



Effects of School Bullying Prevention Camp on the Adolescent Perpetrators of School Violence

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Objectives: The purpose of this study was to evaluate the effects of a school bullying prevention camp for adolescent perpetrators of school violence.

Methods: A total of 95 adolescents (boys=73, girls=22) were included in this study. The changes after the program were evaluated using several self-rating scales for the assessment of the degree of depression, loneliness, impulsivity, self-esteem, and interpersonal reactivity compared with the baseline scales.

Results: The school bullying prevention camp significantly reduced the degree of depression severity ($z=-5.874$, $p<0.001$) and impulsivity scale ($z=-3.861$, $p<0.001$), while increasing self-esteem ($z=-2.091$, $p=0.037$). The degree of depression severity ($z=-4.635$, $p<0.001$), loneliness ($z=-2.168$, $p=0.030$), and impulsivity ($z=-2.987$, $p=0.003$) significantly reduced, whereas self-esteem significantly increased ($z=-2.221$, $p=0.026$) for male students who had no history of child abuse. However, there were no significant changes after the program for the degree of depression, loneliness, impulsivity, self-esteem, and interpersonal reactivity among female students with a history of child abuse.

Conclusion: The results of our study suggest that the development of diverse standardized guidance programs is necessary for teenagers with different characteristics and backgrounds. Such programs are expected to be more effective in preventing school violence.

Key Words: School bullying prevention camp program; Depression; Impulsivity; Self esteem; Empathy; Bullying; Adolescents; Child abuse.

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INTRODUCTION

Approximately 40% of middle school students in South Korea have been involved in school violence or bullying [1]. In 2008, 10.2% of 2926 students aged 11–16 years in South Korea were reported to have experienced bullying from their peers [2]. Persistent school violence may damage the victim's adaptive functions and leave serious mental scars, as well as lead to various other issues, such as behavioral problems, substance abuse, and legal complications for the adolescent perpetrators.

The Act on the Prevention of and Countermeasures against Violence in Schools in South Korea was enacted in 2004. However, the law focuses on protection and treatment of the victims while focusing on social and legal regulations for the perpetrators, but fails to address the perpetrators' mental

vulnerability related to behavioral problems, thus limiting the fundamental prevention of repeated school violence [3]. Thus, the Act on the Prevention of and Countermeasures against Violence in Schools was amended in 2012, which introduced a therapeutic perspective for the perpetrators [3]. In 2013, the Korean Neuropsychiatric Association and National Police Agency jointly developed a school bullying prevention program (the Standard Guidance Program). The program is currently being run in hospitals and clinics nationwide [4,5].

The Standard Guidance Program is an 8-session cognitive behavioral therapy-based school bullying prevention program that was developed for the purpose of improving the capability in impulsivity, emotional control, and empathy of school violence perpetrators [5]. The program is run by psychiatrists or psychologists, who perform baseline and post-intervention psychiatric assessments, supervise the overall program, and advise on future intervention for the participants. The effectiveness of the program has been verified

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previously [4,5].

Physical activity reduces depression and anxiety and increases self-esteem in adolescents [6,7]. Meditation-based camp programs can reduce depression and anxiety, increase self-esteem and positive emotions, and decrease negative emotions [8]. Although a clustered randomized controlled trial evaluation on the effectiveness of the program presumably failed to find meaningful outcome, the 'Boost Camp', a two-day school-based transdiagnostic prevention program in Belgium, reportedly had the effect on short-term emotional control [9].

As the Chungnam region in South Korea has a low population density, and it is difficult for the school police to bring school violence perpetrators to a psychiatrist, the Gongju National Hospital implemented a two-day school bullying prevention camp based on the Standard Guidance Program for perpetrators called the Standard Guidance School with cooperation from the Chungnam Provincial Police Agency. In this study, we aimed to examine the sociodemographic characteristics and diagnosis of students who participated in the Standard Guidance School from 2017 to 2019 and evaluate their changes after treatment to determine the effectiveness of the Standard Guidance School. We also examined the factors related to treatment, ultimately to present foundational data for developing various programs tailored to school violence perpetrators.

METHOD

Participants and procedure

Among school violence adolescent perpetrators identified by the Chungcheong Provincial Police Agency from 2017 to 2019, 97 first-time offenders involved in minor incidents with a high potential for change through guidance, as indicated by the school police officers, consented to participate in the study. After excluding two students who were only victims of school violence, data from 95 participants were analyzed.

With a consent from the developer [5] of the Standard Guidance Program, the Standard Guidance School was run 5–6 times annually from 2017 to 2019, and a meeting and mental health training were held for the Chungnam and Sejong school police officers in the beginning of the year. This program is an 8-session cognitive behavioral therapy program with 4–8 participants per program and 60 minutes per session (Supplementary Table 1 in the online-only Data Supplement) [4]. In the past, the program was run once a week (2 sessions for visit) for 4 weeks, but our Standard Guidance School was run as a 2-day, 1-night camp program during which all 8 sessions were run by a psychologist, with 'physical activities for improving relationships' and 'breathing relaxation pro-

gram' added. Additionally, 2 or 3 school police officers in each region participated in 'a talk with a mentor' with our team and stayed with the adolescents in their rooms (Supplementary Table 2 in the online-only Data Supplement). A psychiatrist first interviewed the students and provided overall advice on the program, including the approach to be taken for each adolescent, during our team meeting and upon completion of the program. The psychiatrist and our team provided advice to the school police officers in the respective regions based on the results of the interview and program. The timetable for the program is shown in Supplementary Table 3 (in the online-only Data Supplement).

Data collection and instruments

This study was approved by the Institutional Review Board of the Gongju National Hospital in 2020 (2020-07). The study was conducted with reference to the final report for the Standard Guidance Schools conducted from 2017 to 2019 [10–12]. The report cards sent to each student included the questionnaire coding data before and after the program and a report from a psychiatrist on each student (history of child abuse, living with parents, socioeconomic status, history of school violence perpetration/victimization, provisional diagnosis, and future intervention plans). The following questionnaires were used for the baseline and post-program assessments.

The Children's Depression Inventory (CDI) is a modified version of the Beck's Depression Inventory for use in children and adolescents, and this scale was developed by Kovacs [13] and adapted into Korean by Cho and Lee [14]. The scale consists of 27 items, with each item rated on a 3-point scale from 0 to 2, with a higher score indicating a higher level of depression.

The UCLA Loneliness Scale was developed by Russell et al. [15] and adapted by Kim and Kim [16]. The scale consists of 20 items, with each item rated on a 4-point scale from 1 to 4, with a higher score indicating lower loneliness.

The Barratt Impulsiveness Scale (BIS) was developed by Barratt [17] and adapted by Lee [18]. The scale consists of 23 items rated on a 4-point scale, with a higher score indicating greater impulsiveness.

The Self-Esteem Scale (SES) was developed by Rosenberg [19] and adapted by Jeon [20]. The scale consists of 10 items rated on a 4-point scale from 1 to 4, with a higher score indicating greater self-esteem.

The Interpersonal Reactivity Index (IRI) was developed by Davis [21] and adapted by Park [22]. The scale consists of 28 items rated on a 5-point scale from 0 to 4, with a higher score indicating greater empathy.

Statistical analysis

The distribution of participants' demographic data and suspected diagnosis were analyzed using descriptive statistics. Differences in provisional diagnoses and history of child abuse according to sex were analyzed using chi-square tests. Changes in depression, loneliness, impulsiveness, self-esteem, and empathy after the program were analyzed using Wilcoxon's signed rank test, and post-program changes were analyzed specifically for sex, age, and child abuse subgroups. All statistical analyses were performed using IBM SPSS statistics version 24.0 (IBM Corp., Armonk, NY, USA), and statistical significance was set at $p < 0.05$.

RESULTS

Participants' characteristics

Of the 95 participants, 73 were boys (76.8%) and 22 were girls (23.2%). The mean age was 15.7 ± 1.19 years (range, 13–18 years). The female group (16.23 years) was significantly older than the male group (15.60 years). Socioeconomic status was predominantly low ($n=50$, 52.6%) and middle ($n=42$, 44.2%). The reason for referral was primarily violence ($n=70$, 73.7%), specifically, 14 students with school violence problems, 5 students with school rule violations, and 6 students with both violence and theft. Forty-six (48.4%) participants lived with both biological parents, while the remaining participants lived with their grandparents, single parent, step-parents, or lived in an orphanage. Seventy-two (75.8%) had only been the perpetrators of school violence, while 17 (17.9%) were both perpetrators and victims of school violence. After the program, 26 (27.4%) were recommended to undergo counseling, and 27 (28.4%) were recommended to undergo psychiatric evaluation. Thirty-five participants (36.8%) were recommended to undergo psychiatric treatment (Table 1).

Distribution of provisional diagnosis by sex

The provisional diagnoses were attention-deficit/hyperactivity disorder (ADHD, $n=22$, 23.2%), depressive disorder ($n=19$, 20.0%), conduct disorder (CD, $n=10$, 10.5%), oppositional defiant disorder (ODD, $n=5$, 5.3%), adjustment disorder ($n=5$, 5.3%), posttraumatic stress disorder (PTSD, $n=4$, 4.2%), social anxiety disorder ($n=3$, 3.2%), internet gaming disorder (IG, $n=1$, 1.1%), and social communication disorder ($n=1$, 1.1%). Twenty-four patients (25.3%) were not diagnosed. Thirty-three participants (34.7%) met the criteria for 2 or more diagnoses.

The participants were divided into externalizing group (ADHD, CD, ODD, etc.), internalizing group (depressive disorder, anxiety disorder, PTSD, etc.), and mixed group (both externalizing and internalizing) and were compared based

Table 1. Descriptive characteristics of sample

Classification	Values
Sex	
Male	73 (76.8)
Female	22 (23.2)
Participation year	
2017	30 (31.6)
2018	39 (41.1)
2019	26 (27.4)
Reasons for request	
Violence	70 (73.7)
Only bullying	14 (14.7)
Violation of school rule	5 (5.3)
Stealing and violence	6 (6.3)
Living with	
Both parents	46 (48.4)
Grandparents	9 (9.5)
Single parent	29 (32.5)
Other	11 (11.6)
Self-Esteem Scale	
Upper	3 (3.2)
Middle	42 (44.2)
Lower	50 (52.6)
Child abuse history	
No	59 (62.1)
Yes	36 (37.9)
Bullying history	
None	6 (6.3)
Bully	72 (75.8)
Bully-victim	17 (17.9)
Recommend	
Information et al.	7 (7.4)
Counselling	26 (27.4)
Evaluation	27 (28.4)
Evaluation and treatment	35 (36.8)

Data are presented as n (%)

on sex (Table 2). There were more male students with an externalizing group and more female students with an internalizing group, and the differences were statistically significant (odds ratio=22.318, $p < 0.001$).

Changes after the program

Compared to the baseline, the participants showed significant reductions in the depression score ($Z = -5.874$, $p < 0.001$) and impulsiveness score ($Z = -3.861$, $p < 0.001$), and a significant increase in the self-esteem score ($Z = -2.091$, $p = 0.037$) after the program. On the other hand, there were no significant changes in loneliness and empathy scores (Table 3). Additionally, the participants with an empathy score of 60 or lower were further analyzed, and these participants did not show

Table 2. Provisional diagnostic distribution

	Male (n=73)	Female (n=22)	Total (n=95)
None	21 (28.8)	3 (13.6)	24 (25.3)
Externalizing	32 (43.8)*	1 (4.55)	33 (34.7)
Internalizing	11 (15.1)	12 (54.6)*	23 (24.2)
Mixed	9 (12.3)	6 (27.3)	15 (15.8)

Data are presented as n (%). Externalizing: attention-deficit/hyperactivity disorder, conduct disorder, oppositional defiant disorder, etc.; internalizing: depression, anxiety disorder, posttraumatic stress disorder, etc.; mixed: internalizing and externalizing disorder. *p<0.001

a significant change in their empathy scores.

Changes after the program by sex and history of child abuse

A total of 37.9% of the participants reported a childhood abuse experience, and the rate of childhood abuse experience was 5.466 times higher among female participants than male participants (odds ratio=5.466, p=0.019). Thus, we compared the changes after the program based on sex and history of childhood abuse, as shown in Table 4. The results showed that male participants without childhood abuse experience

Table 3. Comparison of depression, loneliness, impulsivity, self-esteem, and interpersonal reactivity scales between pre and post school bullying prevention camp in subjects

	Preprogram	Postprogram	Z	Wilcoxon signed rank test probability
Children's Depression Inventory	11.57 (9.52)	6.89 (8.64)	-5.874	<0.001*
UCLA Loneliness Scale	36.79 (9.26)	35.53 (10.27)	-1.721	0.085
Barratt Impulsiveness Scale	71.23 (9.95)	68.35 (10.08)	-3.861	<0.001*
Self-Esteem Scale	28.87 (4.79)	29.78 (5.18)	-2.091	0.037†
Interpersonal Reactivity Index	53.34 (10.67)	54.47 (12.68)	-1.207	0.227

Data are presented as mean (standard deviation). *p<0.01, †p<0.05

Table 4. Changes in scales after the school bullying prevention camp in each grouped according to sex and child abuse history

	Preprogram	Postprogram	Z	Wilcoxon signed rank test probability
Male with no child abuse history (n=50)				
CDI	9.98 (7.66)	4.78 (5.30)	-4.635	<0.001*
UCLA	36.44 (9.13)	33.74 (9.92)	-2.168	0.030†
BIS	70.92 (9.56)	67.28 (9.18)	-2.987	0.003*
SES	29.68 (4.84)	31.20 (4.76)	-2.221	0.026†
IRI	53.14 (10.87)	53.76 (11.35)	-0.729	0.466
Male with child abuse history (n=23)				
CDI	11.30 (10.43)	5.70 (7.12)	-3.221	0.001*
UCLA	35.87 (8.88)	34.78 (10.38)	-1.294	0.196
BIS	69.65 (9.41)	68.57 (9.60)	-1.104	0.270
SES	29.00 (4.01)	28.48 (4.94)	-0.941	0.347
IRI	50.04 (9.04)	50.91 (14.10)	-0.052	0.908
Female with no child abuse history (n=9)				
CDI	11.67 (5.10)	6.33 (7.23)	-2.371	0.018†
UCLA	37.44 (13.45)	40.44 (13.97)	-0.912	0.362
BIS	68.67 (9.21)	66.11 (9.53)	-1.560	0.119
SES	28.11 (6.15)	28.78 (6.74)	-0.923	0.356
IRI	57.22 (8.64)	61.44 (12.29)	-1.684	0.092
Female with child abuse history (n=13)				
CDI	18.08 (14.03)	17.54 (14.08)	-0.491	0.624
UCLA	39.31 (7.57)	40.31 (6.32)	-0.245	0.806
BIS	77.00 (11.70)	73.62 (12.06)	-0.537	0.124
SES	26.08 (4.23)	27.31 (4.84)	-1.505	0.132
IRI	57.23 (12.64)	58.69 (13.62)	-0.767	0.443

Data are presented as mean (standard deviation). *p<0.01, †p<0.05. CDI: Children's Depression Inventory, UCLA: UCLA Loneliness Scale, BIS: Barratt Impulsiveness Scale, SES: Self-Esteem Scale, IRI: Interpersonal Reactivity Index

Table 5. Changes in scales after the school bullying prevention camp in each grouped according to age

	Preprogram	Postprogram	Z	Wilcoxon signed rank test probability
Age ≤ 16 (n=67)				
CDI	11.42 (9.01)	6.66 (7.48)	-4.926	<0.001*
UCLA	37.04 (9.55)	35.52 (10.26)	-2.181	0.029 [†]
BIS	71.76 (10.27)	69.12 (10.16)	-3.053	0.002*
SES	28.85 (4.33)	29.93 (5.11)	-2.160	0.031 [†]
IRI	52.22 (10.88)	53.55 (13.18)	-1.042	0.297
Age > 16 (n=28)				
CDI	11.93 (10.81)	7.46 (11.09)	-3.220	0.001*
UCLA	36.18 (8.67)	35.54 (10.48)	-0.166	0.869
BIS	69.96 (9.18)	66.50 (9.80)	-2.292	0.022 [†]
SES	28.93 (5.84)	29.43 (5.41)	-0.445	0.656
IRI	56.00 (9.80)	56.68 (11.31)	-0.573	0.567

Data are presented as mean (standard deviation). * $p < 0.01$, [†] $p < 0.05$. CDI: Children's Depression Inventory, UCLA: UCLA Loneliness Sscale, BIS: Barratt Impulsiveness Scale, SES: Self-Esteem Scale, IRI: Interpersonal Reactivity Index

had significant reductions in the depression score ($Z = -4.635$, $p < 0.001$), loneliness score ($Z = -2.168$, $p = 0.030$), and impulsiveness score ($Z = -2.987$, $p = 0.003$), and a significant increase in the self-esteem score ($Z = -2.221$, $p = 0.026$), but they did not show significant changes in the empathy score. Male participants with childhood abuse experience showed a significant reduction only in the depression score ($Z = -3.221$, $p = 0.001$), with no significant changes in loneliness, impulsiveness, self-esteem, and empathy scores. Female participants without childhood abuse experience showed a significant reduction only in the depression score ($Z = -2.371$, $p = 0.018$) with no significant changes in loneliness, impulsiveness, self-esteem, and empathy scores. Female participants with childhood abuse experience did not show significant changes in depression, loneliness, impulsiveness, self-esteem, and empathy scores.

Changes after the program by age

The participants were divided into age groups of ≤16 years and >16 years to compare their changes after the program. There were 67 participants in the ≤16 years group, and this group showed significant reductions in the depression ($Z = -4.926$, $p < 0.001$), loneliness ($Z = -2.181$, $p = 0.029$), and impulsiveness scores ($Z = -3.053$, $p = 0.002$), and a significant increase in the self-esteem score ($Z = -2.160$, $p = 0.031$), with no significant changes in the empathy score after the program. The >16 years group consisted of 28 participants, and they showed significant reductions in the depression ($Z = -3.220$, $p = 0.001$) and impulsiveness scores ($Z = -2.292$, $p = 0.022$), with no significant changes in loneliness, self-esteem, and empathy scores (Table 5).

DISCUSSION

This study examined the changes in depression, loneli-

ness, impulsiveness, self-esteem, and empathy after participation in the Standard Guidance School, a camp-type school violence prevention program for perpetrators, among adolescent school violence perpetrators referred by the school police officers in the Chungnam region of South Korea. A total of 47.4% of the participants lived with both of their biological parents, which is a markedly lower percentage compared to 87% reported in a large-scale study [23]. While 57.6% of the participants in a nationwide Standard Guidance Program administered in 2015 were middle class, 52% of the participants in this study reported their socioeconomic level as 'low.' It can be observed that the subjects of this program were socioeconomically vulnerable. A provisional psychiatric diagnosis was established for 73.2% of the participants in this study, which is higher than the percentage of 21.5% reported for the 2015 Standard Guidance Program. A previous study reported that children and adolescents exposed to poverty, child welfare system, and adolescent legal system are at a higher risk for mental health problems [24].

School violence programs are known to be effective when run by experts and when they directly deal with the problem of school violence in a small number of participants [25,26]. Additionally, these programs are reported to be effective not only in reducing violent behaviors but also in reducing depression and reinforcing positive emotions, such as self-esteem [26]. Depression is a potent psychological factor that best explains violent and delinquent behaviors in adolescents [27,28]. Furthermore, adolescents with low self-esteem are vulnerable to engaging in antisocial behaviors or delinquency because they depreciate themselves and society [29], and to compensate for their self-esteem, they may demonstrate aggressive behaviors toward others [30]. As with the 2015 Standard Guidance Program [4], the present program is also expected to lower participants' involvement in school vio-

lence perpetration by reducing their depression and increasing self-esteem.

In addition to the reduced depression score and increased self-esteem score observed in the Standard Guidance Program, the present program also significantly reduced the impulsiveness score. The two programs differed in their participant pool, as 16.7% of the participants of the previous program had an externalizing disorder (ADHD 6.8%) and an impulsiveness score of 45.64 (before program), 34.0% of the participants of our program had an externalizing disorder (ADHD 22.7%) and an impulsiveness score of 70.95 (before program). The difference in participant selection may be attributable to the fact that the school police officers were introduced to and trained about potential clinical groups who could be referred for treatment based on a psychiatric evaluation during an annual meeting with the officers. Moreover, the results are in line with past findings that improvement of impulsiveness, which had been a focus when developing the Standard Guidance Program, was better shown in participants with high baseline impulsiveness [4,31]. Although it was reported that the Standard Guidance Program improved empathy in adolescent school violence perpetrators with low baseline empathy [4], no such changes were observed in this program. In the light of study results showing that empathy can only be improved by implementing various techniques in the long term [32], it is speculated that a short camp for 2 days would have been insufficient to induce changes in empathy.

After participation in this program, male students without childhood abuse experience (n=50) had decreased depression, loneliness, and impulsiveness with improved self-esteem, showing that the program was effective in all aspects with the exception of empathy. Positive childhood experiences serve as a buffer against negative emotions that occur during growth, such as depression and anxiety [33], but adverse childhood experiences, such as child abuse may induce various mental health problems [7] and hinder the improvement of symptoms, such as depression, loneliness, and impulsivity. Moreover, impulsiveness in male students is further related to sensation seeking [34], and physical activities reduce depression and anxiety and increase self-esteem [6,7]. In addition to the existing 8-session cognitive behavioral therapy program, some factors might supposedly take meaningful therapeutic roles within our program. Those are: First, camp style program environment in which all participants (adolescents, school police officers, and mental health professionals) stay naturally close together to improve mutual understanding; second, 'relationship-promoting physical activities,' 'abdominal relaxed breathing training,' and 'talking with mentors (polices, mental health professional) are added. But more structural follow-up studies are necessary.

While our program effectively reduced depression in male students with childhood abuse experience and female students without childhood abuse experience, the program was not effective in female students with childhood abuse experience. Students with childhood abuse experience display trauma-related emotions, such as fear, anger, guilt, shame, disgust, sadness, and helplessness, but these symptoms can be improved through dialectical behavior therapy [35]. In the future, our program should additionally implement such a therapeutic approach focused on PTSD for female adolescent perpetrators with childhood abuse experience.

In this study, adolescent participants aged >16 years showed decreased depression and impulsiveness. Participants aged 16 years or younger also showed decreased loneliness, depression, and impulsiveness, and had improved self-esteem. This is consistent with previous findings that the Standard Guidance Program is particularly effective for middle school students, who are in turbulent period in terms of emotional and physical development [4], and the present program seems to have been effective in improving loneliness and self-esteem because of the nature of a camp-type program with additional activities for improving relationships.

This study modified the Standard Guidance Program, which was developed as a psychiatric evaluation and cognitive behavioral program for use in Korea, to a camp-type program for use in a non-metropolitan region and investigated its effectiveness. Particularly, this study was significant in that it observed that the camp-type Standard Guidance School was more effective for male students without experience of childhood abuse.

This study has several limitations. First, we did not compare the participants with a control group that did not participate in the program. Second, post-program changes were only analyzed with a self-reported questionnaire. Third, a considerable number of the participants were considered to be potential patients who would benefit from psychiatric treatment, which limits the generalizability of the findings. Fourth, because the duration of the program was only 2 days, we could not observe long-term changes. Fifth, the analyses were performed without controlling for various therapeutic factors. Sixth, the number of female students and students with childhood abuse experience was relatively small, which limits statistical interpretation even with nonparametric statistical methods.

CONCLUSION

This study analyzed the changes in depression, loneliness, impulsiveness, self-esteem, and empathy after participation in the Standard Guidance School, a camp-type school vio-

lence prevention program for perpetrators, among adolescent school violence perpetrators referred by school police officers in the Chungnam region of South Korea. After the program, the participants showed reduced depression and impulsiveness with improved self-esteem. One notable finding was that the male students without childhood abuse experience showed reduced depression, loneliness, and impulsiveness and improved self-esteem, while female students with childhood abuse experience showed no significant changes. Furthermore, while high school students showed decreased depression and impulsiveness, middle school students also showed decreased loneliness and improved self-esteem. This study is expected to contribute to modifying the Standard Guidance Program to be tailored to participants of different backgrounds.

Supplementary Materials

The online-only Data Supplement is available with this article at <https://doi.org/10.5765/jkacap.200043>.

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Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Je Jung Lee, Bung-Nyun Kim. Data curation: Je Jung Lee. Formal analysis: Je Jung Lee. Funding acquisition: Je Jung Lee. Investigation: Je Jung Lee, Jong Hyun Kim. Methodology: Je Jung Lee, Bung-Nyun Kim. Supervision: Je Jung Lee, Bung-Nyun Kim. Visualization: Je Jung Lee, Jong Hyun Kim. Writing—original draft: Je Jung Lee, Jong Hyun Kim. Writing—review & editing: all authors.

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Supplementary Table 1. Schedule of the 8-session school bullying prevention camp

Session	Topic	Contents
1	Motivating participation and forming rapport	Understand the purpose and necessity of participating in the program Set rules for the duration of program participation Get to know each other in the program
2	Correctly understanding bullying	Correctly understand the concept and scope of bullying Understand the outcomes of bullying, its ripple effects, and the possible punishment for bullying in school
3	Developing perspective-taking ability Improving empathetic ability	Understand the other person's perspective Think from the perspective of the protagonist in the video Empathize with a victim's situation and feelings through indirect experience
4	Anger management (controlling anger I)	Feeling thermometer: understand the extent of anger Discover my anger patterns, find my real feelings behind anger
5	Anger management (controlling anger II)	Understand and correct automatic thinking that causes anger Learn how to handle negative feelings
6	Self-control and problem-solving	Developing a personalized conflict coping and conflict resolution mechanism Learn ways to stop and change when negative feelings begin to form
7	Communication training	Learn appropriate social skills in peer relations Train how to understand the other person and talk to him/her based on empathic understanding
8	Positive self-image, finding hope	Discover how I changed through the program Share their vision and dreams and in doing so build mutual emotional support Consider what efforts are needed to realize my dream

Supplementary Table 2. Comparison of programs

	Standard Guidance Program	Standard Guidance School (current research program)
Duration	4–5 weeks (once a week)	1 night 2 day
Type	Visit	Camp
Place	Program room	Program room, bed room, living room, gym
Number of participants	4–8	6–8
Number of program staff	3–5	7–8 (+ SPO 3–4)
Contents of operation	8-session CBT Pre and post self-reports Pre and post psychiatric interviews Pre and post operator meeting	8-session CBT Pre and post self-reports Pre and post psychiatric interviews Pre and post staff meeting Relationship-promoting physical activities Abdominal relaxed breathing training Talking with mentors (SPO, mental health professional)

SPO: school police officer, CBT: cognitive-behavioral therapy

Supplementary Table 3. Schedule of the school bullying prevention camp

Time table	Activity contents			
	Participants	SPO or program staff		
Day 1	09:30–09:40 (10 min)	Introduce program hosts and the facility		
	09:40–11:00 (80 min)	Perform pre self-report	Psychiatric interview (preliminary evaluation)	Preliminary meeting (with program staff and SPO)
	11:00–11:50 (50 min)	① Understanding the purpose of the program and setting rules		
	11:50–13:20 (90 min)	Lunch		Staff meeting (with program staff and psychiatrist)
	13:20–14:20 (60 min)	② Correctly understanding bullying		Hospital tour (due to SPO choice)
	14:20–14:30 (10 min)	Break		
	14:30–15:30 (60 min)	③ Developing perspective-taking ability and improving empathetic ability		
	15:30–15:40 (10 min)	Change attires and move to the gym		Participant management (by SPO)
	15:40–17:00 (80 min)	Relationship-improving physical activities		
	17:00–18:30 (90 min)	Dinner and rest		
	18:30–19:30 (60 min)	④ Anger management I		
	19:40–20:40 (60 min)	⑤ Self-control and problem-solving ⑥ Communication training		
	20:40–22:00 (80 min)	Talk with mentors: sharing thoughts and feelings		Participation (with SPO and program staff)
	22:00–23:30 (90 min)	Rest and prepare for sleep (additional tests)/ 23:30 sleep		Participant management (by SPO)
Day 2	07:00–08:00 (60 min)	Rise and get ready		Participant management (by SPO)
	08:00–09:00 (60 min)	Breakfast (outdoor walk)		
	09:00–10:00 (60 min)	Abdominal relaxed breathing training Review of previous sessions ⑦ Anger management II: relaxed breathing program		
	10:00–10:40 (40 min)	⑧ Building positive self-image		
	10:40–12:00 (80 min)	Perform Post self-report	Psychiatric interview (final evaluation)	
	12:00–13:00 (60 min)	Lunch		Final meeting (psychiatrists and staff discuss participants with SPO)
	13:00–13:30 (30 min)	End of program; return home		

SPO: school police officer