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A SINGLE-SESSION UNIVERSAL MENTAL HEALTH PROMOTION PROGRAM IN JAPANESE SCHOOLS: A PILOT STUDY

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A program based on cognitive behavioral therapy was developed for Japanese junior high school students aged 12–15 years. It consists of a single 50-minute session that targets a reduction in irrational beliefs, which is related to the improvement of psychological distress, such as anxiety and depression. The students were assigned to an intervention group ($n = 238$) and a control group ($n = 277$); the latter received an assertiveness training program. Students completed questionnaires including scales addressing irrational beliefs and self-esteem at pre- and post-program. The results revealed that, despite its short length, the OKS program significantly reduced irrational beliefs in the intervention group, in comparison to the control group. Moreover, both programs increased self-esteem. These findings imply the feasibility of a single-session universal mental health promotion program in Japanese schools.

Keywords: single session, universal mental health promotion in schools, child and adolescent cognitive behavioral therapy, irrational beliefs, self-esteem, friend-detach.

Japanese adolescents are facing increasing rates of mental health problems (Tanaka, Terashima, Borres, & Thulesius, 2012). In a recent report (Japan Ministry

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of Education, Culture, Sports, Science and Technology, 2015), nonattendance of more than 30 days by students (aged 12–15 years) in Japanese junior high schools was reported to be 98,428 (2.83% of a total of 3,481,839 students). These absences related to factors including psychological distress, for instance, anxiety (29.7%), lethargy (30.6%), and difficulties in relationships with peers (18.1%). Houri, Nam, Choe, Min, and Matsumoto (2012) found in an international comparative study that Japanese students aged 14–15 years reported more difficulties in interpersonal relationships and more feelings of powerlessness than did their Korean and Chinese counterparts.

Students in distress need appropriate mental health promotion or preventive services. Preventive approaches toward mental health disorder symptoms are divided into three levels: (1) universal, (2) selective, and (3) indicated (Mrazek & Haggerty, 1994). *Universal-level mental health promotion programs* target all students in given school settings, and are at an advantage with respect to reducing stigma, and students accessing treatment and sustaining acquired competencies (Miller et al., 2011). Findings from previous studies indicate that universal programs effectively prevent or alleviate a range of distress, including anxiety, depression, and stress (Domitrovich et al., 2010; Fisak, Richard, & Mann, 2011). Therefore, there has been increasing interest in universal preventative interventions to promote positive mental health and reduce the risk of mental illness and psychological distress (Guvå & Hylander, 2012; Kraag et al., 2007).

Schools play a significant role in promoting positive mental health and providing support (Green et al., 2013). For example, FRIENDS is a school-based universal preventive cognitive behavioral therapy (CBT) program that has had its effectiveness demonstrated in Australian school settings (Barrett, 2010; Barrett, Lowry-Webster, & Turner, 1999) and has been recommended as the sole child and adolescent support program for preventing anxiety and depression (World Health Organization, 2004). However, reports on its effectiveness in non-Western countries are inconsistent (Matsumoto & Shimizu, 2016). This indicates that it may be necessary to consider the background of the subject group. There may be differences in non-Western school systems, cultural norms and values, and interpersonal characteristics of participants, such as being less assertive and unwilling to argue in social interactions (Ishikawa et al., 2012). Japanese people, for instance, tend to emphasize collectivistic aspects of the self and prefer group conformity rather than an individualistic self (Markus & Kitayama, 1991). CBT programs sometimes require the disclosure of one's feelings and thoughts to others in group work, which some Japanese adolescents hesitate to do. Thus, programs based on a Western cultural background should be adapted and adequately modified to other cultures (Hwang, 2006; Ishikawa et al., 2012; Lau, 2006). Weare and Nind (2011) conducted a systematic review of mental health promotion programs in school settings; however, there exist no examples of evidence-based programs for mental health promotion in Japan.

Most effective therapies in evidence-based psychotherapy are based on CBT (Chambless & Ollendick, 2001). CBT is therefore one of the most suitable therapies for universal preventive education. Its effectiveness has been shown in individual, group, and class implementation (Vernon & Bernard, 2006). Moreover, it can be implemented irrespective of students' specific problems or symptoms (Weare & Nind, 2011). CBT can often be accommodated in school settings as its components (e.g., psychoeducation, skill building, between-session work, and progress monitoring) commonly already exist within schools; this may help teachers to accept CBT (Mennuti, Freeman, & Christner, 2006). Sato et al. (2009) reported the efficacy of school-based cognitive-behavioral intervention for prevention of depressive symptoms, including the restructuring of dysfunctional thoughts (irrational beliefs). *Irrational beliefs* are rigid, inaccurate, or illogical beliefs that would mediate between external events and emotions. In CBT, irrational beliefs play a central role. They have been shown to be related to a variety of types of psychological distress, such as anxiety and depression (Bridges & Harnish, 2010). Distorted cognitive processing in children and adolescents is represented by irrational beliefs such as selective abstraction, overgeneralization, and personalization (e.g., Kingery et al., 2009). Erroneous belief systems, such as irrational beliefs, contribute to the cognitive vulnerability that predisposes an individual to mental health problems (Riskind & Black, 2005).

In 2014, we developed a new type of self-help form named OKS (onayami kaiketsu shiito), which translates as "problem-solving sheet" (Mio & Matsumoto, 2014). The OKS program is a brief cognitive-behavioral intervention completed in a single session using the OKS form. In this study, we piloted the OKS program, which is designed to alleviate irrational beliefs held by children or adolescents, and to construct a healthy mental status, from which it would be more difficult to relapse into an unhealthy state of mind represented by related psychological distress, such as anxiety and depression. In the present study, we included a measure for assessing adolescents' irrational beliefs, and predicted that changes in irrational beliefs would be related to improvement of anxiety and depression.

Self-esteem reflects an overall subjective evaluation of personal worth (Marsh & O'Mara, 2008; Rosenberg, 1965). The Rosenberg Self-Esteem Scale (Rosenberg, 1965) assesses explicit positive and negative attitudes about the self. In Japan, the self-esteem of students aged 12–15 years is lower than that of their counterparts in other countries (Government of Japan Cabinet Office, 2014). Regardless of culture or ethnicity, the desire to recognize oneself is common. However, educational policies, especially fundamental policies on aspects such as what is desirable, what should be done, and religious and ethnic values, are different from culture to culture. Furusho (2009) reported that Japanese people tend to suppress explicit expressions of self-esteem. Further, Oshio, Okada, Mogaki, Namikawa,

and Wakita (2014) found that mean self-esteem scores tended to decrease each survey year in every generation. As with irrational beliefs, self-esteem has been reported to be correlated with a variety of psychological distress outcomes, including depression (e.g., Abela, 2002) and anxiety (Lohr & Bonge, 1981). Zeigler-Hill (2011) reported that low self-esteem is associated with anxiety and depression in a distress context.

In Japanese school settings, universal preventive programs have not been systematically implemented due to the lack of any psychoeducational program in the school curriculum, even though its necessity has been recognized (Yamazaki, Toda, & Watanabe, 2013). It follows that lengthy programs would be difficult or even impossible to implement in Japanese schools (Yamazaki et al., 2013). Therefore, to disseminate universal preventive programs in Japan, it is important to consider the program's duration as well as its effectiveness (Miyake, Yoshikawa, & Takada, 2008). For example, Ollendick et al. (2009) conducted a randomized controlled trial of a single-session exposure treatment for specific phobias, based on CBT, and reported its effectiveness for children and adolescents aged between 7 and 16 years old. However, the potential of providing a single-session universal program based on CBT in Japanese school settings remains to be shown.

The goal of this pilot study was thus to develop a single-session universal program (the OKS program), consider its adaptation to Japanese school settings, and examine the possibilities of its use, compared with the assertiveness training program (AT) currently used in the Tokyo metropolitan area as an active control group. The AT requires a similar amount of time to implement as the OKS. Irrational beliefs and self-esteem have been measured as outcome variables to be improved through the mental health promotion programs.

The OKS program includes three elements from CBT's various features. First, a sample story featuring irrational beliefs is provided (Vernon & Bernard, 2006). Second, students' points of view are shifted into their friends' points of view (Dryden & DiGiuseppe, 1990), leading to more objective views. Third, all results from the class lesson regarding beliefs and emotions must be written down in the OKS form and can be reviewed by the user (David, Kangas, Schnur, & Montgomery, 2004). The OKS program thus directly targets the reduction of irrational beliefs and may be more efficacious in reducing irrational beliefs than AT. The theme of the sample story used in the OKS program relates to an irrational belief, "demand for approval," which helps a student explicitly learn that this thought is irrational.

AT is based on rational emotive behavior therapy and behavior therapy (Hiraki, 1993) and it results in improvements in both self-esteem and assertiveness (Lin et al., 2004). However, although rational emotive behavior therapy stresses the positive effects of unconditional self-acceptance and the importance of

de-emphasizing the idea of global self-esteem in the therapeutic process (Sava, Maricuţoiu, Rusu, Macsinga, & Vîrgă, 2011), it does not specifically aim to improve self-esteem as part of the process, even though this may occur. The fact that irrational beliefs appear to be negatively associated with self-esteem, and that there is a link between a high level of irrationality and low self-esteem (Sava et al., 2011), suggests that self-esteem may be better improved through OKS than through AT. Therefore, we formed the following hypotheses:

Hypothesis 1: In comparison with the Assertiveness Training program, the OKS program will reduce irrational belief scores.

Hypothesis 2: In comparison with the Assertiveness Training program, the OKS program will increase self-esteem scores.

Method

Participants

The authors invited schools in the Tokyo metropolitan area to participate, and two public junior high schools (A and B) agreed to do so. The schools had similar socioeconomic profiles, and 515 students participated. The intervention group (i.e., students who completed the OKS) comprised 120 students (57 male, 63 female; aged 13–14 years) from four classes in Grade 8 of School B, and 118 students (51 male, 67 female; aged 12–13 years) from four classes in Grade 7 of School A. The control group (i.e., students who completed the AT) comprised 277 students (179 male, 98 female; aged 12–13 years) from 10 classes in Grade 7 of School B. In school settings everywhere in the world, it is extremely difficult to randomly assign intervention groups and control groups, especially in Japan, where fairness demands that the entire grade receive the same classes, in accordance with government academic curriculum guidelines. As psychological preventive education is not included in the curriculum, it is difficult to execute psychological preventive programs. Both schools requested the same program for the same grade. School reports indicated that no participating students had been diagnosed with mental health problems. Four students' parents did not consent to their children's participation in the research, so data from these students were excluded from the beginning.

Procedure

After the study was approved by Chiba University Ethical Committee, each school principal sent a completed school-level consent form to the university and each student's parents were sent an information sheet and a consent form. Prior to commencing the study, consent sheets were collected from students' parents. Teachers explained the study to students who provided their consent to their teachers in class. Between January and May 2014, both programs

were administered in a single session in a regular 50-minute class. Students completed self-reported questionnaires in their classroom, supervised by the classroom teacher, before and after completing the programs. Students were asked to select the number that best represented their opinion at that moment. The questionnaires' instructions encouraged students to give responses according to their initial judgment. To preserve the programs' fidelity, in the OKS trial, the first author administered all intervention treatments and checked the procedure and contents with the second author using video recording. After the completion of the program, 22 teachers provided reports on their responses regarding the feasibility of the OKS program as a mental health promotion program in their school settings. The questionnaire included the following four questions: (1) "Would this program be helpful in promoting students' mental health?," (2) "Would expense and time constraints be problematic in program implementation, even in a single-session program?," (3) "Are there any problems with having the teachers themselves implement the program?," and (4) "What are the advantages of this program? Please let me know what you noticed."

Design

This is a quasi-experimental design with an intervention group and a control group. Self-reported questionnaires were taken pre-program (Time 1) and post-program (Time 2). In this non-randomized-participants design, each group was assigned by grade. However, pre- and post-test difference analysis could adjust any random individual intercept error, and repeated-measures mixed-effect model analysis could consider fixed effect and random effect separately. In this study, because the programs were conducted in classroom lessons (as part of implementing the intervention at the universal level), all students assigned to the intervention or the control group participated in their respective programs, unless absent on that day. Thus, all students in the class received the program.

Interventions

The OKS program. The OKS was modified from the conventional self-help form often utilized for homework in CBT (David et al., 2004) to be used with Japanese junior high school students. The OKS can automatically organize a student's cognitive process into a 6-column chart if the form is filled out. The OKS program is a brief cognitive behavioral intervention completed in a single session. The purpose of the OKS program is to teach cognitive emotional skills, including how to use the OKS and to grow competencies for mental health promotion for every student in the class at the universal level. The program consists of two parts: psychoeducation for cognitive change and skill practice for problem-solving techniques.

In the psychoeducational section, students learn that unhealthy negative emotions can be changed to healthy negative emotions targeting irrational beliefs,

using the expression "changing red thoughts into blue thoughts." The instructor explains the following: People who experience undesirable activating events will hold a certain type of belief about them. These beliefs lead to emotional, behavioral, and cognitive consequences. In the OKS program, beliefs that lead to unhealthy negative emotions are called *red thoughts*, and those that are less likely to lead to unhealthy negative emotions are called *blue thoughts*. Blue thoughts and red thoughts are named by reference to the emotions they elicit. On the form, the columns' symbolic colors and shapes help students to grasp the concept of red thoughts and blue thoughts. Even red thoughts are useful in the student's daily life; such thoughts are undesirable only when they produce unhealthy negative emotions. Only when in distress should the student aim to transform a thought from red to blue.

In the skill practice section, an example of an activating event is provided in the form of a short sample story about experiencing trouble in peer relationships with ensuing psychological distress. The instructor encourages students to think how the character in the sample story feels and write down her emotions in column C. Then in column A, students write down a precise description of what happened at the time that activated the irrational belief (red thought). After students have written down the red thought in column B, the instructor asks, "If you were your friend, what would you advise from the friend's point of view in this situation?" This answer is written down in column D. This is the key phrase of this program, called *friend-detach*. This question does not intend to change or reconstruct red thoughts (irrational beliefs) directly, but to distance students from red thoughts, which represent illogical, absolutistic, nonevidential, non-reality-based, nonpragmatic, and rigid subjective cognition. When students look at the red thoughts objectively from a distance, the thought itself seems to be transformed. This new thought is written down in column E as a blue thought. At the same time, the blue thought induces functional emotions, which are written down in column F. These functional emotions express alleviated distress, represented using an 'emotional thermometer.'

Students then simulate completing the problem-solving procedure by filling in each column of the OKS, according to the instructions provided. No group work was implemented because some students would be hesitant to give their own opinion explicitly because of the cultural background in Japanese society. Group work may seem to work well in this regard; however, only positive-minded students would thrive in the group work, while students who really need mental health promotion might be left behind. To avoid this possibility, the process proceeds by with the class being treated as a single unit and using a model answer provided by the instructor as the basis, rather than the students' own responses, meaning that students experience a simulated cognitive process. The OKS forms are collected after completion of the program to investigate students' level of understanding by checking each column's content. The instructor teaches

students that they can change their unhealthy negative emotion themselves if they change their irrational beliefs using OKS.

Assertiveness training program (AT). As mentioned earlier, the assertiveness training program is based on rational emotive behavior therapy and behavior therapy (Hiraki, 1993), and it too consists of a psychoeducational and a skill practice section. In the former, students learn assertive communication, including aspects of self-expression, self/other respect, and three types of communication attitude (aggressive, nonassertive, and assertive). The skill-practice section involves several scenarios related to conflicts that are common in daily life.

Measures

Irrational Belief Scale 10. The Japanese Irrational Belief Scale (IBs10; Mio, 2015) measures the level of endorsement of certain types of irrational beliefs and the respondent's degree of irrationality, as described below. It contains 10 items scored on a 4-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). Higher scores indicate stronger endorsement of irrational beliefs as well as a greater distance from preferable cognitive traits. The items are based on the rational living instrument (Ellis & Harper, 1961), as translated by Japanese researchers (Kokubu & Itou, 1981). In a previous study (Mio, 2015), Cronbach's α coefficient was .79. In regard to test–retest reliability, 107 students (43 male, 64 female) completed the IBs10 and subsequently completed it again after a 2-week delay; their initial and subsequent scores were strongly significantly correlated ($r = .73$, $p < .001$). The Japanese Irrational Belief Test R version (Fukui, 2003) and the IBs10 were compared in 172 students (84 male, 88 female); mean scores on each scale were strongly significantly correlated ($r = .80$, $p < .001$).

Rosenberg Self-Esteem Scale Japanese Version. Self-esteem was measured using the Japanese version (RSES-J; Mimura & Griffiths, 2007) of the Rosenberg Self-Esteem Scale (Rosenberg, 1965), which measures global self-esteem and examines individuals' explicit positive and negative attitudes about the self (Huang & Dong, 2012). It contains 10 items rated on a 4-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). Higher scores indicate higher self-esteem. Mimura and Griffiths (2007) reported a Cronbach's α coefficient of .81 for the RSES-J. In this study, Cronbach's α for the OKS group was .80 prior to program completion.

Data Analysis

IBs10 and RSES-J scores were collected prior to program completion (Time 1) and after program completion (Time 2). Participants' scores were analyzed at these time points using a repeated-measures mixed-effects model. Mixed-effects models provide advantages compared with traditional analysis. They provide a

robust analytical approach for addressing problems associated with hierarchical data (e.g., school, class, individuals). In this study, data from each class had a hierarchical structure: random individual and class effects required consideration. The mixed command of STATA v.14.1 was used to perform a multilevel mixed-effect linear regression analysis with an interaction between intervention group and time point as a fixed effect. Individual participants were nested in their class and accordingly analyzed using random intercepts and random slopes for time. This study has universal application in school settings; therefore, outliers were not eliminated. Statistical significance was set at $p < .05$.

Results

Table 1 shows linear predictions of fixed portion scores for each measure after fitting the mixed-effect model. Figures 1 and 2 show predictive margins with 95% confidence intervals for each scale. In both the intervention (OKS) group and control (AT) group, mean scores improved in both scales after treatment.

Table 1. *Linear Prediction Scores After Fitting Mixed-Effects Model*

Measure	Intervention (OKS) $n = 238$				Control (AT) $n = 277$			
	Pre *M*	(*SE*)	Post *M*	(*SE*)	Pre *M*	(*SE*)	Post *M*	(*SE*)
Irrational beliefs (IBs10)	22.15	(0.43)	19.94	(0.55)	21.03	(0.39)	20.16	(0.50)
Self-esteem (RSES-J)	23.51	(0.40)	24.56	(0.41)	24.82	(0.37)	25.54	(0.37)

Note. AT = Assertiveness Training, IBs10 = Irrational Belief Scale 10, RSES-J = Rosenberg Self-Esteem Scale Japanese Version.

Table 2 shows the interaction between intervention and time point, the main effect of time, and the simple main effect of time in each group after fitting the mixed-effect model. There were 24 and 36 data missing from the IBs10 and RSES-J scores, respectively. The STATA mixed command adequately treated these missing data in the program automatically.

Hypothesis 1 was supported (see Table 2 and Figure 1). There was a significant interaction between intervention and time regarding irrational belief scores ($\beta = -1.34$, $z = -2.48$, $p = .013$). Effect size (partial η^2) was .023. The simple main effect of time on OKS group scores was significant ($\beta = -2.20$, $z = -5.54$, $p < .001$), as was the simple main effect of time on AT group scores ($\beta = -0.87$, $z = -2.41$, $p = .016$). Effect sizes (Cohen's *d*) were calculated as 0.42 and 0.18 respectively. These findings revealed that the OKS program had a better effect on the reduction of irrational beliefs than did the AT after each treatment.

Table 2. *Interaction and Main Effects After Fitting Mixed-Effects Model*

Measure	Interaction intervention × time			Main effect of time			Simple main effect of time in OKS group			Simple main effect of time in AT group		
	β	*z*	*p* *p*-η^2	β	*z*	*p* *p*-η^2	β	*z*	*p* *d*	β	*z*	*p* *d*
Irrational beliefs	-1.34	-2.48	.013	-1.54	-5.72	< .001	-2.20	-5.54	< .001	-0.87	-2.41	.016
(IBs10)			.023			.125			.42			.18
Self-esteem	0.33	1.07	.283	0.89	5.85	< .001	1.05	4.75	< .001	0.73	3.49	< .001
(RSES-J)			.002			.066			.22			.15

Note. AT = Assertiveness Training, IBs10 = Irrational Belief Scale 10, RSES-J = Rosenberg Self-Esteem Scale Japanese Version. *p*-η^2 = partial eta squared; *d* = Cohen's d.

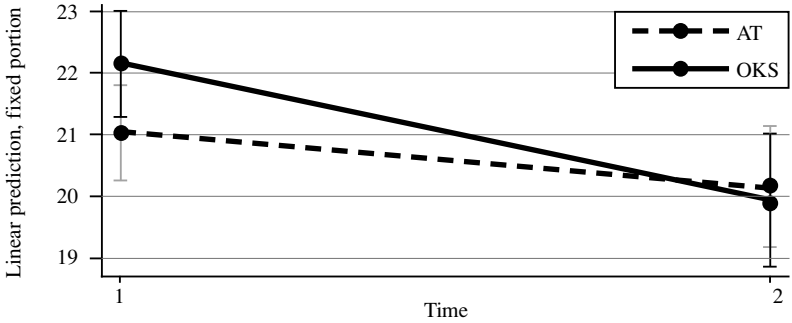

Figure 1. IBs10 predictive margins with 95% confidence intervals. IBs10 = Irrational Belief Scale 10, AT = Assertiveness Training.

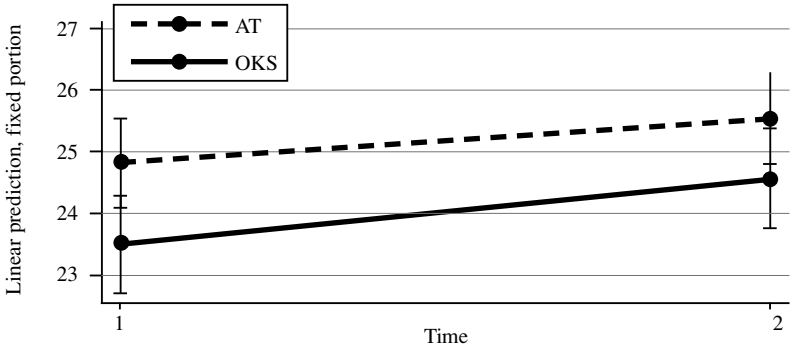

Figure 2. RSES-J predictive margins with 95% confidence intervals. RSES-J = Rosenberg Self-Esteem Scale Japanese Version, AT = Assertiveness Training.

Hypothesis 2 was not supported (see Table 2 and Figure 2.). There was no significant interaction between intervention and time regarding self-esteem scores ($\beta = 0.33$, $z = 1.07$, $p = .283$); however, the main effect of time was significant ($\beta = 0.89$, $z = 5.85$, $p < .001$). The effect sizes (partial η^2s) were calculated as 0.002 and 0.066. As Figure 2 indicates, the OKS group's slope possessed a steeper gradient, which could mean an improvement rate superior to that of the AT group, although not statistically significant. While the STATA mixed command did not provide corresponding effect size directly, effect sizes were calculated separately using analysis of variance.

Discussion

Our aim in this study was to examine the possibilities of a single-session universal mental health promotion program in Japanese schools. The results indicated a significant reduction in irrational belief scores with the interaction between group (OKS program and AT) and time. Further, the simple main effects of the OKS group and AT group were significant and the OKS program significantly reduced every irrational belief item score, whereas the AT reduced only three out of 10 items.

The theme of the sample story used in the OKS program was related to an irrational belief, "demand for approval." Mahoney (1997) proposed a unidimensional model of irrational beliefs, explaining that all items' scores were reduced in tandem. DiLorenzo, David, and Montgomery (2007) noted that, among irrational beliefs, demandingness is viewed as a core belief involved in primary appraisal. The reduction of demandingness beliefs may affect all other subsequent irrational beliefs.

An alternative explanation for the result may be the enhancement of metacognitive awareness. Students in the OKS program learned the friend-detach method, which involves taking a friend's point of view. Accordingly, they could have distanced themselves from their irrational beliefs, seen the activating event more objectively, shifted out of inflexible patterns of thought, and alleviated subsequent unhealthy emotion. Teasdale et al. (2002) commented that skills developed by CBT might enhance metacognitive awareness, which may distance the individual from dysfunctional cognitions. Therefore, friends-detach might help to distance one from irrational beliefs. Fisher and Wells (2005) asserted that even brief interventions to deal with metacognitive beliefs would lead to the reduction of distress. Regarding the common element to enhance metacognitive awareness in the OKS program, action to recognize one's cognitive process by writing it down explicitly may be effective (Sannomiya, 2008).

Regarding self-esteem scores, the main effect of time was significant (Table 2); however, no significant interaction between intervention and time was observed. The OKS program increased self-esteem, as did AT (Figure 2); this reflects that just as CBT can increase self-esteem (Taylor & Montgomery, 2007), so can AT (Stake, DeVille, & Pennell, 1983). The finding supported these previous studies. In the OKS program, the increase of self-esteem could be related to the reduction of irrational beliefs. To demonstrate significant improvement of self-esteem, in future research the OKS program should be tested with a waiting-list control group.

This study is still at the pilot stage, and all interventions were carried out by the researcher. However, as a next step, the program should be implemented by teachers and its accessibility examined. According to the results

of the questionnaire completed by teachers who observed the intervention by the researcher, they thought that the OKS program, implemented by teachers, could be effective, and that there were no major obstacles to program implementation by teachers.

Limitations

There are several limitations to the study design. First, there is an issue of sampling. This study examined only two public schools, both located in the Tokyo metropolitan area. Conducting a randomized control trial in schools is recognized as difficult (Christenson, Carlson, & Valdez, 2002). In this study, all classes in a grade were assigned to the intervention or control group according to grade and according to the schools' curriculum, rather than randomly. This assignment method has weakened the study's validity. Second, assertiveness training is widely conducted in Japan; however, administrative procedures vary. An appropriate version of assertiveness training should be adopted in order to allow valid comparison with OKS in universal mental health promotion programs. Third, it was difficult to find a suitable scale to measure Japanese junior high school students' irrational beliefs. Therefore, IBs10 was developed to employ understandable sentences and only for a limited number of questions. IBs10 measures only the level of endorsement of certain types of irrational beliefs, and cannot be used as a standard scale for comprehensive evaluation of irrational beliefs. Fourth, the surveys were limited in that they used only self-reported measures with subjective responses, which are prone to response bias, as students were aware of the psychoeducational intervention. Also, students learned cognitive process and coping techniques through the simulations with the sample story. The imaginal process may tend to lead to the preferred outcomes (Flett, Hewitt, Blankstein, & Gray, 1998). Fifth, longitudinal follow-up studies should be carried out in future to shed more light on the issue over time. Finally, to disseminate this program to school settings, it needs to be administered by school teachers or personnel themselves and its effectiveness examined. Addressing these limitations, further research should be conducted using a more robust study design with different participants and collecting longitudinal data, again using a control group.

Conclusion

The OKS program, which was based on CBT and targeted a reduction in irrational beliefs, was administered in a single 50-minute session. Despite its short length, this single-session program was found to reduce irrational beliefs and increase self-esteem. These findings imply the possibilities of feasible single-session universal mental health promotion programs in Japanese school settings. It would not be easy to implement longer-term interventions in Japanese

school settings due to the context of Japanese educational structures even if the efficacy of the program were to be acknowledged. The OKS program has the potential to be a frontline component for systematic psychoeducation in Japanese school settings.

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