

KIMOCHIS®: THE EFFECTS OF A SOCIAL AND EMOTIONAL LEARNING PROGRAM
ON EARLY CHILDHOOD OUTCOMES

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ABSTRACT

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by Bree Kaufman

Social and emotional learning (SEL) is a process through which students develop the skills required to effectively manage their emotions, solve problems, show empathy, maintain positive relationships, and make responsible decisions throughout life (Collaborative for Academic, Social, and Emotional Learning, 2013). Research shows that SEL is linked to enhanced social skills, academic performance, and overall positive social behavior. Participation in SEL programming is also associated with a decrease in conduct problems, emotional distress, and other internalizing problems (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

Important factors educators should consider when selecting a SEL program, is the amount of training, time, and effort the program demands. When looking at effective SEL programs for younger populations, it is also important to consider whether or not children are provided with a safe and engaging way to interact with the material (CASEL, 2013). Kimochis® is a SEL program that addresses these types of issues.

Due to the fact that little research currently exists on Kimochis®, the current study aimed to investigate the effects of the program on social-emotional learning in a population of typically developing kindergarten and first grade students. A significant improvement in social skills and problem behaviors was seen for children in the intervention group compared to the control group. Students in the intervention group were also able to identify significantly more feeling words and ways to communicate feelings compared to students in the control group.

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CHAPTER I

INTRODUCTION

There is wide agreement among educators, policy makers, parents, and the general public that classroom education should extend beyond the realm of academic development. In addition to promoting intellectual growth, educational systems have the responsibility to produce responsible, respectful students that are able to demonstrate social and emotional competence, cooperate with others, and independently make mature life choices (Association for Supervision and Curriculum Development, 2007; Greenberg et al., 2003). However, due to limited resources, time constraints, and pressure to meet federal achievement standards, teachers often have to prioritize academics over these other areas of development. Fortunately, there is now a solution to this problem—social and emotional learning programs.

Social and emotional learning (SEL) is a process for developing social and emotional competencies. SEL helps students develop the skills required to effectively manage their emotions, solve problems, show empathy, maintain positive relationships, and make responsible decisions throughout life. Social-emotional competence and academic achievement are interwoven and integrated areas of development. Students who possess well-developed social-emotional skills are more self-aware, confident, and persistent when faced with challenging situations (Aronson, 2002). Students with emotional stability are also more likely to establish high academic standards, exhibit self-discipline, motivation, and effectively cope with stressful situations (Duckworth & Seligman, 2005; Elliot & Dweck, 2005). Therefore, it is no surprise that SEL programs are not only linked to increased social and emotional development, but to increased academic performance as well (Durlak et al., 2011).

The multiple benefits of implementing evidence-based SEL programs in the classroom has been an area of interest among researchers for the past decade. Durlak and colleagues (2011) conducted the first large-scale meta-analysis of SEL programs in the school system. This analysis consisted of 213 studies, consisting of 270,034 K-12 students. To be included in this analysis, studies had to “(a) be written in English; (b) appear in published or unpublished form by December 31, 2007; (c) emphasize the development of one or more SEL skills; (d) target students between the ages of 5 and 18 without any identified adjustment or learning problems; (e) include a control group; and (f) report sufficient information so that effect sizes (ESs) could be calculated at post and, if follow-up data were collected, at least 6 months following the end of intervention.” Studies that explored programs that mainly focused on the prevention of alcohol and drug abuse were excluded (Durlak et al., 2011).

For the programs that were included, six areas of development (social and emotional skills, attitudes toward self and others, positive social behaviors, conduct problems, emotional distress, and academic performance) were investigated. Results were significant for all six variables. Compared to controls, students who had participated in SEL programming demonstrated enhanced social and emotional skills and positive social behaviors. Conduct problems, anxiety, and stress levels were significantly reduced for these students. Particularly noteworthy is that results also reflected a significant increase in academic performance ($N = 35$ studies consisting of 135,396 students, $ES = .27$) (Durlak et al., 2011). In fact, Durlak reported, “In other words, the average member of the control group would demonstrate an 11-percentile gain in achievement if they had participated in an SEL program.”

In addition to its developmental benefits, the results of this meta-analytic study yielded a better understanding of other aspects of SEL programming. For example, follow-up data for 33 of

the studies (15%) indicated that although the observable benefits may reduce in magnitude, effects remain statistically significant even sixth months later. It was also found that the most effective programs were carried out by regular school staff members (e.g., classroom teacher or teacher assistant) as opposed to professional non-school personnel (e.g., university researcher). Results showed that SEL programs carried out by teachers or other school workers, yielded significant results for all six developmental categories (SEL Skills: $N = 40$, $ES = .62$, Attitudes: $N = 59$, $ES = .23$, Positive Social Behavior: $N = 59$, $ES = .26$, Conduct Problems: $N = 53$, $ES = .20$, Emotional Distress: $N = 20$, $ES = .25$, Academic Performance: $N = 10$, $ES = .34$) while SEL programs carried out by non-school personnel only yielded significant outcomes in SEL skills, positive social behaviors, and reduced conduct problems (SEL Skills: $N = 21$, $ES = .87$, Positive Social Behavior: $N = 11$, $ES = .23$, Conduct Problems: $N = 16$, $ES = .17$). This finding suggests that teachers can effectively integrate SEL programming into their designated course curriculum without outside assistance (Durlak et al., 2011).

A final important finding from this meta-analysis relates to the structure of SEL programs. Previous studies have shown that four key factors contribute to a program's effectiveness: sequenced step-by-step training, the utilization of active forms of learning, a sufficient focus on skill development, and explicit learning goals (Bond & Hauf, 2004; Durlak, 1997). This has been described using the acronym SAFE (for sequenced, active, focused, and explicit). Sequence training involves a planned set of activities that assist with breaking down complex skills into smaller components. This allows students the opportunity to make connections between concepts. Another effective teaching strategy is utilizing active forms of learning. In other words, students need multiple opportunities to practice what they have learned, especially in a real-world context. A sufficient amount of time must be spent focusing on the

target skill as well. Finally, specific social and emotional skills should be targeted as opposed to broader concepts (Durlak et al., 2011).

Results of the meta-analysis confirmed previous findings: SEL programs that followed SAFE procedures were more effective than programs that did not. SAFE SEL programs were correlated with numerous positive developmental outcomes. Contrastingly, programs that did not incorporate any of the four SAFE guidelines, were not successful in any area (Durlak et al., 2011). Research also shows that programs that follow SAFE guidelines are effective at the elementary, middle, and high school level (Durlak et al., 2011).

The Collaborative for Academic, Social, and Emotional Learning (CASEL) is the leading organization in this area and provides current information about programs, policy, and research results. The Preschool and Elementary Edition of the 2013 Collaborative for Academic, Social, and Emotional Learning has made great contributions to the knowledge base for social emotional learning programs. This guide provides information on 23 evidence-based SEL programs and five areas of social-emotional competency: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Due to CASEL's efforts to promote SEL science, practice, and policy, the use of SEL programming in school districts across the country is becoming more common each year. Many states now have established certain social and emotional competence standards for their preschool, middle, and high school students (Dusenbury, Zadrazil, Mart, & Weissberg, 2011). There may also be success in SEL advancement through legislation. The passing of the Academic, Social, and Emotional Legislation Act would amend the Elementary and Secondary Education Act (ESEA) to provide funding for educator training on evidence-based SEL programs. This is intended to increase the utilization of SEL programs across districts nationwide (CASEL, 2013).

The promotion of social and emotional learning is valued internationally as well. Targeted Mental Health in Schools (TaMHS) is a mandated school-based mental health program in England. This 100-million-dollar three-year program began in 2008 and aimed to improve the mental well-being of children ages 5 to 13 (Department for Children, Schools and Families, 2008). A study investigated the effects of the TaMHS program by analyzing outcome data from a total of 8,480 4th grade children from 268 schools. Analyses confirmed that the schools that implemented TaMHS increased the use of mental health based interventions and collaboration with mental health professionals in the community. The schools that implemented TaMHS also showed an increase in opportunities for group therapy and the amount of SEL related information made available to students, parents, and staff. Data analyses showed that TaMHS students with behavior issues or at-risk of behavior issues reported significant reductions in behavioral difficulties compared to the control school students (Wolpert et al., 2015). This study contributes to the growing body of research which supports the implementation of social and emotional programming in schools.

Although there are various SEL programs to choose from research suggests interactive SEL programs that follow SAFE guidelines are most effective. Further research indicates optimal success when implementation and support for the program is evident in school, at home, and in the community (Albright & Weissberg, 2009; Weare & Nind, 2011). Another option available to help choose an SEL program is to refer to the CASEL guide. Currently, there are 23 programs that CASEL identifies as being a “SElect” program. SElect programs are SEL programs that CASEL recommends because specific important standards have been met. The current CASEL guide is more selective and the criteria for inclusion is more rigorous compared to previous editions of the guide. In order to be considered a SElect program and be included in

the most current guide the SEL program had to: address all five of the CASEL competencies, be classroom-based, provide opportunities for practice of SEL skills, and offer multi-year programming. In addition to this, the program had to deliver high-quality training and other implementation supports as well as be evidence based with at least one carefully conducted evaluation that documented positive outcomes for students.

Of the 23 programs included in the CASEL guide, one in particular may be an alluring option for Michigan school districts. The Michigan Model for Health is a K-12 program that met the CASEL inclusion criteria and is considered a SElect program. The program utilizes explicit instruction and includes ample opportunities to practice the skills taught. In terms of SEL curriculum specifically, the Michigan Model for Health program provides 8-14 structured lessons each year (lasting 20-45 minutes each) that promote social-emotional health. Lessons aim to teach students the skills needed to build relationships at school, identify and understand feelings, use appropriate problem solving strategies, develop respect, and set attainable goals.

All lessons with a social-emotional focus use a 3-part model: instruction, practice, and closure. The teacher follows a script to teach each structured lesson. Occasionally, homework is assigned at the end of a lesson for additional practice. To deliver this program in Michigan, individuals are required to attend one or two training sessions. This program can be used outside of Michigan as well. Although training is not required out-of-state, it is strongly encouraged (Hines, Shaffer, & Teachout, 2010).

Although this program has many positive attributes, a more extensive review of the curriculum reveals that SEL is not the major focus. The main objective of the program is to provide students with skills needed to maintain healthy behaviors and lifestyles. Social-emotional health is addressed, however, physical activity, safety, drug use, and HIV, are the

topics that make up the majority of this program (O'Neill, Clark, & Jones, 2011). Considering social skills do not receive an abundant amount of attention in this program, The Michigan Model for Health fails to meet SAFE procedures.

Another widely used program that is included in the CASEL guide is the Caring School Community Program. Of the 23 programs that met inclusion criteria this program was rated highest by CASEL. Caring School Community was determined to provide extensive coverage in the areas of classroom-wide content, opportunities to practice skills, school-wide content, family content, and community content. All other programs included in CASEL were determined to provide only minimal or adequate coverage in one or more of those areas. The Caring School Community Program is designed for students in kindergarten through the sixth grade. The overall aim of this program is to teach students about the importance of respect, trust, consideration, responsibility, and family in order to promote positive decision making (Perry, 2002). The program achieves this through four main components built into the yearly curriculum: Class Meetings (30-35 per grade), Cross-Age Buddies (40 activities), Homeside Activities (once or twice a month), and Schoolwide Community-Building Activities (varies by grade).

The Class Meetings are held in the classroom by the teacher three to four times per week. The teacher is provided with an outline to follow in order to facilitate a class discussion. In the beginning of the school year the discussion helps students get to know one another, set classroom rules, and review the importance of positive social interactions with other students. Gradually the focus of the discussions shift to other important issues students face in the classroom. Examples of this include preparing for a substitute teacher, proper field trip behavior, and how to handle disagreements with other students. End of the year class meetings revolve around difficulties

faced with transitioning to the next grade level. Teachers are provided with a recommendation guide discussing how long meetings should last and when certain meetings should be held.

In the Cross-Age Buddies component of the program, older students are paired with younger students for various activities. The interactions range from academic-based activities (math, science, social studies, and language arts) to more recreational-based activities such as art, music, and physical education. Similar to how the Class Meeting component is implemented, each buddy pair is provided with an outline to follow in order to carry out the activity. This piece of the Caring School Community Program allows the older students to gain experience in leadership, the younger students to benefit from the knowledge of a mentor, and helps to build meaningful relationships across grade levels.

The Homeside component aims to build a stronger link between school and home. Students are sent home with activities that should be carried out with a family member. The activities help family members better understand what the student is learning at school. Students then later share the experiences during a group discussion with their classmates. This process helps foster communication between teachers, parents, and students.

SchoolWide activities are the fourth and final component to the Caring School Community Program. These activities help students become more familiar with other adults in their school, help foster school-wide traditions, and increase the feeling of interconnectedness. Teachers provide students with an outline of the activity and provide the student with time during the school day to carry out the task. The student is then asked to share their experience with their family members at home (Caring School Community, 2015).

Although the Caring School Community Program was rated highest amongst the other SEL programs included in the CASEL guide, there are important limitations to consider. Similar to

the Michigan Model for Health Program, the extensive nature of this curriculum is taxing on teachers in terms of time and effort. In order to effectively implement the Caring School Community Program, it is recommended that teachers attend a formal one-to-two day training seminar. Research also suggests that this program requires frequent teacher check-ins from the program's developers in order to ensure the program is being delivered in an effective manner (Chang, 2008).

Furthermore, the Caring School Community Program does not have a specific social-emotional focus. A review of the curriculum reveals that although the program's activities encourage social-emotional skills, these skills are never explicitly taught to students. Research has shown that explicit teaching strategies are most effective in the promotion of social emotional skills. This program also lacks opportunities for active learning, or the opportunity for students to practice what they have learned in real-life situations. Therefore, the Caring School Community Program also does not meet SAFE procedures.

Both the Michigan Model for Health, the Caring School Community Program, and numerous other widely-used SEL programs lack another important feature for younger students-kid appeal. The majority of current SEL programs are structured and implemented in a lecture style fashion with little opportunity for students to directly connect with the material. Considering the sensitive nature of some social-emotional topics, it is also critical that students have a way to engage with the material in a manner that makes them feel comfortable. The majority of SEL programs do not offer this important feature for younger populations.

The Kimochis® Program is a social-emotional learning program that specifically targets social-emotional skills, is not demanding in terms of time, teacher training, or effort, and provides students with an interactive and comfortable way to engage with the material. This

program requires active participation from students and has a strong interactive basis (Dodge, Rice, & Grimm, 2010). Kimochis® also aligns closely with SAFE guidelines.

Kimochi, which is a Japanese word for “feeling,” strives to promote positive emotional communication habits in preschool through middle school aged students. The Kimochis® Program uses child-friendly plush dolls and miniature pillows to help children build the foundations for social and emotional intelligence. In the standard program, there are five plush dolls that each have unique characteristics and personalities. In addition to these dolls, there are numerous small pillows that each have a feeling (e.g., happy, sad, jealous, cranky) printed on one side and a corresponding facial expression on the other. Children are able to tuck these pillows inside the dolls to represent how feelings come from within.

The Kimochis® Feel Guide, which contains the SEL curriculum, consists of 8 major sections (SEL Introduction, Meet the Kimochis®, The Keys to Communication, Creating a Kimochis® Classroom, Students with Special Needs, The Feeling Lessons of Early Childhood, The Feeling Lessons for Elementary-Age Students, and More Feeling Lessons). The guide begins with an introduction of the importance of social and emotional learning and a brief review of SEL research. This is followed by the Meet the Kimochis® unit. Implementers of the program are instructed to share each character’s story with the children. The Keys to Communication section then introduces students to the seven Kimochis® Keys to Communication:

1. Call someone’s name, wait for eye contact, and give a communication tap, if necessary, before you speak.
2. Use a talking tone of voice instead of a fighting tone of voice.
3. Use a talking face and relaxed body language instead of a fighting face and tense body language.

4. Choose words that help instead of hurt.
5. Be brave and redo harmful moments.
6. Be kind and let people try again.
7. Assume the best.

Activities are provided to help teach the seven keys and these keys are also reinforced in each Feeling Lesson of the program.

The next main section of the Kimochis® Feel Guide is Creating a Kimochis® Classroom. This unit provides teachers and other professionals with ideas on how to integrate the Kimochis® program into their curriculum and classroom on a daily basis. The guide also provides suggestions on how Kimochis® can be used with students with special needs. The remainder of the Kimochis® Program is comprised of Feeling Lessons. Feeling Lessons are divided into two main sections – Lessons for Early Childhood and Lessons for Elementary-Age Students. There are 11 main Feeling Lessons in each section which cover the feelings happy, sad, mad, brave, left out, silly, frustrated, curious, cranky, hopeful, and proud. The final major section of the guide provides Feeling Lessons for 15 additional emotions.

The Kimochis® Program is different from other SEL programs in that it allows children a comfortable and safe third-party to help communicate their true feelings. The hands on experience gives children a fun way to practice tone of voice, body language, and appropriate words to use during challenging situations. The use of Kimochis® is intended to create an optimistic and caring learning environment in which students feel safe, included, and valued. This program is meant to be integrated into every-day curriculum and practiced at home as well as in school. There is a twenty-week lesson plan sequence available, however, the program is

flexible. Educators have the ability to choose specific activities and focus on the certain emotions thought to be most relevant and beneficial to their classroom.

Although there is currently little research available on the Kimochis® Program, the interactive lesson plans, use of SAFE techniques, and opportunity for parent participation, suggests Kimochis® may be one of the most effective SEL programs to date. Two known studies have investigated the effectiveness of the Kimochis® Program. In one study, the program was implemented in a combined second-third grade classroom in a disadvantaged area of the Australian suburbs. Participants included 27 children, ranging from 6 years 10 months to 8 years 8 months. Nine children were from families with English as a second language. Nine children were also identified as having a chronic medical condition or disability. The aim of the study was to investigate the effects of class-wide social emotional programs on children who have experienced complex stress and trauma (McInnes, 2013).

The study was conducted in 4 stages across the school year. During the first stage, an initial interview with the teacher regarding student social-emotional functioning was conducted. In stage 2, sociometric data was collected by asking the children to, “Name three people in the class who are important to you.” This same question was asked again in stage 3 and 4 (McInnes, 2013). Sociometric data assists in identifying mutual relationships which is a good indicator of reciprocal friendships. Children who are chosen by a peer, even if the selection is not mutual, indicates that the child is well-liked by peers. Children are identified as isolates if they are not selected by peers, or just one peer. This data was intended to track the development of social relationships among the students across the school year (McInnes, 2013).

At the beginning of stage 2, a social-emotional program, Play is the Way, was incorporated into the classroom. This program requires children to engage in cooperative

physical games and aims to promote peer support, trust, and respect (Street, Hoppe, Kingsbury & Ma, 2004). Researchers helped the teacher to implement aspects of the program on a weekly basis. Parents were also provided information on the program and its potential benefits. Near the end of stage 2, children were asked to name all the feeling words that they knew. During stage 3, the Kimochis® program was introduced. Again, researchers helped the teacher to implement aspects of the program on a weekly basis and parents were provided with information about the program and its potential benefits. In stage 4, children were again asked to name all the feeling words that they knew. Data on overall teacher impressions were collected as well (McInnes, 2013).

Results from the sociometric data indicated that the number of mutual relationships in the classroom increased threefold from 8 to 25. Data also indicated that children were able to identify significantly more feeling words at the end of the intervention period, $t(11) = -3.29, p = .004$. Before the Kimochis® program was introduced, students identified between 4 and 11 feeling words ($M=6.75, SD=2.22$). Identification increased to between 5 and 22 feeling words ($M=11.33, SD=4.94$) after the intervention period. Interview data indicated that the intervention was perceived in a positive light by both the teacher and students. The teacher felt that the social-emotional programs helped to develop social maturity among the students and helped to strengthen the teacher-student relationship as well (McInnes, 2013).

The other known research involving Kimochis® investigated the effect of the program on the emotional intelligence of 6 children, ranging from 5 to 9 years of age, with Autism Spectrum Disorder (ASD). The children were randomly assigned to a Kimochis® or control group. It was also verified that the participants were not receiving any other form of a social-emotional learning curriculum. Each child attended an 8-week social group, once per week, for 90 minutes

at the Kansas State University Speech and Hearing Center. In the intervention group, the Kimochis® Program was used to introduce new feelings to the students. Each lesson began with a review of the previous lesson. The students used the Kimochis® characters to role play. The characters were also used during Kimochis® cooperative games. In the control group, new feelings were introduced to the children, prior skills were reviewed and practiced, and role playing and cooperative games were conducted. However, the Kimochis® Program or characters were not used in any way. Pre and posttest measures included the Social Skills Improvement System (SSIS), a Social Emotional Evaluation form (SEE) and the Kimochis® Checklist. However, no further information has been made available on this research or its findings (Burnett & Meier, 2012).

Purpose of Study

There is an abundance of research linking social-emotional learning programs to numerous positive outcomes in students of all ages (Durlak et al., 2011). There are currently hundreds of social-emotional programs available to school districts, and therefore choosing the one most appropriate for students' needs may be a difficult task. Some important factors to consider when selecting a SEL program, is the amount of training, time, and effort the program demands. When looking at effective SEL programs for younger populations, it is also important to consider whether or not children are provided with a safe and engaging way to interact with the material (CASEL, 2013). Additionally, it has been shown that programs that follow SAFE procedures are correlated with the most positive outcomes (Durlak et al., 2011). The Kimochis® Program is a SEL program that targets social-emotional skills specifically, appears to follow SAFE procedures, and is efficient in terms of training, time, and teacher effort. Although some

SEL programs do include kid-friendly puppets and other toys, these devices are primarily utilized by the program implementer. The curriculum does not intend for the child to utilize the puppets themselves. Kimochis® appears to be one of the only SEL program that allows the students a third-party to safely role play and express emotions through. Considering the teacher and student friendly attributes of this program, Kimochis® may be an ideal option for many school districts.

It is evident that further research is needed on the Kimochis® Program. The current study aimed to investigate the effects of the Kimochis® Program on social-emotional learning in a population that had yet to be explored. This was the first study to look at the effects of Kimochis® on a typically developing population of kindergarten and first grade students. Furthermore, this study addressed limitations of previous research. Unlike the study that investigated Kimochis® and Play is the Way in conjunction with one another, Kimochis® was the only SEL program that was utilized in this study. A larger sample size was used as well.

CHAPTER II

HYPOTHESES

Hypothesis One: On all three rating forms of the SSIS, the mean score on the Social Skills scale will be significantly higher for the intervention group than for the control group.

H1-A: The mean score on the Social Skills scale of the SSIS Teacher form will be significantly higher for the intervention group than for the control group.

H1-B: The mean score on the Social Skills scale of the SSIS Parent form will be significantly higher for the intervention group than for the control group.

H1-C: The mean score on the Social Skills scale of the SSIS Student form will be significantly higher for the intervention group than for the control group.

Hypothesis Two: On all three rating forms of the SSIS, the mean score on the Cooperation subscale will be significantly higher for the intervention group than for the control group.

H2-A: The mean score on the Cooperation subscale of the SSIS Teacher form will be significantly higher for the intervention group than for the control group.

H2-B: The mean score on the Cooperation subscale of the SSIS Parent form will be significantly higher for the intervention group than for the control group.

H2-C: The mean score on the Cooperation subscale of the SSIS Student form will be significantly higher for the intervention group than for the control group.

Hypothesis Three: On all three rating forms of the SSIS, the mean score on the Empathy subscale will be significantly higher for the intervention group than for the control group.

H3-A: The mean score on the Empathy subscale of the SSIS Teacher form will be significantly higher for the intervention group than for the control group.

H3-B: The mean score on the Empathy subscale of the SSIS Parent form will be significantly higher for the intervention group than for the control group.

H3-C: The mean score on the Empathy subscale of the SSIS Student form will be significantly higher for the intervention group than for the control group.

Hypothesis Four: On all three rating forms of the SSIS, the mean score on the Problem Behaviors scale will be significantly lower for the intervention group than for the control group.

H4-A: The mean score on the Problem Behaviors scale of the SSIS Teacher form will be significantly lower for the intervention group than for the control group.

H4-B: The mean score on the Problem Behaviors scale of the SSIS Parent form will be significantly lower for the intervention group than for the control group.

H4-C: The mean score on the Problem Behaviors scale of the SSIS Student form will be significantly lower for the intervention group than for the control group.

Hypothesis Five: On all three rating forms of the SSIS, the mean score on the Bullying subscale will be significantly lower for the intervention group than for the control group.

H5-A: The mean score on the Bullying subscale of the SSIS Teacher form will be significantly lower for the intervention group than for the control group.

H5-B: The mean score on the Bullying subscale of the SSIS Parent form will be significantly lower for the intervention group than for the control group.

H5-C: The mean score on the Bullying subscale of the SSIS Student form will be significantly lower for the intervention group than for the control group.

Hypothesis Six: The students in the intervention group will identify more feeling words than students in the control group.

Hypothesis Seven: The students in the intervention group will identify more ways to communicate feelings than students in the control group.

CHAPTER III

METHODOLOGY

Participants

Data were collected from kindergarten and first grade students from a charter elementary school located in mid-Michigan. This charter school serves approximately 340 students and offers pre-K through 8th grade. This school has a 13:1 student to teacher ratio, which is significantly lower than the average for all U.S. elementary schools (16:1) and significantly lower than the average for elementary schools in Michigan (18:1) (National Center for Education Statistics, 2014). The demographic distribution of this school is similar to that of other schools in the surrounding area-70.7% of the student population identifies as Caucasian, 7.7% as Hispanic, 5.9% as Native American, 4.7% as African American, 1.8% as Asian, and 9.2% as biracial (National Center for Education Statistics, 2014).

Through the National School Lunch Program, children of families with an income at or below 130% of the poverty level are eligible for free meals. Those with incomes between 130% and 185% of the poverty level are eligible for reduced-price meals, for which students can be charged no more than 40 cents. At this school, more than half of the student body (57.7%) receives free lunch and 10.4% of students receive reduced lunch. This is somewhat higher than schools in the surrounding area, where on average 48.6% of students receive free lunch and 6.8% receive reduced lunch (National Center for Education Statistics, 2014).

There were two kindergarten and two first grade classes at the school where the study took place. The teachers of these four classes agreed to participate (Appendix A). One kindergarten and one first grade class were randomly selected to serve as the intervention group,

the remaining kindergarten and first grade class served as the control group. Forty-seven out of the 95 total students returned signed parent consent forms (Appendix B). When students with returned parent consent forms were asked whether or not they wanted to participate, two students declined (Appendix C). Therefore, participants included 45 kindergarten and first grade students. There were 8 students in the intervention kindergarten class (out of 23 students) and 16 in the control kindergarten class (out of 25 students). There were 9 students in the intervention first grade class (out of 24 student) and 12 in the control first grade class (out of 23 students). Participants in the intervention group ranged from 5 years, 5 months to 7 years, 9 months. Participants in the control group ranged from 5 years, 7 months to 7 years, 10 months. The mean age of participants in the control group was 6.81 years and 6.44 years for the intervention group. Sixty-two percent of participants were female and 38 % were male. The ethnicities of the students were as follows: 32 Caucasian (71%), 2 African American (4.4%), 2 Native American (4.4%), 2 Hispanic (4.4%), 2 Biracial (4.4%), 1 Asian (2.2%), and 4 (8.9%) did not have a reported ethnicity. Students in the study had an average of 3.32 absences (ranging from 0-11 days) and 2.70 tardies (ranging from 0-18 occurrences). Additional demographic data can be found in Table 1.

Table 1. *Participant Demographics*

	Control	Intervention	Total
Grade			
<i>N</i>	28	17	45
<i>n</i> kindergarten	16	8	24
<i>n</i> 1 st grade	12	9	21
Sex			
<i>n</i> (%) Males	10 (35.71)	7 (41.17)	17 (37.77)
<i>n</i> (%) Females	18 (64.28)	10 (58.82)	28 (62.22)
Age			
<i>Mean (sd)</i> overall	6.31 (.67)	6.44 (.67)	6.36 (.66)
<i>Mean (sd)</i> kindergarten	5.84 (.21)	5.92 (.42)	5.87 (.28)
<i>Mean (sd)</i> 1 st grade	6.94 (.42)	6.91 (.49)	6.92 (.51)
Ethnicity			
<i>n</i> (%) Caucasian	21 (75)	11 (64.0)	32 (71.11)
<i>n</i> (%) African American	2 (7.14)	0 (0)	2 (4.44)
<i>n</i> (%) Native American	1 (3.57)	1 (5.88)	2 (4.44)
<i>n</i> (%) Hispanic	1 (3.57)	1 (5.88)	2 (4.44)
<i>n</i> (%) Asian	0 (0)	1 (5.88)	1 (2.22)
<i>n</i> (%) Biracial	0 (0)	2 (11.76)	2 (4.44)
<i>n</i> (%) Unreported	3 (10.71)	1 (5.88)	4 (8.88)

Measures

Social Skills Improvement System

The *Social Skills Improvement System Rating Scales* (SSIS) were used to measure students' strengths and deficits in the areas of social skills and problem behaviors.

Rating Forms. The SSIS consists of three rating scales that can be used separately or in combination. One scale is completed by teachers, one by parent, and one by students. Both the parent and teacher forms can be used for children 3 to 18 years of age. The SSIS student report form is intended to be used with children 8 years of age and older. However, due to the lack of reliable self-report measures available for children under 8 years old, the student form of the

SSIS was used with the participants of this study despite the fact that all students were under the age of 8.

Parent Form. The parent form consists of a Social Skills and Problem Behaviors section. Each item of the Social Skills section is rated based on the frequency of occurrence using a 4-point scale that ranges from *never* to *almost always*. Each item in this section is also rated based on importance, using a 3-point scale that ranges from *not important* to *critical*. For the Problem Behaviors section, items are rated based on frequency of occurrence using the same 4-point scale; however, the importance of the behavior is not measured. The Social Skills section is comprised of 46 items while the Problem Behaviors section consists of 33 items. There are seven subscales that comprise the Social Skills Index: Communication, Cooperation, Assertion, Responsibility, Empathy, Engagement, and Self-Control. The Problem Behaviors Index consists of five subscales: Externalizing, Internalizing, Bullying, Hyperactivity/Inattention, and Autism Spectrum.

Teacher Form. The teacher form differs from the parent form in two ways; the Problem Behaviors section consists of 30 items instead of 33 and it includes one additional section-the 7 item Academic Competence Domain. In this section, the teacher uses a 5-point scale ranging from lowest 10% to highest 10% to rate a student's performance in relation to the other students in the classroom.

Student Form. There are also two major differences on the student form. First, students are not asked to rate the importance of the behavior for the Social Skills Section. Second, the Problem Behaviors section consists of 29 items and the Index does not include the Autism Spectrum subscale.

Scores Obtained. For the study, SSIS Scoring Assist software was used to calculate scores. Results of the SSIS can be described in terms of a standard score ($M = 100$, $SD = 15$) or percentile rank for Social Skills, Problem Behaviors, and Academic Competence. For the subscales on the Social Skills and Problem Behaviors sections, behavior levels (fewer, average, or more) are used to describe results. For Academic Competence the behavior levels of below, average, and above are used.

Three validity indices are also included in the SSIS. The *F* Index suggests whether a rater gave the student an excessive number of extreme ratings. The Response Pattern Index suggests whether the same rating was used across items or whether an alternating pattern was used to rate items. The Response Consistency Index assesses whether items that should have similar ratings are rated in a similar fashion.

Normative Data. Normative data for the SSIS were collected from September 2006 to October 2007 for a sample of 4,700 students. This sample was representative of the United States population as measured by the U.S. Census. Either gender-specific or gender-combined norms can be used with the SSIS. Because using gender-specific norms significantly reduces the number of participants included in the standardization sample, gender-combined norms were used when analyzing the data from this study.

Reliability. In terms of reliability, for all age-groups, internal consistency correlations were .94 or higher on both the teacher and parent forms for the Social Skills, Problem Behaviors, and Academic Competence Indices. For the Student Form, correlations for Social Skills were .94 or higher as well, however correlations for Problem Behaviors were .90 or higher.

Data for test-retest reliability is reported across the entire age range (3-18) rather than presented by age group or age level. Retest intervals ranged from 2-87 days for the Teacher

Form ($M = 13$ days), 27-87 days for the Parent Form ($M = 61$ days), and 43-84 days for the Student Form ($M = 66$ days). Test-retest reliability for the Social Skills and Problem Behaviors Indices range from .82 to .87. The Student Scale results are less stable over time (.81 for Social Skills and .77 for Problem Behaviors).

Validity. Items on the SSIS were selected based on extensive research. Social validity is addressed by including the importance ratings for each item in the Social Skills section. Teachers indicated that the Cooperation items were most important while parents felt the Responsibility items were most important.

To evaluate criterion-related validity, SSIS results were compared with a number of other measures that contained similar scales and subscales. Moderate to high correlations were found between the SSIS and the *Social Skills Rating System* (Gresham & Elliott, 1990), the *Behavior Assessment System for Children-Second Edition* (Reynolds & Kamphaus, 2004), *Vineland Adaptive Behavior Scales-Second Edition* (Sparrow, Balla, & Cicchetti, 2005), the *Walker-McConnell Scales of Social Competence and School Adjustment* (Walker, 1995), and the *Home and Community Social Behavior Scales* (Merrell, & Caldarella, 2002).

Keys to Communication Assessment

Participants were given the *Keys to Communication Assessment* (an assessment developed by the research team). This was a single item assessment which asked, “What are some things we can do or say to make sure that our feelings are communicated in the best way possible?” The examiner recorded the participants’ responses verbatim. The students’ responses were not timed. The data from this assessment were used to determine the number of communication strategies students could generate. Twenty percent of the data were randomly

selected and scored by a trained research assistant to assess inter-rater reliability. Inter-rater reliability was 100% on this measure.

Kimochis® Feeling Word Assessment

Data from *The Feeling Words Assessment* (an assessment developed by the research team) were used to measure the number of feeling words each participant could generate. This was a single-item assessment that read, “Tell me all the feeling words you know.” The examiner recorded the participants’ responses verbatim. These responses were not timed. Twenty percent of the data were randomly selected and scored by a trained research assistant to assess inter-rater reliability. Inter-rater reliability was 100% on this measure.

Procedure

Four classrooms (two kindergarten and two first grade rooms) at a charter school in mid-Michigan participated in this study. One kindergarten and one first grade class was selected randomly to be the intervention group, while the remaining kindergarten and first grade rooms were used as control groups. Researchers included the implementer of the Kimochis® intervention, and five individually trained research assistants. Each student was given the *Keys to Communication Assessment*, *Kimochis® Feeling Word Assessment*, and the SSIS. Each item from the SSIS was read aloud to the students and the examiner recorded the students’ responses. Data collection occurred one week prior to administration of the first Kimochis® lesson.

All four teachers completed the teacher form of the SSIS for each participant. Teachers were provided with parent SSIS forms to send home with each participant. Baseline data collection resulted in a *Keys to Communication Assessment*, *Kimochis® Feeling Word Assessment*, student SSIS form, and teacher SSIS form for each of the 45 participants. The

number of returned Parent SSIS forms varied. Nineteen parent forms were collected from the control group (9 from kindergarten, 10 from 1st grade) and 9 parent forms were collected from the intervention group (3 from kindergarten, 6 from 1st grade).

Over the course of 5 weeks, the implementer of the intervention delivered seven half-hour long Kimochis® lessons to all students in the kindergarten and first grade intervention classes. However, data were only collected for those students who provided parent consent and assent. One lesson was given to each intervention class every Tuesday and Thursday afternoon, until all 7 lessons were delivered. A trained research assistant was also in the room during the implementation of the intervention. The two control classrooms did not receive the Kimochis® lessons during this 5-week period; however, the control groups were provided with Kimochis® lessons after posttest data was collected.

To maintain standardization, the implementer of the intervention scripted the Kimochis® lessons. Lessons included all seven Keys to Communication along with activities from the happy, sad, mad, brave, left out, and silly lesson plans. Although different discussions and contributions from the students created slight differences in each lesson, overall both intervention classes received the same 7 Kimochis® lessons.

After each intervention group received all 7 lessons, post data were collected by the implementer of the intervention and 5 trained research assistants. Data collection procedures were identical to those for baseline collection. Post data collection resulted in a *Keys to Communication Assessment*, *Kimochis® Feeling Word Assessment*, student SSIS form, and teacher SSIS form for each of the 45 participants. However, the number of returned Parent SSIS forms varied. Eleven parent forms were collected from the control group (7 from kindergarten, 4 from 1st grade) and 5 parent forms were collected from the intervention group (4 from

kindergarten, 1 from 1st grade). After post-data collection was complete, the two classrooms that served as a control group received the Kimochis® intervention. Data on number of SSIS forms collected at each stage can be found in Table 2.

Table 2. *Number of SSIS Forms Collected*

	Pre Test			Post Test		
	N	K	1 st Grade	N	K	1 st Grade
Control Group						
SSIS Teacher	28	16	12	28	16	12
SSIS Student	28	16	12	28	16	12
SSIS Parent	19	9	10	11	7	4
Intervention						
SSIS Teacher	17	8	9	17	8	9
SSIS Student	17	8	9	17	8	9
SSIS Parent	9	3	6	5	4	1

Data Analysis

It was hypothesized that 1) on all three rating forms of the SSIS, the mean score on the Social Skills scale would be significantly higher for the intervention group than for the control group. To test this hypothesis, a one-way analysis of covariance (ANCOVA) was conducted. Using covariates allows better comparison between groups by adjusting for any pre-existing knowledge or social skills differences between groups (Tabachnick & Fidell, 2007). An ANCOVA was conducted for overall scores on the Social Skills scale, using group as the independent variable (control or intervention), posttest Social Skills scores as the dependent variable, and pretest Social Skills scores as the covariate. The same procedure was used to test hypotheses 2-5 as well. For these analyses, the 2) Cooperation subscale, 3) Empathy subscale, 4) Problem Behaviors scale, and 5) Bullying subscale was investigated. Although adjusting the

alpha level helps control for Type 1 Error, the small sample size ($n = 45$) of this study leads to low power and therefore the alpha level remained at .05. However, effect sizes were explored.

It was further hypothesized that 6) the students in the intervention group would identify more feeling words and 7) would identify more ways to communicate feelings than students in the control group. For both of these analyses a one-way analysis of covariance (ANCOVA) was conducted, using group as the independent variable (control or intervention), number of feeling words/ways to communicate identified at posttest as the dependent variable, and number of feeling words/ways to communicate identified at pretest as the covariate.

CHAPTER IV

RESULTS

Hypotheses

Hypothesis One: Overall Social Skills

It was hypothesized that the mean score on all three rating forms of the Social Skills scale of the SSIS would be significantly higher for the intervention group than for the control group. Result tables provide the pretest and posttest means and standard deviations for the control and intervention group. Adjusted posttest means and standard errors for the intervention and control group are provided as well. As shown in Table 3, results revealed that after controlling for pre-existing knowledge and social skills (pretest scores), the mean gain on the Teacher's Social Skills scale of 13.15, 95% CI [5.05, 21.25], for the intervention group over the control group, was significant, $F(1, 42) = 10.73, p = 0.002$, partial $\eta^2 = 0.204$.

Table 3. *Pretests and Posttest Means for Teacher Social Skills Scale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	95.32 (24.53)	99.25 (23.51)	95.36 (2.42)
Intervention	84.18 (18.27)	102.12 (25.26)	108.51 (3.13)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$

Posttest Control $N=28$, Posttest Intervention $N=17$

According to Cohen (1988) a partial η^2 greater than .14 is considered to be a large effect size, a partial η^2 between .06 and .14 is considered medium, and a partial η^2 between .01 and .06 is small. Therefore, membership in the intervention group or control group explains approximately 20% of the movement in the Social Skills posttest scores (partial $\eta^2 = 0.204$), which is considered to be a large effect. Contrastingly, parents and students did not perceive

significant improvements in social skills. After controlling for pre-existing knowledge or social skills (pretest), there was no significant effect of the intervention on the mean score of the Parent’s Social Skills scale, $F(1, 9) = 0.27, p = 0.613$, partial $\eta^2 = 0.030$, or the Student’s Social Skills scale, $F(1, 42) = 0.47, p = .493$, partial $\eta^2 = 0.011$. Means and standard deviations for the Parent and Student Social Skills scale at pretest and posttest are presented in Table 4 and Table 5 respectively.

Table 4. *Pretests and Posttest Means for Parent Social Skills Scale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	87.68 (20.32)	93.33 (12.91)	92.81 (3.42)
Intervention	91.33 (14.26)	87.67 (16.77)	89.21 (5.94)

Note: Pretest Control $N=19$, Pretest Intervention $N=9$
 Posttest Control $N=9$, Posttest Intervention $N=3$

Table 5. *Pretests and Posttest Means for Student Social Skills Scale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	95.00 (22.82)	103.18 (21.78)	104.54 (2.84)
Intervention	100.12 (18.25)	103.59 (20.01)	101.33 (3.66)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

Hypothesis Two: Cooperation

It was hypothesized that on all three rating forms of the SSIS, the mean score on the Cooperation subscale would be significantly higher for the intervention group than for the control group. As shown in Table 6, results indicated that after controlling for pre-existing knowledge or social skills (pretest scores), the mean gain on the Teacher’s Cooperation subscale of 1.96, 95% CI [0.51, 3.42], for the intervention group over the control group, was significant, $F(1, 42) = 7.42, p = 0.009$, partial $\eta^2 = 0.150$. Membership in the intervention group or control

group explains approximately 15% of the movement in the Cooperation posttest scores (partial $\eta^2 = 0.150$), which is considered to be a large effect.

Table 6. *Pretests and Posttest Means for Teacher Cooperation Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	12.32 (3.60)	12.43 (3.47)	12.10 (.44)
Intervention	11.06 (3.99)	13.53 (3.39)	14.06 (.56)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

However, significant results were not found for the Cooperation subscale on either the parent or student form. After controlling for pre-existing knowledge or social skills (pretest), there was no significant effect of the intervention on the mean score of the Parent's Cooperation subscale, $F(1, 9) = 1.90, p = .201$, partial $\eta^2 = 0.175$, or the Student's Cooperation subscale, $F(1, 42) = 0.022, p = .883$, partial $\eta^2 = 0.001$. Means and standard deviations for the Parent and Student Cooperation subscale at pretest and posttest are presented in Table 7 and Table 8.

Table 7. *Pretests and Posttest Means for Parent Cooperation Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	11.37 (2.36)	12.44 (1.42)	12.67 (.46)
Intervention	12.78 (2.77)	12.00 (2.00)	11.30 (.84)

Note: Pretest Control $N=19$, Pretest Intervention $N=9$
 Posttest Control $N=9$, Posttest Intervention $N=3$

Table 8. *Pretests and Posttest Means for Student Cooperation Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	15.36 (3.02)	15.68 (3.05)	15.77 (.56)
Intervention	16.29 (3.05)	16.06 (3.03)	15.90 (.72)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

Hypothesis Three: Empathy

For all three rating forms of the SSIS, it was hypothesized that the mean score on the Empathy subscale would be significantly higher for the intervention group than for the control group. As shown in Table 9, results indicated that after controlling for pre-existing knowledge or social skills (pretest scores), the mean gain on the Teacher’s Empathy subscale of 1.84, 95% CI [0.24, 3.45], for the intervention group over the control group, was significant, $F(1, 42) = 5.40$, $p = 0.025$, partial $\eta^2 = 0.114$. Membership in the intervention group or control group explains approximately 11% of the movement in the Empathy posttest scores (partial $\eta^2 = 0.114$), which is considered to be a medium effect.

Table 9. *Pretests and Posttest Means for Teacher Empathy Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	12.57 (3.12)	13.00 (3.07)	12.25 (.46)
Intervention	9.76 (3.70)	12.88 (3.70)	14.10 (.60)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

Significant results were not found on the Parent’s Empathy subscale, $F(1, 9) = 0.43$, $p = .526$, partial $\eta^2 = 0.046$ or the Student’s Empathy subscale, $F(1, 42) = 1.97$, $p = .167$, partial $\eta^2 = 0.045$. Means and standard deviations for the Parent and Student Empathy subscale at pretest and posttest are presented in Table 10 and Table 11 respectively.

Table 10. *Pretests and Posttest Means for Parent Empathy Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	11.68 (3.65)	12.22 (2.16)	12.07 (.73)
Intervention	13.00 (3.50)	10.67 (6.42)	11.10 (1.28)

Note: Pretest Control $N=19$, Pretest Intervention $N=9$
 Posttest Control $N=9$, Posttest Intervention $N=3$

Table 11. *Pretests and Posttest Means for Student Empathy Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	13.07 (3.53)	14.50 (3.91)	14.69 (.73)
Intervention	13.88 (2.20)	13.24 (4.64)	13.21 (.96)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

Hypothesis Four: Overall Problem Behaviors

It was further hypothesized that on all three rating forms of the SSIS, the mean score on the Problem Behaviors scale would be significantly lower for the intervention group than for the control group. As shown in Table 12, results indicated that after controlling for pre-existing knowledge or social skills (pretest scores), the mean decrease on the Teacher's Problem Behaviors scale of 16.85, 95% CI [10.37, 23.33], for the intervention group over the control group, was significant, $F(1, 42) = 27.56, p < .001$, partial $\eta^2 = 0.396$. Membership in the intervention group or control group explains approximately 40% of the movement in the Problem Behaviors posttest scores (partial $\eta^2 = 0.396$), which is considered to be a large effect.

Table 12. *Pretests and Posttest Means for Teacher Problem Behaviors Scale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	11.07 (11.47)	16.54 (14.50)	20.05 (1.83)
Intervention	23.76 (12.93)	9.00 (8.90)	3.20 (2.42)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

After controlling for pre-existing knowledge or social skills (pretest scores), the mean decrease on the Parent's Problem Behaviors scale of 3.37, 95% CI [-6.11, 12.87], for the intervention group over the control group, was not significant, $F(1, 9) = .64, p = .441$, partial $\eta^2 = 0.067$. There was no significant effect of the intervention on the mean score of the Student's

Problem Behaviors scale, $F(1, 42) = .70, p = .406$, partial $\eta^2 = 0.016$. Means and standard deviations for the Parent and Student Problem Behaviors scale at pretest and posttest are presented in Table 13 and Table 14 respectively.

Table 13. *Pretests and Posttest Means for Parent Problem Behaviors Scale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	25.63 (16.07)	20.67 (12.96)	19.23 (2.04)
Intervention	20.89 (8.75)	18.33 (7.50)	22.61 (3.60)

Note: Pretest Control $N=19$, Pretest Intervention $N=9$
 Posttest Control $N=9$, Posttest Intervention $N=3$

Table 14. *Pretests and Posttest Means for Student Problem Behaviors Scale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	30.14 (14.07)	23.86 (10.06)	23.21 (2.16)
Intervention	24.12 (12.08)	24.65 (15.13)	26.71 (2.88)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

Hypothesis Five: Bullying

For all three rating forms of the SSIS, it was hypothesized that the mean score on the Bullying subscale would be significantly lower for the intervention group than for the control group. As shown in Table 15, results indicated that after controlling for pre-existing knowledge or social skills (pretest scores), the mean decrease on the Teacher's Bullying subscale of 2.03, 95% CI [.74, 3.31], for the intervention group over the control group, was significant, $F(1, 42) = 10.23, p = .003$, partial $\eta^2 = 0.196$. Membership in the intervention group or control group explains approximately 20% of the movement in the Bullying posttest scores (partial $\eta^2 = 0.196$), which is considered to be a large effect.

Table 15. *Pretests and Posttest Means for Teacher Bullying Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	1.04 (2.06)	2.36 (2.51)	2.67 (.38)
Intervention	2.35 (2.12)	1.18 (2.09)	.63 (.52)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

There was no significant effect of the intervention on the mean score of the Parent's Bullying subscale, $F(1, 9) = .14, p = .713$, partial $\eta^2 = 0.016$ or the Student's Bullying subscale, $F(1, 42) = .01, p = .909$, partial $\eta^2 < 0.000$. Means and standard deviations for the Parent and Student Bullying subscale at pretest and posttest are presented in Table 16 and Table 17 respectively.

Table 16. *Pretests and Posttest Means for Parent Bullying Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	2.16 (1.95)	1.67 (1.93)	1.33 (.31)
Intervention	1.00 (1.58)	.67 (1.15)	-.41 (1.32)

Note: Pretest Control $N=19$, Pretest Intervention $N=9$
 Posttest Control $N=9$, Posttest Intervention $N=3$

Table 17. *Pretests and Posttest Means for Student Bullying Subscale*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	3.54 (3.66)	2.43 (2.31)	2.32 (.44)
Intervention	2.24 (1.52)	2.24 (2.58)	2.40 (.58)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Posttest Intervention $N=17$

Hypothesis Six: Feeling Words

It was hypothesized that the students in the intervention group would identify more feeling words than students in the control group. Results indicated that after controlling for any

pre-existing knowledge and social skills (pretest scores), the children in the intervention group identified more feeling words on average than children in the control group with a mean increase of 1.78, 95% CI [.62, 2.93], $F(1, 42) = 9.70$, $p = .003$, partial $\eta^2 = 0.188$. Membership in the intervention group or control group explains approximately 19% of the movement in the Feeling Words posttest scores (partial $\eta^2 = 0.188$), which is considered to be a large effect. Means and standard deviations for the Feeling Words Assessment at pretest and posttest are presented in Table 18.

Table 18. *Pretests and Posttest Means for Feeling Words Identified*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	2.18 (2.40)	2.68 (2.03)	2.86 (.34)
Intervention	3.00 (2.69)	4.94 (2.77)	4.64 (.44)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Pretest Intervention $N=17$

Hypothesis Seven: Keys to Communication

It was also hypothesized that the students in the intervention group would identify more ways to communicate feelings than students in the control group. Results indicated that after controlling for any pre-existing knowledge and social skills (pretest scores), the children in the intervention group identified more keys to communication on average than children in the control group with a mean increase of 1.343, 95% CI [.47, 2.21], $F(1, 42) = 9.71$, $p = .003$, partial $\eta^2 = 0.188$. Membership in the intervention group or control group explains approximately 19% of the movement in the Keys to Communication posttest scores (partial $\eta^2 = 0.188$), which is considered to be a large effect. Means and standard deviations for the Keys to Communication Assessment at pretest and posttest are presented in Table 19.

Table 19. *Pretests and Posttest Means for Keys to Communicate Feelings Identified*

Groups	Pretest Mean (SD)	Posttest Mean (SD)	Adjusted Posttest Mean (SE)
Control	.32 (.67)	.54 (.57)	.53 (.26)
Intervention	.29 (.47)	1.88 (2.14)	1.88 (.34)

Note: Pretest Control $N=28$, Pretest Intervention $N=17$
 Posttest Control $N=28$, Pretest Intervention $N=1$

CHAPTER V

DISCUSSION

Social and emotional learning (SEL) has been linked to numerous positive outcomes including enhanced social skills, academic performance, overall positive social behavior, as well as decreases in conduct problems and internalizing problems (Durlak et al., 2011). Due to the growing body of research support and work carried out by The Collaborative for Academic, Social, and Emotional Learning (CASEL) the inclusion of SEL programing in schools is becoming more popular each year (Dusenbury et al., 2011). There are numerous factors that educators should consider when selecting a SEL program. Kimochis® is a program that aligns with SAFE procedures and appears efficient in terms of training requirements, time, and teacher effort. Kimochis® also provides children a way to interact with the material through puppets, which creates fun lesson plans and allows children to communicate sensitive information more comfortably. Considering this program may be an attractive option to school districts and little research on the program currently exists, this study aimed to investigate the effects of Kimochis® on social-emotional learning.

Results indicated that after controlling for pre-existing knowledge and social skills, teachers perceived significant improvements in social skills (Social Skills scale, Cooperation subscale, Empathy subscale) and problem behaviors (Problem Behaviors scale, Bullying subscale). Significant results were not found for parent or student ratings. Students in the intervention group were also able to identify significantly more feeling words and ways to communicate feelings compared to students in the control group.

Significant findings for teacher but not parent ratings may be due to the fact that the Kimochis® lessons were implemented in the classroom and geared towards pro-social behaviors

in a school climate. Many of the activities involved role playing situations that often occur in a school but might not occur at home (e.g., how to play with others during recess, how to interact with a large group of peers). Although there is a homebased component to the Kimochis® program, this component was not implemented during this study. Because students had numerous opportunities to practice and become familiar with social skills in a school environment and likely had little or no experience with social skills training in a home environment, participants may not have exhibited noticeable gains at home.

Nonsignificant parent ratings may also be due to the fact that the home environment did not provide as many opportunities to demonstrate growth as in the school environment. For example, some participants may not have had many opportunities to interact with peers, a group of peers, or demonstrate new skills while at home. Therefore, parent ratings may not have been as sensitive as teacher ratings in terms of social gains.

Nonsignificant findings for student ratings on the SSIS may be due to issues with validity of the student response sets. Through the SSIS scoring software, response sets are rated as either acceptable or falling in the caution or extreme caution range on 3 validity indices. Of the 45 pretest Student SSIS forms, 5 were rated in the caution or extreme caution range on the *F* Index, 5 on the Response Pattern Index, and 14 on the Consistency Index. Of the 45 posttest Student SSIS forms, 2 were rated in the caution or extreme caution range on the *F* Index, 5 on the Response Pattern Index, and 4 on the Consistency Index. Considering the SSIS Student form is intended to be used with children ages 8 and older, the issues with the validity indices are not surprising. Children tended to provide answers at the extremes (i.e., Not True, Very True) or answer items in a particular pattern (e.g., A Lot True, A Little True, A Lot True, A Little True).

The validity indices of the SSIS should be considered when interpreting results for teacher and parent ratings as well. Of the 45 pretest Teacher SSIS forms, 0 were rated as falling in the caution or extreme caution range on the *F* Index, 6 fell in the caution range on the Response Consistency Index, and 2 fell in the caution range on the Consistency Index. At posttest, 0 teacher forms were rated as falling in the caution or extreme caution range on the *F* Index, 6 fell in the caution range on the Response Pattern Index, and 2 fell in the caution range on the Consistency Index. The majority of teacher forms that fell in the caution range for the Response Pattern Index were instances in which the teacher indicated “Almost Always” for prosocial behaviors and “Never” for problem behaviors at an extremely high rate. Considering teachers were present during Kimochis® lessons and aware of the intervention efforts and participants, it is possible that unintentional bias favoring positive outcomes may have influenced some teacher response sets.

Of the 28 pretest Parent SSIS forms, 0 were rated in the caution or extreme caution range on the *F* index, 4 on the Response Pattern Index, and 4 on the Consistency Index. Of the 16 posttest Parent SSIS forms, 0 were rated in the caution or extreme caution range on the *F* Index, 0 on the Response Pattern Index, and 1 on the Consistency Index. Similar to teacher rating forms, the majority of response sets that fell in the caution or extreme caution range endorsed answers at the extremes (i.e., Almost Always, Never).

Further analysis of the results revealed that participants in the intervention group were able to identify significantly more feeling words and ways to communicate feelings than participants in the control group. This is not surprising considering that these skills were explicitly targeted and practiced during the Kimochis® lessons that the intervention group received. Results of the Keys to Communication Assessment should be interpreted with caution.

Before the intervention, participants in both groups appeared to have a difficult time providing answers for this assessment. The wording of this assessment (What are some things we can do or say to make sure that our feelings are communicated in the best way possible?) may have been too complex for this young population. The intervention group, however, became familiar with the terminology presented in the question during the course of the Kimochis® intervention. The control group was not exposed to this terminology and appeared to continue to have difficulty with comprehension of the question at posttest. These factors may have contributed to the significant findings for the posttest group over the control group.

Strengths and Limitations

This study aimed to expand the research regarding the effects of the Kimochis® program and improve upon limitations of the other two known Kimochis® studies. Unlike the other Kimochis®-based research, this study investigated the effects of the program in a typically-developing population. The Kimochis® program was analyzed on its own, not in conjunction with another SEL program. Compared to the other known Kimochis® studies, a larger sample size was utilized as well. Other strengths of the present study include randomization, inclusion of a control group, and the creation of scripts for the Kimochis® lesson plans in order to preserve standardization across classes. The use of ANCOVA also helped to control for any pre-existing knowledge and social skills that may have existed across the participants.

The unequal and small sample size is a major limitation of this study. Due to varied parent consent across classes, there was a large discrepancy between the number of participants in the control and intervention group (Control: 28 students, Intervention: 17 students). Because of the small sample size, kindergarten and first grade students were grouped together. Effects

were not analyzed at separate grade levels. The number of parents who returned the Parent SSIS rating form was also a major limitation. Only 12 parents returned both pre and posttest rating forms and of the 12 only 3 were for participants of the intervention group. Because of this extremely small sample size, statistical analyses involving parent perception was impractical. It is likely that this small sample size contributed to the non-significant findings for the parent rating forms. Due to these various factors, not all statistical assumptions were met for each hypothesis. Further statistical analyses of the current dataset may be considered for future investigations.

Although the demographic distribution of the sample was similar to that of other schools in the surrounding area, issues with generality are a concern. Results of this study may not generalize to children of different ages, of different ethnic backgrounds, or of different socioeconomic status. An additional limitation regarding the sample is that information was not collected on whether or not participants received special education services.

The way in which social emotional learning was measured is a further limitation of this study. Although the SSIS is considered a reliable and valid measure, this rating form is not intended to be used with children under the age of 8. Because there are no other known reliable measures for children of this age, the SSIS form was utilized with this young sample regardless. Although the items were read to students and questions about the items were answered, results regarding the Student SSIS forms should still be interpreted with caution. There were also concerns with participant comprehension of the Keys to Communication Assessment. More simplified wording on this measure may have improved the assessment of skills in this area.

Direct observations in the classroom regarding social skills and problem behaviors may have helped to address the issue regarding the SSIS student form and improve the study overall.

The use of sociometric data may have added additional valuable information. A larger and more equal number of students in the control and intervention group would have also improved the study. Phone calls to parents and use of incentives may have helped improve the number of returned Parent SSIS forms.

Future Research

With the current dataset, further analyses could be conducted. Information on the teacher perception of classroom functioning as a whole was collected but not analyzed. The Social Skills index, Cooperation subscale, Empathy subscale, Problem Behaviors index, and Bullying index were the only scales and subscales of the SSIS that were analyzed. These scales were selected for analysis based on relevance to the social skills and behaviors targeted in the various Kimochis® activities. Data on the remaining subscales of the SSIS were collected but not analyzed. After posttest data was collected, the control group received Kimochis® intervention. Using posttest score as the new baseline, data could be analyzed for these two classrooms as well.

Future research may wish to investigate the effects of the Kimochis® program in different populations of students. For example, there is no known research on how older students respond to Kimochis®. Another area of interest would be the effects of the program when carried out by classroom teachers. The appeal of the program to both teachers and students would provide important information as well. Research could also investigate the effects of the program when the home component of the program is implemented in conjunction with the schools, or by itself.

Implications

Social emotional development is associated with numerous positive outcomes (including positive academic outcomes) that benefit the individual as well as the school climate and community. Because of the numerous benefits of social emotional development, there has been an increase in the number of school districts that incorporate SEL programs into their everyday curriculum. Although there is currently little research available on the effects of Kimochis®, a review of the program indicates that it has many positive attributes. This is the first known study to investigate the effects of Kimochis® on social emotional learning in a population of typically-developing students. Results from teacher ratings indicated significant improvements in social skills and problem behaviors for students who received the Kimochis® intervention compared to control students who did not. Data also showed an increase in knowledge of feeling words and ways to communicate feelings for the intervention group over the control group. Considering the findings of this research as well as the numerous other positive attributes of the program, Kimochis® may be a top choice for school districts and professionals interested in SEL programing.

APPENDICES

APPENDIX A

TEACHER CONSENT FORM



Teacher Consent Form

Study Title: Kimochis: Validation of a social and emotional learning program

Research Investigator: Dr. Katrina Rhymer, Associate Professor of Psychology at Central Michigan University

Contact Information: 989-774-6468 or rhyme1kn@cmich.edu

Introductory Statement

The Kimochis social/emotional school curriculum is based on evidence-based practices in five areas of competency: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Promoting student development in these five areas as well as improving student attitudes, is linked to better academic performance, positive social behaviors, fewer conduct problems, and less emotional distress. The purpose of this study is to validate the effectiveness of the Kimochis social/emotional school curriculum with students at your school. Your principal has decided that learning about feelings and communication is important for all students. We are asking your permission to allow your class to participate in this research study. Details about the study are provided in this consent document. I am available to answer any questions you may have about this project.

What is the purpose of this study? The purpose of this study is to validate the effectiveness of the Kimochis social/emotional school curriculum. Your principal has decided that learning about feelings and communication is important for all students. We are asking your permission to allow your class to participate in this research study.

What will I do in this study? To study the effectiveness of the Kimochis social/emotional school curriculum, data will be collected via: 1) Teacher, Child, and Parent versions of the Social Skills Improvement System, 2) the Social-Emotional Behavior Scale, 3) student recall of feeling words, 4) student recall of keys to communication, 5) student grades, 6) student MEAP scores, 7) student curriculum-based measurement scores, 8) student attendance, and 9) student referrals for behavior problems. Students in your class will also receive 8 sessions from the Kimochis social/emotional school curriculum. If you agree, you will be asked to complete the Teacher version of the Social Skills Improvement System and the Social-Emotional Behavior Scale so we can measure if you perceive a change in your student's behavior.

How long will it take me to do this? This program will be conducted twice per week for a total of 4 weeks. Each session will be 20-30 minutes per session. The day and time of the sessions will be selected in consultation with you. The Social Skills Improvement System (Teacher version) and the Social-Emotional Behavior Scale will take less than 30 minutes to complete.

Are there any risks of participating in the study? There are no risks of participating in this study.

What are the benefits of participating in the study? We hope that your students will learn about feelings and communication during this study. This may help your students get along better with others.

Will anyone know what I say or do in this study (Confidentiality)?

Teachers and students will be assigned ID numbers that will be used instead of their names. Only Dr. Katrina Rhymer will have access to the key that links you and the particular student with the ID number and this key will be kept in a locked cabinet. This key linking you and your students name to ID numbers will be destroyed by July 2014. In all other instances, any data under the investigator's control will, if disclosed, be presented in a manner that does not reveal your identity or the student's identity, except as may be required by law.

Will I receive any compensation for participation? You will not receive any compensation for taking part.

Is there a different way for me to receive this compensation or the benefits of this study?

Your principal has decided that learning about feelings and communication is important for all students. We are asking your permission to allow your class to participate in this research study.

Who can I contact for information about this study? Please call Dr. Katrina Rhymer at 989-774-6468 if you have questions about this research study, your students' rights, or in case of a research-related injury to your student.

You are free to refuse to participate in this research project or to withdraw your consent and discontinue participation in the project at any time without penalty or loss of benefits to which you are otherwise entitled. Your participation will not affect your relationship with the institution(s) involved in this research project.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the Institutional Review Board by calling 989-774-6777, or addressing a letter to the Institutional Review Board, 251 Foust Hall Central Michigan University, Mt. Pleasant, MI 48859.

_____ I agree to complete the Social Skills Improvement System and the Social-Emotional Behavior Scale.

_____ I do not agree to complete the Social Skills Improvement System and the Social-Emotional Behavior Scale.

My signature below indicates that all my questions have been answered. I agree to participate in the project as described above.

Signature of Subject

Date Signed

A copy of this form has been given to me. _____ Subject's Initials

Signature of Responsible Investigator

Date Signed

APPENDIX B

PARENT CONSENT FORM



Parent/Guardian Consent Form

Study Title: Kimochis: Validation of a social and emotional learning program

Research Investigator: Dr. Katrina Rhymer, Associate Professor of Psychology at Central Michigan University

Contact Information: 989-774-6468 or rhyme1kn@cmich.edu

Introductory Statement

The Kimochis social/emotional school curriculum is based on evidence-based practices in five areas of competency: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Promoting student development in these five areas as well as improving student attitudes, is linked to better academic performance, positive social behaviors, fewer conduct problems, and less emotional distress.

The purpose of this study is to validate the effectiveness of the Kimochis social/emotional school curriculum with students at your child's school. Your child's principal and teacher have decided that learning about feelings and communication is important for all students.

We will teach feelings and communication to all students, but you can decide whether or not we can use your child's information in our study. You can also decide whether or not you want to complete the Parent version of the Social Skills Improvement System so we can measure if you perceive a change in your child's behavior.

Details about the study are provided in this consent document. I am available to answer any questions you may have about this project.

What is the purpose of this study? The purpose of this study is to validate the effectiveness of the Kimochis social/emotional school curriculum. Your child's principal and teacher have decided that learning about feelings and communication is important for all students. We will teach feelings and communication to all students, but you can decide whether or not we can use your child's information in our study.

What will my child/ward and I do in this study? To study the effectiveness of the Kimochis social/emotional school curriculum, data will be collected via: 1) Teacher, Child, and Parent versions of the Social Skills Improvement System, 2) the Social-Emotional Behavior Scale, 3) student recall of feeling words, 4) student recall of keys to communication, 5) student grades, 6) student MEAP scores, 7) student curriculum-based measurement scores, 8) student attendance, and 9) student referrals for behavior problems. Your child will also receive 8 sessions from the Kimochis social/emotional school curriculum. If you agree, you will be asked to complete the Parent version of the Social Skills Improvement System so we can measure if you perceive a change in your child's behavior.

How long will it take my child/ward and I to do this? This study will span 11 weeks; however, your child will receive the Kimochis curriculum twice per week for a total of 4 weeks. Each session will be 20-30 minutes. The day and time of the sessions will be selected in consultation with your child's teacher. Although all classrooms will receive the Kimochis curriculum, classrooms will vary when they initiate the 4 week curriculum. The Social Skills Improvement System (Parent version) will take less than 30 minutes to complete.

Are there any risks of participating in the study? There are no risks of participating in this study.

What are the benefits of participating in the study? We hope that your child will learn about feelings and communication during this study. This may help your child get along better with others.

Will anyone know what my child/ward & I do or say in this study (Confidentiality)? You and your child will be assigned ID numbers that will be used instead of names. Only Dr. Katrina Rhymer will have access to the key that links you and your child with the ID number and this key will be kept in a locked cabinet. This key linking you and your child with ID numbers will be destroyed by July 2014. In all other instances, any data under the investigator's control will, if disclosed, be presented in a manner that does not reveal you and your child's identity, except as may be required by law.

Will my child/ward and I receive any compensation for participation? You and your child will not receive any compensation for participation. Your child will receive a pencil for returning this signed form regardless of whether or not you agree to allow us to use your child's data.

Is there a different way for my child/ward and I to receive this compensation or the benefits of this study? Your child's principal and teacher have decided that learning about feelings and communication is important for all students. We will teach feelings and communication to all students, but you can decide whether or not we can use your child's information in our study.

Who can I contact for information about this study? Please call Dr. Katrina Rhymer at 989-774-6468 if you have questions about this research study, your students' rights, or in case of a research-related injury to your child.

You are free to refuse to allow your child/ward to participate in this research project or to withdraw your consent and discontinue your child/ward's participation in the project at any time without penalty or loss of benefits to which you are otherwise entitled. Your participation will not affect your child/ward's or your relationship with the institution(s) involved in this research project.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the Institutional Review Board by calling 989-774-6777, or addressing a letter to the Institutional Review Board, 251 Foust Hall Central Michigan University, Mt. Pleasant, MI 48859.

My signature below indicates that all my questions have been answered. I agree to take part in this study, and I agree to allow my child participate in the project as described above.

Signature of Parent/Guardian

Date Signed

Name of Child/Ward

A copy of this form has been given to me. _____ Parent/Guardian Initials

For the Research Investigator—I have discussed with this subject the procedure(s) described above and the risks involved; I believe he/she understands the contents of the consent document and is competent to give legally effective and informed consent.

Signature of Responsible Investigator

Date Signed

APPENDIX C

STUDENT ASSENT FORM



*Child Assent Form for
Minors Aged under Age 7
(To be read to the child)*

Title of Project: Kimochis: Validation of a social and emotional learning program

Research Investigator: Dr. Katrina Rhymer, Associate Professor of Psychology at Central Michigan University

Contact Information: 989-774-6468 or rhyme1kn@cmich.edu

Invitation to Participate:

You and your mom/dad/ guardian have been asked to help us learn about feelings. If you decide to do this, you will learn about feelings. Your parents said that this was okay for you to do. Do you want to do this?

YES

NO

Signature: _____

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