



# Effects of the cognitive-behavioral You Can Do It! Education program on the resilience of Japanese elementary school students: A preliminary investigation



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## ABSTRACT

The effect of a mental health promotion program based on cognitive behavioral therapy and social-emotional learning called “You Can Do It! Education” on the resilience of elementary school students was evaluated. Participants were fourth grade students at elementary schools in the Tokyo Metropolitan Area, who were assigned to the intervention ( $n = 78$ ) or control ( $n = 47$ ) group. The intervention group was taught eight program lessons by a visiting counselor, which covered topics related to resilience and the relationships of thinking, feeling, and behaving. The intervention group showed significant improvements in resilience and social support, whereas the control group did not. We discuss the program’s feasibility for enhancing resilience and its limitations in Japanese school settings.

## 1. Introduction

Recent studies have indicated that Japanese elementary school students manifest various mental health problems, including anxiety and depression (e.g., Tanaka, 2011). According to the Ministry of Education, Culture, Sports, Science, and Technology of Japan (MEXT, 2014), chief among the causes of mental health-related problems is the high prevalence of bullying in Japanese elementary and junior high schools, which exceeded 210,000 cases in 2015. More specifically, in 2015, there were an estimated 151,692 in elementary schools (122,734 in 2014) and 59,502 in junior high schools (52,971 in 2014). Chronic nonattendance of school has also increased, with approximately 125,000 students in that same year. The proportion of students who exhibited chronic nonattendance caused by anxiety or mental health problems was estimated at 32.4% while 14.5% was due to laziness and 46.2% due to problems with peer relationships except bullying.

The lack of development of socioemotional competence in adolescents is universally recognized as a major contributing factor to poor mental health. Furthermore, school performance is an important foundation for young children’s later success and well-being (Ashdown & Bernard, 2012). There are five main interconnected sets of cognitive, affective, and behavioral competencies for students, including self-awareness, self-management, social awareness, relation skills, and responsible decision making (The Collaborative for Academic, Social, and Emotional Learning: CASEL, 2013).

*Abbreviations:* CASEL, Collaborative for Academic, Social, and Emotional Learning; CBT, Cognitive behavioral therapy; SCAS, Spence Children’s Anxiety Scale; SSSC, Social Support Scale for Children; RESC, Resilience in Elementary School Children; YCDI, You Can Do It!

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There exist a number of international programs aimed at preventing the development of various problems in children, such as nonattendance at school, bullying, social withdrawal, and self-injurious behaviors. Many such programs are based on cognitive behavioral therapy (CBT) and have been found by randomized controlled trials to be effective in preventing mental health problems in school settings (e.g., Barret, Farrell, Pina, Peris, & Piacentini, 2008; Stallard, 2003). Such preventative interventions have been found to particularly benefit participants' mental health, even as they enter into adolescence and adulthood (Bernard, 2003), which is essential for school life (Bernard, 2006). The efficacy of these preventative programs is a result of the fact that they primarily help to decrease students' fear and depression, identify their emotions, use others as a method of support during times of trouble, and build resilience (Bernard, 2007a).

CBT is effective in managing students' anxiety, depression, and other mental disorders, according to evidence obtained from approximately 500 cases treated with CBT (Macklem, 2011). As such, a school-based CBT program for Japanese schoolchildren has been almost universally believed to be useful (Matsumoto & Shimizu, 2016). It is further believed that preventive programs for elementary school students are most effective when implemented early on, when any maladjustment is still relatively minor in nature (Matsumoto, 2014). Such preventative programs seem especially indispensable for Japan, as they would be helpful in mitigating the maladjustment resulting from natural disasters, such as earthquakes and typhoons, which frequently occur in Japan (Matsumoto, 2014). However, in Japanese schools, most evidence-based psychology programs that have been developed have not yet been implemented, despite the urgent need.

Bernard (2006) proposes five core lessons of socioemotional learning: (1) learning to think positively (Confidence); (2) learning tenacity (Persistence); (3) learning cooperation (Getting Along); (4) learning organizational skills (Organization); and (5) learning resilience (Resilience). Resilience, in particular, is regarded as a skill that should be cultivated in schools, along with adaptability (Bernard, 2007a). Thus, in the present study, we tested the applicability of the You Can Do It! Education Program (YCDI; Bernard, 2007a), which is a preventive education program based on CBT that was developed in Australia, in order to help promote resilience in schoolchildren. Resilience refers to individuals' ability to overcome suffering and demonstrate sufficient personal strength to manage various hardships or adversity (Bonniwell & Ryan, 2011). Bernard (2004) further specified emotional resilience as the ability to control one's offensive and avoidant behavior, and calm down when confronted with distressing events (Bernard, 2008). Emotional resilience has been shown to be effective in recovering from anxiety, anger, and low mood (Bernard, 2007a). Furthermore, resilience has been defined as the capacity to plan a course of action, deal effectively with a difficult event, and recover well after facing a problem, and it is akin to "defiance" (Bernard, 2007a). Among those with low levels of resilience, risky behavior has been found to be a predictor of future troubles (Bernard, 1993).

Zolkoski and Bullock (2012) identified five attributes of resilience in children: (a) social competence, which covers empathy, caring, flexibility, communication skills, and a sense of humor; (b) problem-solving skills, such as planning and creativity; (c) critical consciousness, including the awareness of abusive situations and the ability to create systems to cope with these situations; (d) autonomy; and (e) sense of purpose, such as having goals, educational ambitions, and faith in a bright future. People with resilience also have confidence in their capacity to manage difficulties (Werner, 1993). In particular, when faced with adversity, students with resilience are able to (1) decrease their level of anger, depression, and anxiety; (2) control their physical reactions to troubling events, such as avoiding a quarrel or stopping themselves from escaping a distressing situation; (3) regain composure within a suitable amount of time; and (4) rebound, or return to their studies and recreation (Bernard & Walton, 2011).

To teach students resilience in this study, we employed the Resilience Lessons from the "Program Achieve" curriculum (Bernard, 2007a; Bernard, 2007b). The YCDI program has been shown to be effective for improving self-esteem, the ability to bounce back from adversity, friendly relationships, and academic ability in 16 countries around the world (Bernard & Matsumoto, 2013a) are seen in reading ability 50% of students as universal designs in the experimental schools (Ashdown & Bernard, 2012).

The Resilience Lessons of the YCDI have been carried out in elementary schools as a form of universal preventive education, and their efficacy has been verified for students in regular classes (Bernard, 2007a). Thus, the present study assessed the effects of the YCDI in a Japanese context, in particular determining whether Japanese children could achieve positive, social, emotional, behavioral, and achievement outcomes that are equivalent in magnitude to those reported by Ashdown & Bernard (2012) in Australia. To use this program effectively in a Japanese context, including within the educational system and school culture, we translated the YCDI materials into Japanese and introduced them into ordinary classes as a universal program (i.e., which all class members can understand). According to Bernard (2007a), the program's intended objectives can be achieved by providing children with explicit instruction in the abovementioned five key socioemotional competencies. We specifically used the Resilience Lessons of the YCDI (Bernard, 2007a), examples of which are shown in Table 1. A total of eight lessons, which were approximately 45 min long each and taught once per week, were adopted as the intervention program. We hypothesized that individuals who completed this program would show (1) decreased anxiety, (2) increased awareness and supportive resources, and (3) increased resilience compared to the control group.

## 2. Methods

This study used a quasi-experimental 2 (Group: intervention vs. control)  $\times$  2 (Time: pre-test vs. post-test) between-subjects design. In order to determine whether the changes observed in the intervention group at post-test were maintained over time, all assessment surveys were re-administered to the intervention group 12 weeks after the intervention phase was completed.

**Table 1**  
Program Achieve Resilience Lessons for Grades 3 and 4 (Bernard, 2007a).

Intervention Session	Session Title	Example of Session Contents	Materials
1	Guidance	Introduction	Lesson plan
2	Lesson 1	Emotions	“Emotional Face” Worksheet “Name That Emotion” Worksheet
3	Lesson 2	Thinking, Feeling, Action	“Emotional Bingo” “Emotional Thermometer” Worksheet “Taking Your Emotional Temperature” Worksheet
4	Lesson 3	Brilliant Resilience	“The Catastrophe Scale” “A Resilient Character” “Catastrophe Scale” Worksheet “Happening” Worksheet
5	Lesson 4	Resilience Boosters	“5-3-5 Relaxation” “Finding Someone to Talk To” “Exercise Gives You the Edge!” An Exercise circuit set up in Playground
6	Lesson 5	Using your Head	“Being Tolerant of Others” When Things Are Unfair, I can cope Print of “Being Tolerant of Others”
7	Lesson 6	Resilience at Work	“Resilient Thoughts You Can Bank” “Resilient Piggy Bank” Student
8	Review	Completion	Certification of Completion Remainder Card

Note. One lesson = 45 minutes.

### 2.1. Participants

Participants were 125 fourth-year students (56 females, 79 males), aged 9–10 years, from elementary schools in the Tokyo Metropolitan Area in Japan. However, four students participated without the express agreement from their parents as part of classroom activities, and were thus excluded from analyses. Some students were also missing data, owing to the fact that they were absent from class as a result of illness, they transferred to another school, or because of random errors in the data (e.g., missing data, such as not answering some items or not answering them as requested). After excluding these invalid data from analyses, a total of 94 students (43 females and 51 males) were included as participants, of whom 61 were allocated to the intervention group (School A; 26 females, 35 males) and 33 to the control (waitlist) group (School B; 17 females, 16 males). All students had complete data both before (Time 1) and after (Time 2) the intervention period (Table 2). Students who were selected to participate in the program did not have any physical or mental health problems.

### 2.2. Dependent measures

We used the following three scales to measure anxiety, social support, and resilience.

#### 2.2.1. Spence children’s anxiety scale (SCAS; Spence, 1997)

The SCAS is a self-report measure of anxiety in children. The SCAS has been translated into Japanese and comprises six subscales containing 38 items that correspond to different types of anxiety symptoms, including panic/agoraphobia, social phobia, fear of physical injury, obsessive-compulsive disorder, separation anxiety, and generalized anxiety. The SCAS was chosen because it has demonstrated high reliability for assessing anxiety among Japanese children (Ishikawa, Sato, & Sasagawa, 2009a, 2009b). Children are asked to rate the frequency of each symptom on a 4-point scale ranging from 0 (*never*) to 3 (*always*). In this study, the SCAS displayed good internal consistency at pre-test (Cronbach’s  $\alpha = 0.93$ ) and post-test (Cronbach’s  $\alpha = 0.94$ ).

#### 2.2.2. Social support scale for children (SSSC; Matsumoto & Nishida, 2013b)

This measure was developed to assess the social support available to young children. Students were asked to nominate supporters (including nobody, family, teachers, friends, and other persons) for six situations that they encounter in their lives, including being in trouble, doing tasks/activities, feeling scared, feeling down, being unwilling, and being happy. Participants could make multiple selections for each situation (excluding “nobody,” which was scored “0”). Items were scored by adding the number of options selected; for example, an item was given a score of 2 if the child chose family and teachers as sources of social support. The scale has demonstrated good item-total correlations ( $r_s = 0.37\text{--}0.58$ ,  $n = 116$ ,  $p < 0.0001$ ; Matsumoto, Ishimoto & Yamamoto, 2016). The scale has also exhibited good correlations with the Resilience in Elementary School Children (RESC) scale (Tanaka, 2011), including the total score ( $r = 0.41$ ,  $n = 591$ ,  $p < 0.0001$ ) and the four subscales ( $r_s = 0.27\text{--}0.38$ ,  $n = 616\text{--}619$ ,  $p < 0.0001$ ; Matsumoto et al., 2016). In this study, the SSSC had good internal consistency (Cronbach’s  $\alpha = 0.91$  at both pre-test and post-test).

#### 2.2.3. Resilience in elementary school children scale (RESC; Tanaka, 2011)

The RESC scale comprises four subscales containing 19 items that relate to different aspects of resilience: (1) optimistic nature, (2) challenging nature, (3) reflection and cooperativeness, and (4) positivity. Students rate each item on a 4-point scale ranging from 0 (*never*) to 3 (*always*). In this study, the RESC scale displayed good internal consistency (Cronbach’s  $\alpha = 0.91$  and  $0.92$  at pretest and posttest, respectively).

**Table 2**  
Means, Standard Deviations, and Significance Tests for the Intervention and Control Groups across Time.

		Intervention group (n = 61)		Control group (n = 33)		F	Partial $\eta^2$
		Time 1	Time 2	Time 1	Time 2		
SCAS	A/AP	5.52 (5.90)	5.69 (5.44)	4.12 (4.48)	3.88 (4.38)	0.957	0.01
	SAA	5.16 (4.33)	4.74 (3.37)	4.82 (3.29)	4.42 (3.96)	0.043	0.00
	PIF	3.69 (3.33)	3.64 (3.19)	3.61 (2.97)	3.33 (2.83)	0.638	0.01
	SP	5.38 (4.00)	6.23 (4.07)	5.55 (4.02)	4.61 (3.44)	5.199*	0.06
	OC	5.18 (3.46)	5.20 (3.35)	4.67 (3.83)	4.70 (3.78)	0.004	0.00
	GA	4.61 (3.75)	4.84 (3.57)	4.00 (3.35)	3.88 (3.07)	0.738	0.01
	Total	29.54 (20.97)	30.33 (18.38)	26.76 (18.04)	24.82 (18.49)	1.440	0.02
	SSSC	11.70 (5.07)	14.54 (5.04)	11.76 (4.93)	12.09 (5.38)	9.410**	0.10
RESC	On	9.90 (3.85)	10.62 (3.89)	7.76 (4.49)	7.82 (4.89)	7.656**	0.09
	Cn	9.51 (3.28)	9.36 (3.07)	7.70 (4.50)	7.00 (4.37)	7.149**	0.08
	Rc	5.48 (2.84)	6.26 (2.50)	4.91 (3.23)	4.97 (3.22)	4.390*	0.05
	Po	9.05 (3.72)	9.18 (3.81)	8.48 (4.23)	8.39 (5.07)	0.451	0.01
	Total	33.94 (10.84)	35.43 (10.32)	28.85 (13.77)	28.18 (15.29)	7.287**	0.08

Note. Standard deviations are in parentheses.

F-values are comparisons of post-test data between the intervention and control groups.

SCAS: Spence Children's Anxiety Scale. P/AP: Panic/agoraphobia; SAA: Separation anxiety and agoraphobia. PIF: Physical injury fear; SP: Social phobia. OC: Obsessive compulsive; GA: General anxiety. SSSC: Social Support Scale for Children. RESC: Resilience in Elementary School Children. On: Optimistic nature; Cn: Challenging nature. Rc: Reflection and cooperativeness; Po: Positivity.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

### 2.3. Procedures

This study received ethical approval from the ethics committee of the authors' university. After approval, we sent the board of education and an association of principals a written research request in the location where the program took place. Through the education board, we received responses from five schools. We then explained the program to the principals of all five schools. Ultimately, only two schools took part in the study because the other three schools were too busy to accommodate the program content. Initially, School A's principal permitted 78 students to accept the request to serve as the intervention group, while School B's principal permitted 47 students to act as the control group during the same period. Owing to the schools' schedule, we administered the pre-test questionnaire to the intervention and control groups in September 2015, which was one month before the program began (Table 2; Time 1).

Classroom teachers who had been explained the purpose of the YCDI program assisted students in completing the tasks. The first author, who was a counselor, served as the program leader. The program was implemented only after all participants understood its purpose and consent was obtained from their parents, or guardians. The letter sent to parents informed them that their child had been invited to participate in a group program to help build their emotional resilience, coping skills, and problem-solving abilities.

Regarding program contents, we adapted the Resilience Lessons from Program Achieve, which are listed in Table 1. After obtaining permission from the author of the original materials, all contents were translated into Japanese and were then checked by a native Japanese co-researcher. The lessons were chosen from the program of the original work to accommodate class hours in Japan and adapted to last 45 min each. Lessons consisted of individual activities, group activities, and overall class activities to ensure students' sustained concentration and interest in the materials. In addition, this study adapted the materials to increase their applicability to Japanese culture and situations involving resilience. For example, resilient characters from picture books and a cartoon of the resilient character "Doraemon" were included to make it easier for students to understand the concept of resilience. As a way to deliver the content to students, Japanese teachers were also encouraged to make full use of their, as well as students', experiences. The program comprised eight lessons, administered over eight consecutive weeks, starting in October 2015. All lessons were taught by the first author and were given during classes in the fifth or sixth class periods, as time allowed. The lessons covered six units from the Program Achieve Resilience Lessons for Grades 3 and 4. One week after the program ended in December 2015, students

completed the post-test questionnaire (Table 2; Time 2).

The control group data were collected at the same time at the intervention group data. Importantly, when translating the program materials into Japanese, we made sure to account for cultural differences in students' school lives between Japan and Australia. In particular, we made sure to incorporate Japanese references into concrete examples and teaching materials used in the program to ensure that children could understand the content.

#### 2.4. Data analysis

All data analyses were carried out using IBM SPSS Statistics Version 23. We first conducted a set of preliminary analyses to ensure that the groups were homogeneous at pre-test. Multivariate analyses of covariance (MANCOVAs) were used to compare the two groups at Time 2 while including Time 1 scores on the dependent measures as covariates. The independent variables were time (pre vs. post) and group (intervention vs. control).

### 3. Results

#### 3.1. Preliminary results

Chi-square analyses revealed that there were no significant differences in gender distribution between groups  $\chi^2(1, n = 94) = 0.52, p = 0.47$ . Furthermore, *t*-tests for analyzing group differences in the dependent variables indicated that there were no significant differences between the groups on the SCAS,  $t(92) = 0.64, p = 0.52$ , or SSSC,  $t(92) = -0.05, p = 0.96$ . However, the RESC scale did significantly differ between the groups,  $t(92) = 1.97, p = 0.05$ , such that groups differed on the subscales of optimistic nature,  $t(92) = 2.43, p = 0.02$ , and challenging nature,  $t(92) = 2.24, p = 0.03$ . Thus, we performed all subsequent analyses using a MANCOVA. We also tested whether the sample met the assumptions for MANCOVA and found that the assumptions of normality, homogeneity of variance, homogeneity of regression slope, and the reliable measurement of the covariate were met.

#### 3.2. Intervention effects

Table 2 presents the means, standard deviations, and significance testing for the intervention and control groups across time. A one-way between-groups MANCOVA was conducted to examine pre- to post-test changes in the performance of both groups on all dependent measures. This analysis confirmed that there was a significant difference between the intervention and control groups,  $F(1, 92) = 2.28, p < 0.05$ , as follows.

Table 3 presents the comparison of changes for the intervention group between pre-test and follow-up. A one-way MANOVA between-time intervention groups was conducted to examine pre- and follow-up test changes in the performance of two times on all dependent measures. This analysis confirmed that there was a significant difference between time only in the intervention group SSSC,  $F(1, 114) = 15.62, p < 0.01$ .

##### 3.2.1. Hypothesis 1: decrease anxiety

We observed no significant differences between the intervention and control groups on the total SCAS score at post-test,  $F(1, 81) = 1.44, p = 0.23, \eta_p^2 = 0.02$ . Only the social phobia subscale showed a significant difference,  $F(1, 81) = 5.20, p = 0.03, \eta_p^2 = 0.06$ , such that scores of the intervention group increased compared to those of the control group. However, in the intervention group, the follow-up score ( $M = 4.69, SD = 4.00$ ) was lower than the pre-score ( $M = 5.38, SD = 4.00$ ). Thus, after the program, the score temporarily increased and then decreased.

##### 3.2.2. Hypothesis 2: increase awareness of support resources

We observed significant differences between the intervention and control groups at post-test for the SSSC total score,  $F(1, 81) = 9.41, p < 0.01, \eta_p^2 = 0.10$ . A partial eta-squared indicated that this difference was rather large.

##### 3.2.3. Hypothesis 3: increase resilience

We observed a moderate difference between the intervention and control groups at post-test for the RESC total scores,  $F(1, 81) = 7.29, p < 0.01, \eta_p^2 = 0.08$ . Furthermore, three subscales showed significant differences: optimistic nature,  $F(1, 81) = 7.66, p < 0.01, \eta_p^2 = 0.09$ , challenging nature,  $F(1, 81) = 7.15, p < 0.01, \eta_p^2 = 0.08$ , and reflection and cooperativeness,  $F(1, 81) = 4.39, p < 0.05, \eta_p^2 = 0.05$ .

### 4. Discussion

The present study investigated the effects of a cognitive-behavioral, social-emotional learning curriculum program that included resilience lessons from the Program Achieve curriculum (Bernard, 2007a; Bernard, 2007b), on different aspects of mental health among fourth-year elementary school students, including anxiety, resilience, and perceived social support. The program was carried out while paying attention to the uniqueness of Japanese school systems, including the classroom size and type of stress often encountered by Japanese school children, which are often related to academic competitiveness and entrance examinations.

The outcomes indicated that after the intervention period, students participating in the YCDI! Education curriculum program

**Table 3**  
Comparison of Changes for Intervention Group between Pre-test and Follow-up.

		Time 1 (pre-test) n = 61	Time 3 (follow-up) n = 55	F	Partial $\eta^2$
SCAS	A/AP	5.52 (5.90)	4.38 (4.85)	1.281	0.01
	SAA	5.16 (4.33)	4.27 (3.93)	1.335	0.01
	PIF	3.69 (3.33)	3.18 (2.59)	0.822	0.01
	SP	5.38 (4.00)	4.69 (4.00)	0.852	0.01
	OC	5.18 (3.46)	4.42 (3.38)	1.437	0.01
	GA	4.61 (3.75)	3.91 (3.96)	0.948	0.01
	Total	29.54 (20.97)	24.85 (18.90)	1.586	0.01
	SSSC	11.70 (5.07)	15.56 (5.44)	15.624**	0.12
RESC	On	9.90 (3.85)	11.16 (4.32)	2.768	0.02
	Cn	9.51 (3.28)	10.16 (3.34)	1.134	0.01
	Rc	5.48 (2.84)	5.93 (2.59)	0.797	0.01
	Po	9.05 (3.72)	9.96 (3.68)	1.767	0.02
	Total	33.93 (10.84)	37.22 (11.62)	2.479	0.02

Note. Standard deviations are in parentheses.

The F-values are compared between pre-test and follow-up data within the intervention group.

SCAS: Spence Children's Anxiety Scale. P/AP: Panic/agoraphobia; SAA: Separation anxiety and agoraphobia. PIF: Physical injury fear; SP: Social phobia. OC: Obsessive compulsive; GA: General anxiety. SSSC: Social Support Scale for Children. RESC: Resilience in Elementary School Children. On: Optimistic nature; Cn: Challenging nature. Rc: Reflection and cooperativeness; Po: Positivity.

\*\*  $p < 0.01$ .

demonstrated significantly higher scores on SSSC and RESC compared to the control group. The total SCAS score did not show a significant decrease while scores on the social phobia subscale increased. The analysis of follow-up data showed that the higher scores for the intervention group on the SSSC were maintained while scores on the social phobia subscale returned to pre-intervention levels.

#### 4.1. Anxiety

We found that the YCDI program did not lead to an overall decrease in students' anxiety. This finding is not surprising, as children's pre-test scores indicated that they were not anxious according to Japanese norms (Ishikawa et al., 2009a, 2009b). Accordingly, it is not expected that children who are not highly anxious to begin with would show overall changes in their levels of anxiety as a result of an intervention. A possible reason for this finding is that, at post-test, students were more self-aware compared to how they felt at pre-test (Table 2). At the beginning of the program, students showed rather little conscious awareness of their own emotions or how to measure and express them. Through the YCDI program, students likely became more aware of their emotions. Indeed, in the first and second lessons, children were taught to assess and express their own emotions.

In this study, students' social phobia scores significantly increased after the program, which is not consistent with the results of Matsumoto & Shimizu (2016), who conducted a universal school-based CBT program in Japanese elementary school settings and found a significant reduction in social phobia scores among sixth-grade (aged 11–12 years) female students. Program effects could appear differently in different age groups. Since the participants in this study were fourth-grade students (aged 9–10 years) who had just started to understand the relationship between feelings and thoughts with the help of the YCDI program, they may have required a longer follow-up period to determine whether the program helped them control their anxiety.

After 12 weeks, social phobia returned to pre-intervention levels. The initial increase may have been due to the increased awareness of students who had learned how to understand and attend to others' emotions. However, social phobia then decreased with regular practice of these skills. Previous studies have found that anxiety can be reduced by changing negative perceptions or cognitions to more positive ones, as well as by relaxation, meditation, exercise, and resilience (Adachi, Suzuki, & Kuze, 2014). Given that the YCDI contained lessons that taught skills related to these various factors, it could be that the use of these skills both at school and home helped to lower anxiety. A longer follow-up period is thus necessary.

#### 4.2. Awareness of social support

The YCDI program intends to help promote students' awareness of their social support, particularly in Lesson 4, "Finding Someone to Talk To." This lesson teaches students that a helpful strategy that can help them stay calm in difficult situations involves finding someone to talk to. Students were asked to identify people with whom they could talk if they required support in staying calm and being resilient, and to write five names in the fingers of a piece of paper cut to look like their hand.

The YCDI program taught awareness of support networking skills that would allow students to enhance their relational competency. Indeed, students often wrote the names of their teachers and classmates in this study. This finding is in accordance with that of a previous study, wherein a greater number of students at YCDI-adopting schools, compared to those at non-YCDI schools, realized that their friendships with their classmates had strengthened over time (Bernard & Walton, 2011). Furthermore, Cahill, Beadle, Farrelly, Forster and Smith (2015) claimed that teachers are in a key position to notice which students require support. Teachers and staff in the study schools noticed and intervened when students experienced problems related to learning or well-being. Thus, students' awareness of the help available to them could be considered essential networking skills.

#### 4.3. Resilience

Using the skills taught by the YCDI program, students became able to express moderate emotions and became better able to control negative emotions, such as anger or intense fear. In other words, the YCDI program helped students obtain skills to control their emotions in daily life. The students expressed this growth themselves—for instance, some students said that the 5-3-5 breathing exercise was helpful in staying calm, while they found the exercises that involved changing their emotions and communicating with others when they were in trouble were very useful. These skills seem necessary for Japanese students in particular, as they are culturally enforced to avoid expressing their emotions (Ookawara & Hibiki, 2013). By using the YCDI skills, students could alter their feelings or obtain help before trouble escalated.

Collins (2007) showed that resilient people who are optimistic, highly engaged, and interested in their way of living tend to be more receptive of new experiences. Hirano (2010) further showed that students gained optimism, control, sociability, and vitality based on a qualitative analysis of measuring resilience. These results are consistent with the finding in our study that "optimistic nature" subscale scores on the RESC scale increased after the YCDI program. Similarly, we found that "challenging nature" subscale scores increased as well. Given that all children and young people are inevitably faced with considerable demands, challenges, frustrations, difficulties, and setbacks, it is vital that they have developmentally appropriate levels of resilience (Bernard, 2007a). The "reflection" and "cooperativeness" subscale scores also increased following the YCDI lessons, likely because students learned self-monitoring of their emotions (such as using the Emotional Thermometer), relaxation, keeping things in perspective, how to use "I Can Stand It" thinking, how to find people to talk to, how to use positive rather than negative self-talk, and how to find something fun to do (Bernard, 2007a). The use of these methods is likely what underlies the YCDI program's benefit to Japanese children's resilience.

#### 4.4. Adaptations of you can do it! Education for Japanese culture and students

Lessons in the current study were organized into 45-min sessions wherein students could enjoy activities as individuals, groups, and a class as a whole. The students were able to become more aware of their resilience while enjoying games that were specifically set up twice to review what they had learned. Although it was difficult to secure time in a busy Japanese school curriculum, teachers were dedicated to completing all contents of the program. The Japanese version of the YCDI was implemented using a universal approach across classes and was a relatively short program compared to the original program.

### 5. Limitations

This study has three notable limitations. First, it was difficult to design the program such that it fit well into the regular school curriculum. Students' schedules did not allot a specific time for the preventive education program, and the occurrence of school events frequently and suddenly influenced program lessons because they were given priority over our intervention. For example, one lesson in each class was cancelled twice during the study period. As a result, participants had insufficient individual support during the lessons. Children might need more time and supervision for several of the activities given during the lessons. Furthermore, the program inconvenienced classroom teachers because they had to change their regular schedule to fit it in. Overall, in Japanese schools, implementation of this program and similar programs must be carefully based around the school schedule and seasons. Second, the sample size of this study was small. A total of 31 of the initial 125 participants were excluded from analyses because of illness, transferring schools, or missing data. To address the issue of missing data, future research would benefit from using easier-to-read measures for Japanese elementary school students. Finally, our study design was only quasi-experimental in nature. In the future, we would like to conduct a randomized controlled trial with a greater number of participants.

### 6. Conclusion

Kibe, Suzuki, Hirano and Nakane (2015) emphasized that the mental health problems of Japanese elementary school students should not be overlooked, and that their resilience should in particular be targeted for intervention. Their statements reflect a growing interest in resilience as a significant and influential theme of education. As such, we introduced the Resilience Lessons from

Program Achieve, an aspect of the YCDI Education program, to Japanese elementary school students. These lessons have been previously shown to enhance resilience in school settings. The results indicated that students who underwent the program exhibited increased awareness of supportive resources and resilience. The students were able to adequately concentrate on the program lessons, and they learned the various concrete skills that the lessons aimed to each. The program's excellent contents were clearly engaging and easily accessible to the students. The skills taught by the Program Achieve Resilience Lessons have convinced us that this program can contribute to improving the mental health of Japanese students.

### Conflict of interest

None.

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### Ethical approval

This study received ethical approval from the Chiba University Medical Department Ethics Committee.

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### References

- Adachi, H., Suzuki, M., & Kuze, K. (2014). *The resilience building program for children and teens-with fun-filled resilience building activities*. Tokyo: Houken Inc.
- Ashdown, D. M., & Bernard, M. E. (2012). Can explicit instruction in social and emotional learning skills benefit the social-emotional development, well-being, and academic achievement of young children? *Early Childhood Education Journal*, 39(6), 397–405. <http://dx.doi.org/10.1007/s10643-011-0481-x>.
- Benard, B. (1993). Fostering resiliency in kids. *Educational Leadership*, 51(3), 44–48.
- Bernard, M. E. (2003). *The social-emotional well-being surveys*. Camberwell, Victoria, Australia: The Australian Council for Educational Research.
- Bernard, M. E. (2004). Emotional resilience in children: Implications for rational emotive education. *Romanian Journal of Cognitive and Behavioral Psychotherapies*, 4, 39–52.
- Bernard, M. E. (2006). It's time we teach social-emotional competence as well as we teach academic competence. *Reading and Writing Quarterly*, 22, 103–119. <http://dx.doi.org/10.1080/10573560500242184>.
- Bernard, M. E. (2007a). *Program Achieve: A social and emotional learning curriculum Primary set, six volumes. ready set, you can do it! confidence, persistence, organisation, getting along, resilience* (3rd ed.). Oakleigh, Victoria, Australia: Australian Scholarships Group; Priorslee, Telford (ENG): Time Marque [pp. 1,200].
- Bernard, M. E. (2007b). *Program Achieve: A social and emotional learning curriculum Secondary set, six volumes: Ready set, you can do it! Confidence, persistence, organisation, getting along, and resilience* (3rd ed.). Oakleigh, Victoria, Australia: Australian Scholarships Group; Priorslee, Telford (ENG): Time Marque.
- Bernard, M. E. (2008). The effect of You Can Do It! Education on the emotional resilience of primary school students with social, emotional, behavioral and achievement challenges. *Proceedings of the Australian Psychological Society Annual Conference*, 43, 36–40.
- Bernard, M. E., & Matsumoto, Y. (2013a). You can do it! Program. In K. Yamazaki, Y. Watanabe, & Y. Toda (Eds.). *Prevention education at schools in the world: The actions of each country for children's health and adjustment* Tokyo: Kanekoshobo [(pp. 203–224).
- Bernard, M. E., & Walton, K. E. (2011). The effect of You Can Do It! Education in six schools on student perceptions of wellbeing, teaching learning and relationships. *Journal of Student Wellbeing*, 5, 22–37.
- Barret, P. M., Farrell, L., Pina, A. A., Peris, T. S., & Piacentini, J. (2008). Evidence-based psychosocial treatments for child and adolescent obsessive-compulsive disorder. *Journal of Clinical Child & Adolescent Psychology*, 37(1), 131–155. <http://dx.doi.org/10.1080/15374410701817956>.
- Boniwell, I., & Ryan, L. (2011). *Personal well-being lessons for secondary schools: Positive psychology in action for 11 to 14 year olds*. New York: Open University Press.
- Collaborative for Academic, Social, and Emotional, Learning (CASEL) (2013). *CASEL GUIDE: Effective Social and Emotional Learning programs*. [Retrieved from] <http://www.casel.org/guide>.
- Cahill, H., Beadle, S., Farrelly, A., Forster, R., & Smith, K. (2015). *Building resilience in children and young people: A literature review for the Department of Education and Early Childhood Development (DEECD)*. Melbourne, Australia: Youth Research Center, Melbourne Graduate School of Education, University of Melbourne. [Retrieved from] <http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>.
- Collins, S. (2007). Social workers, resilience, positive emotions and optimism. *Practice*, 19(4), 255–269. <http://dx.doi.org/10.1080/09503150701728186>.
- Hirano, M. (2010). A study of the classification of resilience factors: Development of the Bidimensional Resilience Scale (BRS). *The Japanese Journal of Personality*, 19(2), 94–106. <http://dx.doi.org/10.2132/personality.19.94>.
- Ishikawa, S., Sato, H., & Sasagawa, S. (2009a). Erratum to “Anxiety Disorder Symptoms in Japanese Children and adolescents” [J Anxiety Disord. 23 (2009), 104–111]. *Journal of Anxiety Disorders*, 23(7), 1008.
- Ishikawa, S. I., Sato, H., & Sasagawa, S. (2009b). Anxiety disorder symptoms in Japanese children and adolescents. *Journal of Anxiety Disorders*, 23(1), 104–111.
- Kibe, C., Suzuki, M., Hirano, M., & Nakane, U. (2015). Development of resilient psychology education in Japanese schools: A case study of collaboration between SC, teachers and researchers. *Nihon educational psychological conference 57th general assembly a collection of academic papers*, 92. [Retrieved from] [http://ci.nii.ac.jp/els/110010014002.pdf?id=ART0010574754&type=pdf&lang=en&host=cinii&order\\_no=&ppv\\_type=0&lang\\_sw=&no=1483466141&cp=](http://ci.nii.ac.jp/els/110010014002.pdf?id=ART0010574754&type=pdf&lang=en&host=cinii&order_no=&ppv_type=0&lang_sw=&no=1483466141&cp=).
- Macklem, G. L. (2011). *Evidence-based school mental health services: Affect education, emotion regulation training, and cognitive behavioral therapy*. New York: Springer.
- Matsumoto, Y. (2014). Evidence-based psychological program in the school. *Nihon educational psychological conference 56th general assembly a collection of academic papers*, 114. [Retrieved from] [http://ci.nii.ac.jp/els/110009981568.pdf?id=ART0010536235&type=pdf&lang=en&host=cinii&order\\_no=&ppv\\_type=0&lang\\_sw=&no=1483461039&cp=](http://ci.nii.ac.jp/els/110009981568.pdf?id=ART0010536235&type=pdf&lang=en&host=cinii&order_no=&ppv_type=0&lang_sw=&no=1483461039&cp=).
- Matsumoto, Y., & Nishida, C. (2013b). A universal preventive program in Japanese primary school: Impact of cognitive behavioral therapy on children's difficulties and strengths in Japanese context. *Poster session presented at the world congress of behavioral and cognitive therapies 2013*.
- Matsumoto, Y., & Shimizu, E. (2016). The FRIENDS cognitive behavioral program in Japanese schools: An examination of the treatment effects. *School Psychology International*, 37(4), 397–409. <http://dx.doi.org/10.1177/0143034316649639>.
- Matsumoto, Y., Ishimoto, Y., & Yamamoto, T. (2016). A universal preventive program FRIENDS. *Paper presented at the friends workshop*.



- Ministry of Education, Culture, Sports, and Technology (2014). *Survey on students' behavior problems such as student leadership on the issues*. Tokyo: Ministry of Education, Culture, Sports, and Technology. [Retrieved from] <http://www.e-stat.go.jp/SG1/estat/NewList.do?tid=000001016708>.
- Ookawara, M., & Hibiki, E. (2013). Japanese characteristic parents-child relationship which produces the difficulty of emotional regulation: Through an exploratory research about difference between USA and Japan. *Tokyo Gakugei University Educational Practice Research Center Journal*, 9, 39–50. [Retrieved from] <http://ir.u-gakugei.ac.jp/handle/2309/13441>.
- Spence, S. H. (1997). Structure of anxiety symptoms among children: A confirmatory factor-analytic study. *Journal of Abnormal Psychology*, 106(2), 280–297. <http://dx.doi.org/10.1037/0021-843X.106.2.280>.
- Stallard, P. (2003). *Evidence-based therapy for children and young people [PowerPoint presentation]*. [Retrieved from] <http://cep.lse.ac.uk/seminarpapers/WB-26-01-11STALLARD.pdf>.
- Tanaka, F. (2011). *Resilience in elementary-school children: Development, reliability, and validity of a scale of resilience (Master's thesis)*. Retrieved from <http://hdl.handle.net/10129/4630>.
- Werner, E. E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai longitudinal study. *Development and Psychopathology*, 5, 503–515. <http://dx.doi.org/10.1017/S095457940000612X>.
- Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review*, 34(12), 2295–2303. <http://dx.doi.org/10.1016/j.childyouth.2012.08.009>.