, Gyeongsangbuk-do	Understand suicidal intent, enhance life motivation, construct a safety net	3
Short-term Intervention Program 2.0, ‘Empathy 1’ ⁶³	Gumi Mental Health Welfare Center, Gyeongsangbuk-do	A short-term intervention program for suicide attempters and high-risk suicidal groups	3
Peer Life Savor Training Program ⁶⁴	Gumi Mental Health Welfare Center, Gyeongsangbuk-do	Educate on the four phases including irrational belief phase, rational belief construction phase, rational behavior construction phase, and rational behavior acquirement phase	3
Life Loving Gatekeeper Training Program and Instructor Training Program ⁶⁵	Jeollabuk-do Mental Health Welfare Center	Increase understanding of suicide, detect suicidal signs, educate on interview skills and attitude and assessment and evaluation of crisis situations	3
Suicide Prevention Program ⁶⁶	Jeollabuk-do Mental Health Welfare Center	Improve understanding of suicide for Jeollabuk-do people, reduce the suicide rate in Jeollabuk-do	3
Life Loving Gatekeeper Professional Instructor Program ⁶⁷	Jeollabuk-do Mental Health Welfare Center	Understand suicide and theory about suicide, educate on suicidal risk assessments	3
‘Knocking Repeatedly’ ⁶⁸	Wanju Mental Health Welfare Center, Jeollabuk-do	Reduce suicide ideation and depressive mood of high-risk suicide groups	3
‘Hello?’ ⁶⁹	Jeollanam-do Mental Health Welfare Center	Understand suicide, conduct early detect and early management of high-risk suicidal groups, decrease suicidal rate through fostering a life respecting culture	3
Life Loving Gatekeeper Training Program ⁷⁰	Jeju-do Mental Health Welfare Center	Understand the characteristics of elderly suicides, detect and help high-risk suicide groups	3
Gatekeeper Education Program for Police Officer ⁷¹	Korea National Police Agency	Recognize suicidal risk of police officers, improve the connection with resources which provide appropriate help	3

Table 1. Domestic gatekeeper training programs for suicide prevention (continued)

Program	Development institution	Highlight	SECTION
Suicidality Screening Program ⁷²	Department of Epidemiology, The Catholic University of Korea, Seoul	Conduct community-based suicidality screening tests and refer persons with high-risk suicidality to mental health institutions	3
TLC Academy, 'Life Loving' ⁷³	Nazarene University, Cheonan, Chungcheongnam-do	Understand suicide and suicide prevention programs, train counseling, conduct a suicide prevention campaign	3
Life Saver Education Book ⁷⁴	Life Respect Education Association, Seoul	Educate psychology to respect life, educate suicide prevention for respect of life	3
Adolescent Suicide Prevention Education Program, 'I Love You' ⁷⁵	Life Line Korea, Samsung Life Insurance, Community Chest of Korea, Korea Health Promotion Institute	Educate intervention skill for adolescents with suicidal crises, educate school-based suicide prevention intervention	3
Life Loving Gatekeeper Basic Education Program ⁷⁶	Life Hope Protestant Suicide Prevention Center, Seoul	Suicide prevention intervention program for adolescents	3
Sexual Minority Suicide Prevention Gatekeeper Training Program ⁷⁷	Korean Gay Humanity Movement Organization	Understand suicidal signs and suicidal ideation of sexual minorities, improve self-help of gatekeepers	3

Adapted from the Korea Suicide Prevention Center. Registration System for Domestic Gatekeeper Training Programs to Introduce Evidence-Based Suicide Prevention Interventions [Internet]. Seoul: Korea Suicide Prevention Center; 2020, according to the Creative commons license¹⁶

and availability in Korean contexts from the international gatekeeper training programs. Reviews of the international gatekeeper training programs presented major considerations as follows: First, each of the international gatekeeper training programs has been developed to be used consistently with each of the special conditions for the countries. It has been concluded that most international gatekeeper training programs may be inconsistent with the particular conditions of suicide in Korea. Second, it has been assumed that the early detection of suicide risk signals should be an essential content of "Suicide CARE" version 2.0. Thus, the "Careful observation" part has been proposed as the most important portion in the revision process of "Suicide CARE" from version 1.6 to 2.0. Third, since most of the international gatekeeper training programs require a range of tuition fees, it is speculated that the fees can contribute to the main obstacles for educating and training gatekeepers. Thus, it was concluded that "Suicide CARE" should be distributed free of charge. Fourth, role play and group simulation are regarded as the main sections in many of the international gatekeeper training programs. Thus, it has been proposed that role-play or group simulation should be included in "Suicide CARE" version 2.0.

Psychological autopsy interview reports 2015–2018

The Korea Psychological Autopsy Center has published psychological autopsy interview reports, which present the clinical characteristics of 391 Korean suicide completers from 2015 to 2018, based on interviews with family survivors.¹² The contents for the psychological autopsy interview reports, 2015–2018,

were also included in the revision of the "Suicide CARE." Among 391 suicide completers, 92.3% (n=361) presented warning signals before suicide completion, whereas 6.1% (n=24) did not present warning signals. In addition, 1.5% (n=6) were not aware of the warning signals. In the 361 suicide completers who presented warning signs before death, alterations in verbal expression, behaviors, and emotions, 77.0% (n=278) were not recognized, whereas only 20.5% (n=74) were recognized. In addition, warning sign recognitions in 2.5% (n=9) was not evaluated.

The psychological autopsy interview reports classified suicide warning signals into three groups: verbal, behavioral, and situational signals. First, the verbal and behavioral signals for a total of 249 people who committed suicide from 2016 to 2018, were analyzed descriptively since the data from the suicide completers in 2015 did not contain specific contents. The specific suicidal signals were as follows: the verbal signals were classified into frequent mentions about suicide, homicide, or death (n=130, 52.2%), somatic complaints (n=120, 48.2%), expression of self-criticism (n=106, 42.6%), questioning on how to commit suicide (n=30, 12.0%), writing about death in letters, notes, etc. (n=40, 16.1%), expression of longing for the afterlife (n=30, 12.0%), and talking about people who committed suicide (n=19, 7.6%). The behavioral signals were classified into alterations in sleep (n=164, 65.9%), alterations in appetite (n=133, 53.4%), decreased concentration or indecisiveness (n=82, 32.9%), indifference to appearance management (n=82, 32.9%), disposing of the belongings (n=75, 30.1%), self-destructive behaviors or substance abuse (n=63, 25.3%), striving

Table 2. International gatekeeper training programs for suicide prevention

Program	Requirement	Education
Applied Suicide Intervention Skills Training (ASIST) ⁷⁹	Instructor education: \$2,600 for 5-day course Gatekeeper education: \$36 for 14-hour course	Mini-lecture, discussion, group simulation, and role-play
Army ACE (Ask, Care, and Escort) ⁸⁰	Gatekeeper education: peer-to-peer or buddy-to-buddy education for four hours	Encourage direct questions to peers with suicidal behavior
At-Risk for Middle School Educators ⁸¹	Gatekeeper education: online education for 50 minutes, \$5–30	Detect middle school students’ psychological conflicts including depressed mood and suicidal ideation
At-Risk for High School Educators ⁸²	Gatekeeper education: \$500–3,500 for 1-year license	Detect high school students’ psychological conflicts
At-Risk for University and College Faculty ⁸³	Gatekeeper education: online education for 45 minutes, \$1,850–4,850 for 1-2-year license	Web-based interactive simulation to analyze virtual students’ psychological conflicts including depression, anxiety, and suicidal ideation
At-Risk for University and College Students ⁸⁴	Gatekeeper education: 30-minute course, \$2–20 for users	Online program to detect at-risk students, discuss his or her problems, and connect with a counseling center
At-Risk in the ED ⁸⁵	Gatekeeper education: 1-hour course, \$35–75 for users	Online program to detect the signs of suicide and substance abuse in patients
Be A Link! ⁸⁶	Instructor education: \$295 for 2-day course Gatekeeper education: \$375 for 2-hour course (including instructor resource)	Community connection and risk protocol to detect risk factor and a warning sign of suicide
Campus Connect ⁸⁷	Instructor education: \$4,500 for 6-hour workshop Gatekeeper education: 2.5-hour training	Information about risky and protective factors of suicide, role-play to train communication skills
Connect Suicide Prevention Intervention Training ⁸⁸	Instructor education: \$6,000 for 3-day course Gatekeeper education: \$1,600 for 4 to 6-hour course	Educate communication and link, decrease stigma, restrict lethal tools
Connect Suicide Postvention Training ⁸⁹	Instructor education: \$6,000 for 3-day course Gatekeeper education: \$1,600 for 4 to 6-hour course	Increase collaboration to provide the most effective intervention, care for a survivor, and connect with community society
Connect Youth Leaders Partnering with Adults in Youth Suicide Prevention ⁹⁰	Gatekeeper education: \$6,000 for a 2-day course	Adolescent suicide prevention program
EndingSuicide.Com ⁷⁸	Gatekeeper education: two modules on the homepage	Simple module for persons who have no health education and a complex module for health professionals
Family of Heroes: Training for Family Members for Veterans ⁹¹	Gatekeeper education: 1-hour course, \$2–2.5 for users	Simulation conversation with a virtual veteran
Gryphon Place Gatekeeper Suicide Prevention Program- A Middle School Curriculum ⁹²	Gatekeeper education: 3-day course	Detect, intervene, and help adolescents at-risk
High School Gatekeeper Curriculum ⁹²	Gatekeeper education: four lessons	Detect, intervene, and help adolescents at-risk
How Not to Keep a Secret (HNTKAS) ⁹³	Gatekeeper education: \$50 for a one-day course (including free DVD)	Include clinical presentation, documentary, and interview skills
Just Talk About It: Suicide Prevention Toolkit ⁷⁸	Instructor education: free for 2-hour course Gatekeeper education: 0.5 to 1.5-hour course	Help adolescents with the signs of suicidal ideation
In Harm’s Way: Law Enforcement Suicide Prevention ⁹⁴	Instructor education: free for 8-hour course	Detect warning signs of depression, PTSD, and suicide through peer training
Late Life Suicide Prevention Toolkit ⁹⁵	Gatekeeper education: free	Detect suicide warning signs, establish a relationship, evaluate suicide risk and resilience factors

Table 2. International gatekeeper training programs for suicide prevention (continued)

Program	Requirement	Education
Let's Talk Gatekeeper Training ⁷⁸	Gatekeeper education: 2-hour course	Understand the risky and protective factors of suicide, warning signs of suicide, and communication with children and adolescents
Lifelines Intervention: Helping Students At Risk for Suicide ⁹⁶	Gatekeeper education: \$149 for manual (216 pages) and DVD (37 minutes)	Modify classical counseling skills about the school environment
Life Savers Training ⁹⁷	Gatekeeper education: \$230 for 3-day course	Active listening, confidentiality, and help peers with a psychological problem
Making Educators Partners in Youth Suicide Prevention ⁹⁸	Gatekeeper education: free for five modules	Email specific questions to expert personnel
More Than Sad: Suicide Prevention Education for Teachers and Other School Personnel ⁹⁹	Gatekeeper education: \$99.99 for one guidebook and 2 DVDs	Educate on the life-threatening mental disorders of adolescents
Online Counseling and Suicide Intervention Specialist (OCSIS) ¹⁰⁰	Gatekeeper education: \$199 for a volunteer, \$399 for professional	Detect, evaluate, and relieve suicide risk
Operation S.A.V.E.: VA Suicide Prevention Gatekeeper Training ¹⁰¹	Gatekeeper education: free for 1 to 2- hour course	Include risk factors of suicide, SAVE model
QPR (Question, Persuade, Refer) ¹⁰²	Gatekeeper education: \$495 for 12-hour course, \$395 for 8-hour course	“Chain of survival” approach to recognize warning signs
QPR for Law Enforcement ¹⁰²	Gatekeeper education: \$119 for 90-minute course	Online education program to recognize warning signs of suicide
QPR for Nurses ¹⁰³	Gatekeeper education: \$139 for 3 to 6-hour course	Evaluate suicidal risk
Response: A Comprehensive High School-based Suicide Awareness Program ¹⁰⁴	Instructor education: \$375 for 2-hour course of teacher Gatekeeper education: \$150	Detect depression and suicidal ideation, and recommend services
Shield of Care: A System-Focused Approach to Protecting Juvenile Justice Youth from Suicide ¹⁰⁵	Gatekeeper education: free for 8-hour course	Suicide prevention system-centered model to connect with adolescents
Sources of Strength ¹⁰⁶	Instructor education: \$5,000 for 40-hour course Gatekeeper education: 15-hour course	Send a message of “Hope, Help, and Strength” through a presentation, poster, video, and the internet
Student Support Network ¹⁰⁷	Instructor education: \$1,000–3,000 for 1 to 2-day course Gatekeeper education: free	Include mental and behavioral health problems and knowledge about the community
Suicide Alertness for Everyone (safeTALK) ¹⁰⁸	Instructor education: \$820 for 2-day workshop Gatekeeper education: \$6.50–7.50	A structured behavior training program with graded exposure
Student and Aging: A Gatekeeper's Workshop ¹⁰⁹	Gatekeeper education: 4-hour course	Detect the risk factors of suicide in the elderly
Suicide Prevention Training for Gatekeeper of Older Adult ¹¹⁰	Gatekeeper education: free for 8-hour course	Include aging, mental health, and suicide, risk and protective factors of suicide
Trevor Lifeguard Workshop ¹¹¹	Instructor education: 2-day course Gatekeeper education: 1-hour course	Two versions, LGBTQ adolescents and ordinary adolescents
Veterans on Campus ¹¹²	Gatekeeper education: \$2,500	Discuss psychological conflicts of veterans and connect with community resources
Working Minds: Suicide Prevention in the Workplace ¹¹³	Instructor education: \$1,000 for 1-day course	Educate on interviewing skills about psychological conflicts of workers

Adapted from Suicide Prevention Resource Center. Resources and Programs [Internet]. Waltham, MA: Suicide Prevention Resource Center; 2020, according to the Creative commons license⁸¹

to improve interpersonal relationships (n=45, 18.1%), planning suicide (n=43, 17.3%), aggressive or impulsive behaviors (n=43, 17.3%), giving others the things they usually valued (n=19, 7.6%), and excessive collecting of poems, music, and movies related to death (n=12, 4.8%). Second, the situational signals for a total of 103 people who completed suicides in 2018 only were analyzed descriptively. Since situational signals for suicide can be multifactorial and complex, they were simply classified as mental health problems (n=87, 84.5%), occupation-related stress (n=70, 68.0%), economic problems (n=56, 54.4%), family-related stress (n=56, 54.4%), interpersonal relationship-related stress (n=40, 38.8%), spouse-related stress (n=35, 34.0%), physical health problems (n=34, 33.0%), lover-related stress (n=14, 13.6%), and learning-related stress (n=14, 13.6%). In terms of classification of the suicide commitment period, the warning signals three months before the suicide completion were alterations in emotion, alterations in appetite, alterations in sleep, disposing of the belongings, and loss of energy or interest. In addition, the warning signals one week before suicide completion were disposing of belongings, striving to improve interpersonal relationships, and aggressive or impulsive behaviors. Furthermore, in terms of classification of the life cycle, the suicide warning signals of young adults were learning, family and lover-related stress, loneliness, and absence of close relationships. In addition, the signals in middle-aged adults were economic stress and debt problems. Finally, the signals in the elderly were chronic physical diseases, unspecified somatic symptoms, and absence of interpersonal relationships.

As shown in Figure 2, based on the psychological autopsy interview reports, the chronicled pathways to suicide completion of job seekers, self-employed persons, and retirees were conceptualized to improve the understanding of suicidal cases. Thus, by consensus of the developers for “Suicide CARE” version 2.0, life cycle-based example cases were selected from the conceptualized paths to suicide.

Feedback of persons who completed “Suicide CARE” version 1.6

From September 16 to October 4, 2019, a survey question-

naire that included difficulties in teaching, feedback about content and construction of each part, and feedback about instructor training courses was administered by persons who completed training of “Suicide CARE” version 1.6, and 66 persons responded to the survey questionnaire.⁸² The responses were as follows: First, since many of the students for “Suicide CARE” version 1.6 felt bored, it has been proposed that a method to relieve boredom should be added in the new version. Thus, “Suicide CARE” version 2.0 is needed to fulfill a diversified demand for education according to age, sex, occupation, and other factors. In addition, the transcript of the lecture needs to be reduced, and the capability of educators needs to be increased in order to guarantee educators’ unconstrained lectures. Furthermore, the education time needs to be reduced to decrease the burden of educators and students. It has been proposed that weighting more important content can improve the efficiency of lectures. Second, it has been proposed that the contents of the adolescent version should be updated and added. Most of all, it is necessary to add the fact that suicide currently is the most common cause of death in adolescence. It is also necessary to add the fact that self-injury is a warning sign for suicide. Moreover, it is necessary to complement a method to improve the concentration of middle school students. Third, it has been proposed that “Suicide CARE” version 2.0, including the transcript of a lecture, should be differentiated according to the life cycle or occupation (i.e., adolescents, elders, office workers, public servants, soldiers, teachers, college students, etc.). It has been proposed that an advanced course should be developed in “Suicide CARE” version 2.0. In addition, it is necessary to diversify the scenarios of role-playing to improve the quality of the practical exercise for educators. Overall, the contents of the survey responses were consistent with the opinions of the developers for “Suicide CARE” version 2.0.

DISCUSSION

The developers of “Suicide CARE” version 2.0 planned to revise more than 70% of “Suicide CARE” version 1.6 based

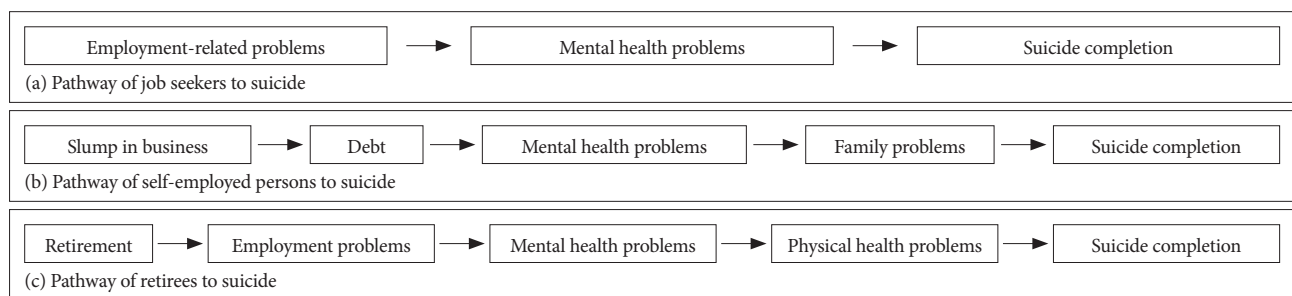


Figure 2. Pathways to suicide completion. These pathways were proposed following the psychological autopsy interview reports collected between 2015 and 2018.

Table 3. Comparison of “Suicide CARE” versions 1.6 and 2.0

	Version 1.6	Version 2.0
Introduction	<ul style="list-style-type: none"> • Introduce suicide epidemiological data 	<ul style="list-style-type: none"> • Quote the psychological autopsy interview reports (2015–2018) • Emphasize the importance of the gatekeeper training program • Quote written texts authored by Prof. Se-Won Lim
“Careful observation”	<ul style="list-style-type: none"> • Introduce theoretically relevant verbal, behavioral, and situational warning signs of suicide completers 	<ul style="list-style-type: none"> • Introduce the real verbal, behavioral, and situational warning signs of suicide completers, based on the psychological autopsy interview reports (2015–2018) • Explain the characteristics of the warning signs according to life cycles
“Active listening”	<ul style="list-style-type: none"> • Ask a question about suicidal ideation • Explain the concept of ambivalence 	<ul style="list-style-type: none"> • Connect the warning signs of “Care observation” with the question of “Active listening” • Change the explaining pattern and design about the concept of ambivalence
“Risk evaluation and Expert referral”	<ul style="list-style-type: none"> • Lists for safety check 	<ul style="list-style-type: none"> • Dichotomize the lists for safety into the evaluation of suicide risk and helping safely • Change video clips and role play

on the troubling suicide-related situation in Korea. Psychological autopsy interview reports showed that suicide completers express self-deprecation and show changes in sleep and appetite. Thus, the findings of the psychological autopsy interview reports were planned to be incorporated into video clip scenarios. It has also been planned that the characters of video clips include a job-seeker (aged 20–30, female), a self-employed person (middle aged, male), and a retired person (over 70 years old, male). Herein, from August 2019 to February 2020, the workbook, manuscript of lecture, and video clips of “Suicide CARE” were revised. Since “Suicide CARE” version 2.0 was developed based on extensive international literature reviews and the psychological characteristics of more than 300,000 Koreans, it is expected to enhance the effectiveness of gatekeeper training. In “Suicide CARE” version 2.0, educational video clips are regarded as an important component because it is a key medium that delivers the main contents of education to the trainee. Herein, as shown in Table 3, “Suicide CARE” has been updated from version 1.6 to 2.0.¹¹⁴ In terms of a utilization plan, from now on it is expected that all gatekeeper education programs be conducted using “Suicide CARE” version 2.0. Moreover, it is expected that “Suicide CARE” version 2.0 be positioned as the basic framework for many developing gatekeeper training programs for suicide prevention in Korea in the near future. However, owing to the limited production cost, there has been a limit on capturing visual quality that can convey empathy and emotion along with educational content. In the future, when revising “Suicide CARE” version 2.0 or when creating a specialized program for other special roles, such as firefighters and soldiers, it is necessary to reflect sufficient production costs in the production of the video when forecasting a budget.

Acknowledgments

We would like to express our sincere gratitude to Prof. Se-Won Lim for his dedication to the development of “Suicide CARE” versions 1.0 and 1.6. This work was supported by the Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea, version 2.0, development grant from the Korea Suicide Prevention Center. This work was also supported by the Korea Psychological Autopsy Center.

Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

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