

Effectiveness of a School-Based Universal Prevention Program for Enhancing Self-Confidence: Considering the Extended Effects Associated with Achievement of the Direct Purposes of the Program

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Abstract We have developed a group of universal prevention programs for children's health and adjustment. The programs are characterized by new theories such as the somatic-marker hypothesis and enjoyable methods that utilize animated stories and games. This study adopted one of the programs, a universal prevention program for the development of self-confidence in third grade children, and examined the effectiveness of the program. Participants were third grade children in six public elementary schools in Japan. Homeroom classes in the schools were randomly divided into intervention and control groups. The final samples were 204 children (98 boys and 106 girls) for the intervention group and 218 children (105 boys and 113 girls) for the control group. The program was implemented weekly in one regular 45-minute class over eight weeks for all homeroom class members. Participants completed a battery of three questionnaires (along with writing tasks that were not reported here) both before and after the intervention. Similar time periods were utilized for the control group. Questionnaires assessed the main purposes of the program (to recognize the values of self and others, recognize one's psychological needs, behave according to one's psychological needs, and evaluate positively one's and others' behaviors based on psychological needs), measured the adaptive status of children at school, and gauged implicit positive and negative affect. Results indicated that all of the main purposes of the program were achieved in the intervention group compared to the control group. Moreover, the children's motivation for learning significantly increased with the program. Additionally, compared to the control group, the program significantly enhanced implicit positive affect (but not negative affect) in the intervention group. The necessity of future research that examines the sustainability of the effectiveness of the program is discussed, along with a number of limitations.

Keywords Universal prevention program, Self-Confidence, Elementary school children, Health, Adjustment

1. Introduction

In recent years, children have been suffering from various health and adjustment problems such as obesity, depression, bullying, and school violence. Consequently, various attempts have previously been made to address these problems in schools. Among them, prevention, specifically universal prevention, is expected to be the most promising, because it targets all children in schools with the aims of cultivating beneficial characteristics and modifying detrimental ones, which could lead to the effective prevention of problems. Moreover, in schools, selective or indicated prevention is difficult to conduct because it often

places a stigma on the targeted children. Especially in Japan, which is a collectivistic country, it is almost impossible to select children with problems or risk factors for prevention programs in schools because parents are sensitive to such selection.

In line with this consideration, we developed a group of new universal prevention programs, termed "TOP SELF (Trial Of Prevention School Education for Life and Friendship)" (see Uchida, Yamasaki, & Sasaki, 2014, for their general description). The programs consist of two types, i.e., comprehensive base and partial optional programs. Comprehensive base programs target a comprehensive achievement of health and adjustment, while partial optional programs are applied for specific health and adjustment problems such as bullying, depression, and lifestyle diseases.

Comprehensive base programs that are implemented from the third grade of elementary schools to the first grade

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of junior high schools aim to achieve two primary purposes: autonomy and interpersonal relatedness. In these programs, autonomy is defined as a composite personality consisting of self-confidence, confidence in others, and intrinsic motivation, while interpersonal relatedness is characterized by smooth interactions with others, which includes one's own sense that one regards others as reliable and friendly and that others regard one likewise. We developed four types of programs associated with the development of self-confidence, understanding and regulation of emotions, pro-sociality, and social skills, such that the primary purposes may be achieved.

Of these programs, the present study focused on the development of self-confidence, targeting third grade elementary school children. The program for the development of self-confidence includes four main purposes to improve self-confidence, i.e., to appreciate the worthiness of oneself and others (Purpose I), to recognize one's psychological needs (Purpose II), to behave according to one's psychological needs (Purpose III), and to evaluate positively one's and others' behaviors based on their psychological needs (Purpose IV). Regarding Purpose II, psychological needs are desires to do something intrinsically, which are neither physiological needs nor passive ones to avoid punishment. Scientific evidence exists to support the development of these purposes; the reader is encouraged to refer to a book published in 2013 for more details (Center for the Science of Prevention Education in Naruto University of Education, 2013).

Table 1. Standard Class Procedure in TOP SELF

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- 1) Paying attention to the necessity of concentration during class (including how to do group activities)
 - 2) Introducing the purpose of the class
 - 3) Watching an opening animated story
 - 4) Doing preliminary activities
 - 5) Doing climax activities
 - 6) Sharing feelings and ideas during the activities
 - 7) Watching a closing animated story
 - 8) Confirming the process of the class
 - 9) Listening to the meaning of what was learned in the class
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These purposes are achieved through methods employed through a standard class procedure (see Table 1). According to Uchida et al. (2014), the procedure is depicted in details below. At the beginning of the class, teachers (or program practitioners) make some remarks about the necessity of concentrating during the class. In the first class, teachers explain how the classes proceed in this program using animated slides. Next, teachers briefly and clearly explain the purposes of the class. Thereafter, teachers show the children an opening animated story using a projector and a screen in the classroom. This animated story, which is a continuous story from the first class to the last class, motivates children to actively participate in the class, and enhances the children's memories and consciousness regarding the class content, because children feel as if they

are participating in the story. The animated stories in a class are always limited to 5 minutes or less in total.

Next, preliminary and climax activities are conducted. These activities are the most important part of the class: if the activities are successful, the entire class is a success; if the activities fail, the entire class is a failure. Specifically, the climax activities are designed for maximum enjoyment by the children and achievement of educational purposes. In recent years, regular school classrooms commonly include a number of children who have difficulty paying attention in class. TOP SELF is designed to maximize the focus of all children in the classroom. Although it is difficult, the activities in TOP SELF, as well as the animated stories, are sufficiently engaging to capture and maintain children's attention during the class.

After the activities, children share their feelings and ideas about the class with each other. Thereafter, a closing animated story is presented. Next, children confirm the process of the classes. In the classroom, a large posterboard that describes the class process is mounted to the wall or door. Stickers that show what they learned in the present class are attached on the poster. By using this poster, their stream of consciousness about the content and process of the classes lengthens and becomes more vivid. Finally, the significance of what the children learned in the class is provided orally by the teachers.

The procedure engages the attention of all children during classes based on the theories of TOP SELF, in which psychological characteristics such as thought, cognition, and behaviors are learned and memorized under conditions where suitable emotions and feelings are fully evoked (also see Uchida et al., 2014, for details). These theories are partially based on the somatic-marker hypothesis by Damasio (1994).

Damasio (1994, 2003) defined two words, emotion and feeling, as follows: Emotions are subtle body reactions, such as neuroendocrine and physiological changes, that occur before or without entering consciousness; that is, they are generally unconscious or preconscious. In contrast, feelings arise from patterns of various strongly evoked emotions. Feelings can be conscious, as indicated by specific names such as anger, grief, and joy. Studies of individuals with damage to parts of the brain responsible for adaptively evoking and utilizing emotions, such as the ventral and medial prefrontal regions, have suggested that emotions play crucial roles in adaptive behaviors and cognition (e.g., Bechara, Damasio, Damasio, & Anderson, 1994; Bechara, Tranel, Damasio, & Damasio, 1996; Damasio, 1994). In our experience, emotions (and often feelings), cognition (or thinking), and behaviors occur together and are stored in unified forms as memories. When encountering events that are similar to those previously experienced, the memories are triggered as guided by their emotions and feelings, leading to initiation of cognition and behaviors.

TOP SELF attempts to equally address all of the psychological components discussed above, although it

emphasizes the role of emotions. After evoking emotions and making them conscious, we unify emotions, cognition, thinking, and behaviors, storing them collectively in memories. In discussing their emotion-focused therapy, Greenberg and colleagues (e.g., Greenberg, 2008) suggest that making unconscious or preconscious emotions conscious is crucial for adaptive cognition and behaviors.

Thus, the aim of the present paper was to examine the efficacy of a program for the development of self-confidence in children. Moreover, its effects on children's adjustment at school and homeroom class were tested, because such effects are expected to carry over from the direct purposes of the original program. These assessments were conducted using self-report questionnaires. Additionally, we assessed implicit positive and negative affect. According to Quirin, Kazén, and Kuhl (2009), implicit affect is defined as the automatic activation of cognitive representations of affective experiences, and its processes operate basically at a preconscious level. Since the programs of TOP SELF underscore the unconscious and preconscious functions of emotions, their measurements are essential to examine how such emotional experiences change. Specifically, since the programs are expected to make children healthier and more adaptive, implicit positive and negative affect will increase and decrease, respectively, if they are effective.

2. Method

2.1. Participants

Participants were third grade children across six public elementary schools in a suburb of the capital city of Tokushima prefecture in Japan. The homeroom classes in the schools were randomly divided into intervention and control groups. After eliminating subjects ($n = 22$) in the data analyses due to absence from school on the evaluation days or otherwise missing data, the final sample consisted of 204 children (98 boys and 106 girls) for the intervention group and 218 children (105 boys and 113 girls) for the control group. The control group was wait-listed, and this population took the program afterwards. The program and evaluation were provided in official school classes primarily by school teachers under the supervision of principals.

2.2. Procedure

In the intervention group, the first evaluation was conducted in classes around one month before the start of the program, and the second evaluation was given around one week before the start of the program. Afterwards, around one week after the last class of the program, the third evaluation was administered. The first evaluation constituted another study and these data are not provided in the current report. Participants in the control group were given evaluations around the same periods of time as the

intervention group. In each evaluation, all participants completed a battery of three questionnaires, along with writing tasks that are not reported here.

The current program was implemented weekly for eight consecutive weeks in regular 45-minute classes for all homeroom class members. Regarding methodology, every class proceeded according to the standard TOP SELF guidelines (see Table 1). As stated in Introduction, every class strongly attracts the interest of children to focus on class activities in which animated stories, games, enjoyable competition, etc. are included. Thus, children experience sufficient emotional stimulation during classes at the same time that desirable cognitive and behavioral characteristics are simultaneously taught. As a consequence, emotions paired with the learning objectives are stored in unified forms as coded memories. The memories are subsequently expressed as guided by the associated emotions, leading to initiation of the stored cognition and behaviors whenever needed.

2.3. Measures

2.3.1. Intermediate Purposes of the Program

The program has four main purposes according to which we assess changes incurred by the program to examine its effectiveness. The Self-confidence Scale for Children (SS-C) (Murakami & Yamasaki, 2014), which was developed by five psychologists with PhDs (all familiar with the measured concepts, providing content validity), was utilized for this aim. The SS-C includes four subscales, each of which assesses one of the four main purposes via three question items. Item examples include "Do you know your good features?" for Purpose I, "Do you know what you want to do?" for Purpose II, "Can you think of methods that will ensure that what you want to do will be successful?" for Purpose III, and "Do you think that you did well when you were previously challenged with something?" for Purpose IV. Children answered about themselves on a four-point Likert scale (e.g., 1 = "don't know at all" to 4 = "know very well"). For each subscale, the scores of three items were summed with a range of 3 through 9. Additionally, a composite score was calculated by summing the scores of the four subscales. The alpha of the composite score was high (.81) in this study, although those of the four subscales were low (.44 to .54) due to the relatively few number of items (three) in each subscale. In addition, children were asked about class members overall regarding the same purposes, but only one item modified from the above three question items was employed for each purpose. A composite score summing the four scores of the subscales was also employed ($\alpha = .68$ in this study).

2.3.2. Implicit Affect

The Implicit Positive and Negative Affect Test for Children (IPANAT-C) was utilized to measure implicit positive and negative affect (PA and NA) (Uchida, Fukuda,

& Yamasaki, 2014). This test was originally developed based on the Implicit Positive and Negative Affect Test (PANAT) for adults by Quirin et al. (2009). The IPANAT-C uses three nonsense line drawings instead of nonsense artificial words in Quirin et al.'s version, and includes three adjectives for each affect ("confident", "vigorous", and "happy" for PA; "anxious", "sad", and "scared" for NA). Participants were asked about how the appearance of each drawing fits to each adjective on a four-point Likert scale ("doesn't fit at all" to "fits very well"). Scores are computed in two steps. First, single adjective scores are computed with the average of all three drawings. Then, scores for positive and negative affect are computed by averaging three adjective scores for PA and NA. The alphas in this study were .71 and .65 for PA and NA, respectively.

2.3.3. Adaptive Status at Homeroom Classes and Schools

If the direct, main purposes are achieved via this program, it is predicted that the effectiveness of the program would also extend to children's adaptive status at homeroom classes and schools. In this study, this extended effectiveness was examined using a questionnaire named "the Questionnaire-Utilities (Q-U)" (Kawamura & Tagami, 1997). The Q-U includes five factors, i.e., approval, aggrievedness, peer relationship, motivation for learning, and classroom climate. Children answered on a four-point Likert scale (e.g., 1 = "don't think so at all" to 4 = "think so very much"). For scoring each subscale, the scores of three or six items were summed with a score range of 3 through 9 for peer relationship, motivation for learning, and classroom climate or 6 through 24 for approval and aggrievedness. The validity and reliability of this scale were confirmed in Kawamura and Tagami (1997). The alphas in this study were .81, .79, .70, .56, and .72 for approval, aggrievedness, peer relationship, motivation for learning, and classroom climate, respectively.

3. Results

3.1. Effects of the Program on the Primary Purposes

Table 2 shows the mean scores in the scales of the SS-C regarding oneself in each of the groups and periods for boys and girls. Data were analyzed by a 2 (intervention and control groups) x 2 (pre-intervention and post-intervention periods) x 2 (boys and girls) analysis of variance (ANOVA). In describing the results, we focused on the interactive effects of group x period and group x period x sex, because the effectiveness of the program can best be examined in such interactions. The results revealed that the interaction of group x period was significant in all subscales ($F_s(1, 418) = 45, 53, 35.46, 10.78, 17.85, \text{ and } 28.39$ for Purposes I to IV and the composite score, respectively, $p_s < .01$). No significant interaction of group x period x sex was found.

Post hoc tests with Bonferroni corrections using the data collapsed across boys and girls showed that the scores for all subscales significantly increased from the pre-intervention to post-intervention periods in the intervention group, while the scores for Purpose IV and the composite score significantly decreased from the pre-intervention to post-intervention periods, along with no significant changes for the other scales, in the control group. These results showed that the program was effective in enhancing self-confidence and confidence in others in terms of the self-report on oneself.

Table 3 shows the mean scores in the scales of the SS-C regarding the other (whole) class members in each of the groups and periods for boys and girls. The statistical results revealed that a significant interaction of group x period existed in all subscales ($F_s(1, 418) = 9.75, p < .01; 3.99, p < .05; 8.30, p < .01; 5.35, p < .05; \text{ and } 14.86, p < .01$ for Purposes I to IV and the composite score, respectively). No significant interaction of group x period x sex was found.

Post hoc tests with Bonferroni corrections using the data collapsed across boys and girls showed that the scores for Purposes I and III and the composite score significantly increased from the pre-intervention to post-intervention periods in the intervention group, while the score for Purposes II and IV in the intervention group and all scores in the control group did not significantly change from the pre-intervention to post-intervention periods. These results showed that the program was effective in enhancing self-confidence and confidence in others in terms of the self-report on the other class members in Purposes I and III and the composite score. However, as the significant interaction of group x period indicates that the changes from pre- to post-intervention periods are different between the two groups, the effectiveness of the program in terms of Purposes II and IV can also be suggested. In fact, the increase and decrease in the scores of Purpose II in the intervention group and Purpose IV in the control group, respectively, almost reached statistical significance ($.05 < p < .10$).

3.2. Extended Effects Associated with Achievement of the Direct Purposes

Table 4 shows the mean scores in the scales of the Q-U in each of the groups and periods for boys and girls. Statistical results revealed that the interaction of group x period was significant only in the scale of motivation for learning, $F(1, 418) = 3.98, p < .05$. No significant interactive effects of group x period x sex were found. *Post hoc* tests with Bonferroni corrections using the data collapsed across boys and girls showed that the scores significantly decreased from the pre-intervention to post-intervention periods in the control group, along with no significant change in the intervention group. These results showed that the program was effective in enhancing the motivation for learning.

Table 2. Mean Scores (Standard Deviations) of the Subscales of the Self-confidence Scale for Children (SS-C) for Oneself for Each Sex and Period in the Intervention and Control Groups

Variables	Groups	Boys		Girls	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Purpose I	Intervention Group	9.77 (1.53)	10.41 (1.46)	9.93 (1.49)	10.69 (1.32)
	Control Group	9.51 (1.72)	9.48 (1.87)	10.09 (1.35)	9.92 (1.59)
Purpose II	Intervention Group	10.18 (1.28)	10.50 (1.30)	10.13 (1.58)	10.64 (1.23)
	Control Group	9.99 (1.55)	9.94 (1.53)	10.39 (1.46)	10.39 (1.45)
Purpose III	Intervention Group	9.44 (1.63)	9.76 (1.70)	9.37 (1.84)	9.99 (1.52)
	Control Group	9.60 (1.66)	9.31 (1.65)	9.96 (1.45)	9.87 (1.57)
Purpose IV	Intervention Group	9.48 (1.73)	10.05 (1.66)	10.23 (1.54)	10.61 (1.50)
	Control Group	9.74 (1.88)	9.42 (2.04)	10.35 (1.53)	10.01 (1.62)
Total Score	Intervention Group	38.87 (4.67)	40.71 (5.12)	39.66 (5.26)	41.93 (4.68)
	Control Group	38.85 (5.51)	38.15 (5.94)	40.79 (4.79)	40.19 (5.16)

Table 3. Mean Scores (Standard Deviations) of the Subscales of the Self-confidence Scale for Children (SS-C) for the Other Class Members for Each Sex and Period in the Intervention and Control Groups

Variables	Groups	Boys		Girls	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Purpose I	Intervention Group	3.76 (.91)	4.09 (.93)	3.89 (.89)	4.15 (.81)
	Control Group	3.63 (.98)	3.75 (.98)	3.81 (.87)	3.70 (1.04)
Purpose II	Intervention Group	3.83 (1.09)	3.93 (1.11)	3.53 (1.20)	3.76 (1.07)
	Control Group	3.66 (1.21)	3.64 (1.13)	3.47 (1.28)	3.33 (1.22)
Purpose III	Intervention Group	4.00 (.86)	4.27 (.70)	4.18 (.81)	4.32 (.81)
	Control Group	4.14 (.81)	4.16 (.87)	4.33 (.84)	4.19 (.82)
Purpose IV	Intervention Group	4.05 (.98)	4.14 (.91)	4.25 (.79)	4.35 (.82)
	Control Group	4.00 (1.14)	3.89 (1.05)	4.22 (.99)	4.08 (.96)
Total Score	Intervention Group	15.63 (2.78)	16.43 (2.66)	15.85 (2.63)	16.58 (2.56)
	Control Group	15.43 (3.12)	15.44 (2.82)	15.83 (2.78)	15.30 (3.25)

Table 4. Mean Scores (Standard Deviations) of the subscales of Questionnaire-Utilities (Q-U) for Each Sex and Period in the Intervention and Control Groups

Variables	Groups	Boys		Girls	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Peer relationship	Intervention Group	10.02 (1.82)	10.09 (1.84)	10.30 (1.69)	10.30 (1.76)
	Control Group	10.07 (1.74)	10.04 (1.90)	10.73 (1.41)	10.53 (1.67)
Motivation for learning	Intervention Group	9.94 (1.68)	9.93 (1.75)	10.15 (1.57)	10.13 (1.76)
	Control Group	9.80 (1.74)	9.48 (1.89)	10.24 (1.58)	9.97 (1.59)
Classroom climate	Intervention Group	10.87 (1.34)	10.95 (1.55)	10.97 (1.56)	11.00 (1.41)
	Control Group	10.89 (1.51)	10.73 (1.58)	11.04 (1.40)	10.81 (1.63)
Approval	Intervention Group	18.27 (4.07)	18.94 (3.79)	19.15 (3.52)	19.70 (3.70)
	Control Group	18.77 (3.68)	18.67 (4.12)	20.00 (3.25)	19.72 (3.57)
Aggrievedness	Intervention Group	10.28 (3.59)	10.34 (3.91)	9.75 (3.55)	9.34 (3.70)
	Control Group	10.56 (4.01)	10.34 (3.62)	9.60 (3.59)	9.57 (3.57)

Table 5. Mean Scores (Standard Deviations) of the subscales of the Implicit Positive and Negative Affect for Children (IPANAT-C) for Each Sex and Period in the Intervention and Control Groups

Variables	Groups	Boys		Girls	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Positive affect	Intervention Group	6.90 (1.86)	7.04 (1.59)	7.28 (1.62)	7.46 (1.62)
	Control Group	7.36 (1.88)	6.84 (1.51)	7.04 (1.88)	7.09 (1.91)
Negative affect	Intervention Group	6.84 (1.67)	6.65 (1.67)	6.95 (1.63)	7.13 (1.62)
	Control Group	6.62 (1.52)	6.64 (1.66)	6.79 (1.61)	6.64 (1.45)

Table 5 shows the mean scores in the scales of the implicit PA and NA with the IPANAT-C in each of the groups and periods for boys and girls. The statistical analyses revealed a significant interaction of group x period only in PA, $F(1, 418) = 5.56, p < .05$. No significant interaction of group x period x sex was found. *Post hoc* tests with Bonferroni corrections using the data collapsed across boys and girls showed that although no changes from

pre- to post-intervention periods in either group were significant, the decrease in the control group almost reached significance ($.05 < p < .10$), which suggests an effectiveness of the program in terms of implicit PA.

4. Discussion

The current study examined the effectiveness of a

universal prevention program to enhance self-confidence and confidence in others, targeting third graders at elementary schools. Comparisons between the intervention and control groups showed that this program is effective not only in achieving the direct main purposes of the program, but in improving implicit PA and motivation for learning.

Japanese people have lower subjective well-being compared to people in most Western countries (e.g., Diener, Diener, & Diener, 1995), and they also exhibit lower self-esteem during elementary and high school (e.g., Furusho, 2007). Taking these facts into consideration, it is noteworthy that this program enhanced self-confidence and confidence in others during such a short period of time. However, in regard to self-reports on oneself, some defensiveness often occurs such that one assesses oneself better than he or she actually is, which could cast doubts on the present findings. In this regard, it should be underscored that in the current study, children's scores assessing the other class members also indicated a significant effectiveness of the program, along with an increase of implicit affect that would not be distorted by conscious defensiveness. Although it is unclear why implicit negative affect did not decrease, the program might be more sensitive to increases in positive affect because of its enjoyableness.

Considering that conscious self-reports are not reliable, the examination of effectiveness needs to utilize implicit measures that are free of conscious control. Inspired by the development of the implicit association test (e.g., Greenwald, McGhee, & Schwartz, 1998), many measures have been developed to assess implicit self-esteem. The present program aims to enhance genuine self-esteem that is an absolute evaluation on oneself rather than a relative comparison to others. Explicit self-esteem is sensitive to comparison to others, along with a manifestation of conscious defensiveness. Although, to the best of the authors' knowledge, no implicit measures to assess children's self-esteem in groups have been developed yet, it is possible to develop such measures according to the paper-and-pencil tests that measure implicit self-esteem in adults (e.g., Kitayama & Karasawa, 1997; Nuttin, 1985).

The present research hypothesized that if self-confidence and confidence in others increased, such effects would furthermore influence not only positive and negative affect but various adaptive aspects of daily life in schools and classrooms. In this study, such adaptive status was assessed utilizing the Q-U. As a result, only motivation for learning increased. Since we expected increases in the other subscales of the Q-U that were more directly related to daily life in schools and classrooms, this result appears difficult to interpret. However, academics are underscored at schools. As such, the enhancement of self-confidence might initially influence motivation for learning. It is easily predicted that enhanced motivation for learning would lead to actual improvements of academic performance. Many prevention programs in social emotional learning have been found to enhance academic performance (e.g., Payton et al., 2008),

in accordance with hypothetical mechanisms why the programs enhance such performance (e.g., Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Promisingly, this kind of program could be utilized to enhance learning in addition to health and adjustment.

The current research has limitations. First, the present research design was not of a Randomized Controlled Trial (RCT) design. At present, it is the current scientific consensus that the RCT is needed to conclude that a program is effective. Second, the reliability and validity of the measures to directly assess the program purposes need to be improved. Even if the design is RCT, any assessment without sufficient reliability and validity would not reveal a valid effectiveness of the program. Third, since the program is large-scale with a plethora of methods, it is unclear which components of the methods are effective. If these become clear, the programs could be streamlined by removing ineffective components.

Despite the above limitations, the current research demonstrated a clear effectiveness of the program, so now we can move on to thinking about promising future research. In particular, the necessity to examine the sustainability of the effectiveness of the program is indicated. It is easily predicted that just eight classes of these programs will not lead to maintenance of effectiveness for a long period of time. After determining the limits of effectiveness, we might need to conduct some booster sessions or a re-implementation of the program to extend the results. This kind of prevention program aims to be implemented on a regular basis in all elementary schools. For this aim, effective training for teachers in creating educational materials and implementing the program are needed, which represents a second future avenue of research.

Schools underscore academics. However, health and adjustment are no less crucial than academics now that more children are suffering from health and adjustment problems. Hopefully, this kind of program will open fruitful avenues to save children from these problems.

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