The Effect of a Parent Training Program, In Conjunction with a Life Skills Training Program for School-age Children, on Children's Life Skills, and Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development

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Abstract: This quasi-experimental study sought to examine the effect of a parent training program, in conjunction with a life skills training program for school-aged children, on children's life skills, and parents' child-rearing skills and perceptions of support for child life skills development. One school was purposively selected, from which two 5th grade classes were randomly assigned to either the experimental group or the comparison group. The parent and student study participants, who met the inclusion criteria and consented/assented to take part in the study, included 26 student/parent dyads in the experimental group and 27 student/parent dyads in the comparison group. All students were recruited into the life skills training program, while only parents of the students assigned to the experimental group were recruited into the parent training program. The principle investigator based these programs on the Theory of Planned Behavior and interactive group techniques. Instruments for data collection included: a Life Skills Questionnaire for School-aged Children; and, the researcher-developed Child Life Skills Development Questionnaire for Parents. Data were collected on all participants prior to implementation of both programs, immediately following each program's completion, and one month and three months after each program's completion. Analysis of covariance (ANCOVA) and repeated measures ANOVA were used to test the effect of the parent training program.

The results demonstrated no significant effect of the parent training program on the children's life skills, the parents' attitudes, and their subjective norms regarding child life skills development. Positive effects, however, were seen on the parents' child-rearing skills that supported child life skills development, self-efficacy toward child life skills development, and intention to engage in child-rearing skills that supported child life development. These findings suggest this intervention may require a longer duration of implementation, so as to improve child life skills. Recommendations for further research include a larger sample size and a longer period for outcome measurements.

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Introduction

The proportion of child behavioral problems and risk behaviors has increased throughout the 21st century. [1, 2] Data indicate a number of interrelated social problems have their roots in childhood behavioral problems, including aggressive behavior, delinquency, smoking, and drug and alcohol abuse. [1, 2, 3] The lack of competencies in adapting to and dealing

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with situations and problems is a frequently-cited cause of negative behavior among children and adolescents.[1] Thailand is encountering emotional and behavioral problems in children and adolescents similar to those of other countries.[4] As a result, child behavioral problems have been dominant in the public mind for several years. Consequently, dealing with these problems is an urgent issue facing Thai society.

Literature reviews have indicated the major causes of child behavioral problems are a lack of interpersonal skills in a child and the parents' lack of child-rearing skills.[5, 6] Deficits in interpersonal skills and social skills have long-term effects on child competency and make children vulnerable to engaging in risky behaviors.[1, 7] In addition, lack of appropriate child-rearing skills impacts a child's beliefs and behavior, especially during the school-age period that is characterized by progressive changes in a child's biology, emotions, and thought processes.[1, 8] Thus, school-aged children are at an increased risk of engaging in risky behaviors, although full-scale problems, typically, do not tend to emerge during this period.[1] This suggests, before children encounter various risk factors in society, their school years are an important window of time for interventions that promote and maintain child health, particularly regarding skills development.[1,6]

Life skills training has been one of the strategies used to promote child and adolescent development, whereas parent training programs are new in behavioral science in terms of child care. Life skills training focuses on child development in social competencies, self-management skills, drug abuse prevention, and general health promotion. Often, this type of program produces positive changes in children's decision-making, critical thinking ability, empathy, positive coping, and management of life in a healthy and productive manner.[1, 3]

Likewise, literature reviews have indicated training parents in child-rearing skills reduces child behavioral problems.[9, 10, 11] Improvement in parenting practices is viewed as having a mediating effect on life skills resources and reducing child behavioral problems.[10, 11, 12] The effectiveness of child preventive programs that combine parent training programs, along with child life skills training programs, is an acceptable and appropriate practice that is supported by scientific findings.[2, 11]

The Theory of Planned Behavior (TPB) has been used as an organizing framework for family-based interventions related to life skills development. This theory provides insight into the mechanisms of parent-child attachment and the influence of the family.[14, 15] The TPB addresses the relationship between parents' attitudes, beliefs, intentions, and behaviors and the effect they have on their child's attitudes, beliefs, intentions, and behaviors. This is most noticeable in the strong mediating effects parental behavior and intention (i.e., approval or disapproval) have on a child's behavior.[14, 15, 16] It is believed that changes in parental intention and behavior, related to supervising and monitoring a child, are transferable to a child's behavior.[14, 16]

Literature Review

Child life skills development: In order to face risk factors in society, children need adequate life skills development.[18, 19] Life skills are viewed as an individual's ability to: exhibit adaptive and positive behavior in protecting him/herself from health risks; promote health; and, deal effectively with the demands and challenges of life.[1] Life skills training in children's competencies has become of increasing interest to the public and is needed in order to reform traditional educational systems throughout Thailand.[1, 18, 19]

Life skills training programs: Over the past thirty years, life skills training (LST) has been found to produce positive behavioral changes and better skills, especially regarding taking responsibility for making healthy choices, resisting negative pressures, and avoiding risky behaviors.[1, 3] The World Health

Organization (WHO) has recommended that LST programs, for children, include content addressing: decision making; problem solving; critical and creative thinking; interpersonal relationship skills; self-awareness; empathy; coping with emotions and stress; and, effective communication.[1] However, several training programs have added the additional skills of negotiation and refusal, for the purpose of facilitating children's ability to handle their decisions,[1, 3, 20] while others have added content related to moral skills.[17, 21, 22] It is believed moral skills support the development of children's practices of problem solving, decision making, and organization of emotions, particularly in regards to conflict and stress.[21]

Prior research, consistently, has shown that LST programs have a positive effect on prevention of risky health practices (i.e., drinking, smoking, abusing drugs, and engaging in unprotected sex).[20] With regard to the statistical effectiveness of LST programs, the results of meta-analyses has shown effect sizes ranging from 0.28 to 0.32.[6, 20, 21] In addition, prior research has found the effectiveness of LST programs, for children, to be positively influenced when parents are included. When a family-focused approach is used in a LST program, child behavioral problems are reduced, on average, nine times more than when solely child-focused approaches are used.[9, 24] Thus, in order to increase the effectiveness of developing and changing child behaviors, most LST program developers are combining parent training with child skills training.

Parent training programs: Over the past two decades, when parent training has been included as part of risk prevention programs for children, the training has addressed parents' ability to practice sound child-rearing skills (i.e., parent-child communication, support, modeling, monitoring, supervising, and stress and coping management), as well as consciously think about their children's development.[14, 25, 26] Unfortunately, few studies, conducted in Asian countries have included parent participation in their child life skills development programs, particularly those in Thailand.[17, 27] Preventive interventions that emphasize parent participation have not been widely utilized because of the widespread belief that it is impossible to get parents to participate. Unfortunately, little is known about family-based prevention programs in Thailand, and sizeable gaps appear to exist in the effectiveness of parent participation in child life skills development programs. Thus, in order to address this gap in knowledge, it seemed reasonable to examine the effectiveness of intervention programs, especially designed to develop child life skills, by combining parent training with child life skills training. Therefore, the purpose of this study was to examine the effect of a parent training program, in conjunction with a life skills training program for school-aged children, on children's life skills, and parents' child-rearing skills and perceptions of support for child life skills development.

Conceptual Framework

The organizing framework for the intervention employed in this study was the Theory of Planned Behavior (TPB).[13] The TPB suggests a person's behavior is directly determined by his/her intention to perform a behavior (i.e., immediate antecedent) and this intention is, in turn, a function of the person's: attitude toward the behavior (positive or negative expressions about the behavior in question); subjective norm (beliefs about how others, of importance to the person, will view the behavior in question); and, perceived behavioral control (one's perception of his/her ability to perform the behavior in question). As a general rule, the more favorable one's attitude, subjective norm, and perceived behavioral control, the stronger the person's intention to perform a given behavior. Thus, the TPB purports individuals will intend to perform a behavior when they: evaluate it positively (attitude); believe significant others want them to participate in the behavior (subjective norms); and, perceive the behavior to be under their control (perceived behavioral control).

Generally, the TPB looks specifically at the relationship between individuals' beliefs, based on perception or sense on favorable attitudes, and subjective norms toward the behavior to predict perceived behavioral control and form intentions and beliefs concerning the consequences of behavior of interest.[13] In this study, the parents' attitudes, subjective norms, self-efficacy (perceived behavioral control), and intentions that involved the support for their children's life skills development were referred to as parents' perceptions of support for their children's life skills development.

The TPB also states that the relationship between intention and behavior may be influenced by the congruence of the measurement of intention and behavior, and the stability of intention at the time of behavior measurement. Thus, measurement of behavior should include four elements: action, target, context, and time. However, intention can: alter over time; be taken prior to the observation of a behavior; and, differ from the intention at the time the behavior was observed. Therefore, the longer the timeframe between measurement of intention and observation of behavior, the less accurate the prediction of behavior.

Finally, the literature points out, in regards to measurement, the terms, perceived behavior control and self-efficacy, often are used interchangeably, particularly in family-based interventions.[14, 15, 16] Therefore, in this study, perceived behavioral control (i.e., controllability in parenting skills) was labeled and measured as parenting self-efficacy.

Method

Design: A quasi-experimental design, using an experimental group (child training and parent training) and a comparison group (child training only), was implemented in this study.

Ethical Considerations: Prior to commencing the study, the Committee on Human Rights Related to Research Involving Human Subjects at the principle investigator's (PI) academic institution approved the study. In addition, the Administrative Committee and Parent-Teachers Association, at the school used as a data gathering site, granted approval for access to potential participants.

Potential participants were informed about: the nature of the study; the study's purpose; what study involvement would entail; voluntary involvement; confidentiality and anonymity issues; the right to refuse to answer any specific questions; and, the ability to withdraw, at any time, without repercussions. Consent of parent and child participation was obtained from the parents, and assent was obtained from the children.

Sample and Setting: The sample consisted of 53, fifth-grade students and their parents, who were selected from catchment schools under the Human Potential Development in Thai People Project of the PI's academic institution. The students were selected via purposive sampling. Two classrooms of 5th grade students, in the selected school, were randomly assigned to either the experimental or comparison group. All students from the two classrooms were recruited into the life skills training program, while only the parents of the students assigned to the experimental group were recruited into the parent training program. Inclusion criteria, for both the students and their parents, were: able to read and write Thai; willing to participate and give consent/assent to be in the study; and, living together in one household. Exclusion criteria involved the: students being involved, previously, in a formal life skills development program; students being unable to attend at least 8 out of 10 sessions of the life skills development program sessions; and, parents being unable to attend at least 2 out of 3 sessions of the parent training program.

The sample size was determined, for a single group repeated measures design, based on a statistical power analysis, at a significance level of 0.05, a desired power of 0.80, and the average correlation of the subjects' responses to the number of repeated measures.[28] In accord with previous findings,

the average effect size was 0.62.[29] Therefore, a minimum of 17 subjects per group was determined to be needed. Since the attrition rate of a prior study that was based on a Thai family context was 20%,[30] in order to prevent missing cases and data, four subject dyads (student and his/her parents) were added. Thus, the minimum number of student/parent dyads needed in each group was 21.

Initially, a total of 58 students and their parents met the inclusion criteria and consented to participate with 28 students and their parents, in the experimental group, and 30 students and their parents in the comparison group. During the study, two of the experimental group student/parent dyads and three of the comparison group dyads dropped out because of illness and relocation to another school (13.33% attrition rate). As a result, 26 students and their parents, in the experimental group, and 27 students and their parents, in the comparison group, completed the study.

The majority of students, in the experimental and comparison groups, respectively: were of similar ages (mean age = 10.50; SD = 0.510 vs. mean age = 10.37; SD = 0.491); were boys (n = 14; 53.8% vs. n = 14; 51.9%); were the last-born child (n = 12; 46.1% vs. n = 9; 33.3%); had siblings (n = 20; 76.9% vs. n = 20; 74.1%); and, lived with both parents (n =16; 61.5% vs. n = 17; 63.0%). Thus, no significant difference, in demographic characteristics, existed between the two groups (α >0.05). With regard to the parents, who were all Buddhist, the majority, in the experimental and comparison groups, respectively: were of similar ages (mean age = 42.31; SD = 4.523 vs. mean age = 42.74; SD = 3.879); were female (n = 22; 84.6% vs. n = 20; 74.1%); lived with their spouse (n = 23; 88.5% vs. n = 26; 96.3%); had two children (n = 17; 65.4% vs. n = 13; 48.1%); had other family members living with them (n=17; 65.4% vs. n=18; 66.7%); held a bachelor's degree (n = 17; 65.4% vs. n = 14; 51.9%); and, were government officers (n = 14; 53.8% vs. n = 11; 40.7%). Both groups indicated their family incomes to be approximately 40,000 baht per month (31 baht = 1 USD). Thus, no significant differences, in demographic characteristics, existed between the two groups (α >0.05).

Interventions: Two interventions were used in this study. These interventions included a: *Life Skills Training Program for School-aged Children (LSTPSAC),* for both the experimental group and comparison group children; and, *Parent Training Program (PTP),* for the parents of the children assigned to the experimental group.

The *Life Skills Training Program for School-aged Children (LSTPSAC)*, based on key constructs from the TPB and developed by the PI,[13] focused on providing information about and promoting the development of child life skills. The content validity of the program was examined by three experts (i.e., one nursing faculty member with experience and skills in child cognitive behavioral strategies, using the TPB; and, one educator and one school health nurse, both experts in conducting life skills training interventions in school). The experts recommended the sequence of each session be adjusted, and changes be made in the learning activities so as to be more easily understood and to fit within a one-hour timeframe. Once revisions were made in the program, it was administered, for the purpose of pilot testing, to 35 fifth-graders (one classroom) who were similar to the study participants. As a result of the pilot test, games and group activities were added to the program so as to foster the children's attitudes toward life skills and development of self-efficacy.

The final program (see Table 1) consisted of eleven, 60 minute, sessions that introduced the program and presented ten child life skills: self-esteem; critical thinking; decision-making and problem-solving; coping with emotions; honesty;

generosity; sufficiency; self-responsibility; family-responsibility; and, social-responsibility.[31] Session one of the program involved the PI and two trained research assistants (RAs) introducing the program and gathering baseline data. The other ten sessions, presented by the RAs, involved activities focused on the development of each of the child life skills. A new life skill was presented each week. All program sessions were presented, in a school classroom at the end of the school day, over a period of 11 weeks. The children in the experimental group and the children in the comparison group were presented the program in separate sessions.

Each session was sequentially organized into three major components: a) promoting a positive attitude toward each skill by way of giving information about the advantage of and need for the skill; b) increasing subjective norms by focusing on peer and parental norms related to each skill; and, c) developing self-efficacy and promoting intention to carry out each skill by practicing the methods for developing each skill. The strategies used for teaching the life skills involved: skill demonstration; practice of the skill; games; group activities; and, extended practice of a skill through homework assignments. The homework assignments were used as a means of facilitated parents and children to participate, together, in child life skills development while at home. The homework assignments were designed for parents and children to know and understand each other regarding: attitudes, norm perceptions, self-efficacy, and intentions regarding child life skills development. The homework assignments were provided to the children, every week after each life skills session, and brought back to the RAs the next week.

The *Parent Training Program (PTP)*, based on the TPB and developed by the PI, focused on promoting and providing information on child-rearing skills, and addressing the beliefs, attitudes, subjective norms, and child-rearing self-efficacy needed for supporting a child's life skills development. To further facilitate parents' knowledge and abilities related to the program content, the PI developed a parent handbook. The purpose of the handbook was to provide parents with printed information, regarding the same content presented in the PTP sessions, which could be used as a reference for self-study. Both the PTP and the handbook were reviewed for content validity by three experts (i.e., two nursing faculty with clinical experience and skills in family-child nursing care and a pediatrician with expertise in family counseling). Based on the experts' reviews, refinements were made in the handbook and program which included additional examples of child-rearing strategies and keywords for the role playing session.

Following the refinements, the program and handbook was pilot tested on five parents who were similar to the parents participating in the study. As a result of the pilot testing, examples of parent-child communication, and parental monitoring and supervision were added to the program sessions and handbook.

The final PTP (see Table 1) consisted of three, 3-hour training sessions, as well as weekly involvement in the children's life skills homework assignments. Each of the three sessions was offered, by the PI, in a classroom at the school, on the first Friday and Saturday of the month. Each of the Friday and Saturday sessions involved 15 to 20 parents. The three sessions addressed ways to develop each of the life skills being presented in the *LSTPSAC* as well as essential child-rearing skills (i.e., parent-child relationship, parent-child communication, parental monitoring and supervision, parental modeling, and mentoring).

Strategies used in the three sessions included: coaching; role playing; group discussion and reinforcement; and, follow-up telephone calls, from the PI, between sessions, as well as four weeks after program completion. The three sessions were organized around two major components: a) cognitive

restructuring related to knowledge about child life skills development (CLSD) and parents' child rearing skills (PCRS) involved with child life skills of interest; and, b) developing and practicing, at home, support for CLSD. Finally, the parents were required to work with their children, each week, on the child skills homework they were given to complete and return.

Instruments: Three instruments were used in the study: a researcher-developed *Demographic Data Questionnaire (DDQ)*; the *Life Skills Questionnaire for School-age Children (LSQSAC)*;[31, 32] and, a researcher-developed *Child Life Skills Development Questionnaire for Parents (CLSDQP).*

The researcher-developed *Demographic Data Questionnaire (DDQ)* sought information about the children. The information obtained, by the PI, from the school's registry, included each child's: age; gender; birth order; presence of siblings; and, persons residing within the household.

The *Life Skills Development Questionnaire for School-age Children (LSQSAC)*, originally developed by Kaewpatima[32] and modified by Phuphaibul,[31] consisted of 46 items that assessed ten life-skills (i.e., self-esteem, critical thinking, decision-making and problem solving, coping with emotions, honesty, generosity, sufficiency, self-responsibility, family-responsibility, and social-responsibility). The questionnaire contained scenarios addressing: substance abuse (3 items); violence (3 items); sexual-risk (3 items); relationships (7 items); mass media (7 items); usual daily life (12 items); and, moral issues (11 items). Examples of questions were: "Your uncle encourages you to drink beer, but you do not (decision-making and problem solving skills with substance abuse);" "You want to reward yourself with a new toy because you earned a good score on the last examination (sufficiency skill with usual daily life);" and, "You see your friends quarreling and fighting in school, but you decide not to take part in the activity (social-responsibility skill regarding violence)." Possible responses to the items were: 1 = "inappropriate behavior that has negative effect on me and others"; 2 = "inappropriate behavior that has benefit to me, but not to others"; 3 = "appropriate behavior that has benefit to me, but not to others"; and, 4 = "appropriate behavior that has positive effects on me and others." A total score was obtained by summing the response values across all items. A high score indicated a high level of life skills, while a low score suggested a low level of life skills. In this study, the Cronbach's alpha for this instrument was 0.87.

The *Child Life Skills Development Questionnaire for Parents (CLSDQP)* consisted of two major sections: demographic characteristics; and, levels of PCRS and perceptions of support for CLSD. The demographic characteristic section of the *CLSDQP* requested information on each subject's: age; gender; living with or without the spouse; number of children; others residing in the household; educational level; occupation; monthly family income; and, sufficiency of the family income.

The second major section of the *CLSDQP*, which measured the level of parents' child-rearing skills and perceptions of support for CLSD, consisted of five parts. The five parts addressed the level of: involvement in child-rearing skills for CLSD; attitude toward child-rearing skills that support CLSD; subjective norm regarding CLSD; child-rearing self-efficacy that supports CLSD; and, intention to engage in child-rearing skills for CLSD.

The first part of the second major portion of the *CLSDQP*, involvement in child-rearing skills for CLSD, consisted of 30 items. Involvement in child-rearing skills was measured in terms of performance (i.e., teaching, modeling, and monitoring/supervision). Each item was developed in terms of the TPB's beliefs about target, action, context, and time. Examples of items were: "Over the last three months, up to now: I have taught my child to have self-esteem in daily life;" and, "I have monitored and supervised

my child regarding critical thinking in daily life." Parents were asked to rate their performance on each of the 30 items, using the following responses: 1 = "definitely false"; 2 = "false"; 3 = "uncertain"; 4= "true"; and, 5 = "definitely true". A total score was obtained by summing the response values across all items A high score indicated more positive involvement in child life skills development. In this study, the Cronbach's alpha, for this portion of the instrument, was 0.94.

Attitude toward child-rearing skills for CLSD, the second component of the second major portion of the *CLSDQP*, consisted of 12 items. Attitude was measured by way of parents' beliefs about specific child-rearing skills that support CLSD. Examples of items were: "During the last three months, up to now: I believe I have taught my child that having life skills is extremely valuable;" and, "I believe I have found monitoring and supervising my child, based on life skills, to be extremely pleasant." Parents were asked to indicate their level of belief about the child-rearing skill described in each item, using the following responses: 1 = "strongly disagree"; 2 = "disagree"; 3 = "uncertain"; 4 = "agree"; and, 5 = "strongly agree". A total score for this portion of the questionnaire was obtained by summing the numerical values of the responses across all items. A high score indicated a more positive attitude toward CLSD. In this study, this portion of the questionnaire had a Cronbach's alpha of 0.84.

Subjective norm regarding CLSD, the third component of the second major portion of the *CLSDQP*, consisted of six items. These items assessed the parents' level of perception regarding what they believed people of significance to them would think regarding their participation in CLSD. Examples of items were: "Over the last 3 months, up to now: People who are important to me (i.e., my parents and family members) want me to develop my child's life skills, therefore, I have taught life skills to my child;" and, "Most people whose opinions I value would approve of my child's life skills development." Possible responses to each item were: 1 = "strongly disagree"; 2 = "disagree"; 3 = "uncertain"; 4 = "agree"; and, 5 = "strongly agree". A total score for this portion of the *CLSDQP* was obtained by summing the numerical values of the responses across all items. A high score suggested the parents had a more positive perception about how others would view their participation in CLSD. In this study, the Cronbach's alpha, for this portion of the questionnaire, was 0.84.

The fourth portion of the second major component of the *CLSDQP*, child-rearing self-efficacy that supports CLSD, consisted of 12 items. Six of the items addressed perceptions of self-efficacy, while the other six dealt with perception of being able to control three specific child-rearing skills (teaching, role modeling, and monitoring and supervising). An example of a self-efficacy item was: "Over the last three months, up to now: I have not found it difficult to support my child regarding his/her life skills development." An example of a child-rearing (role modeling) item was: "Over the last 3 months, up to now: the decision to be a good role model for my child, in order for him/her to develop life skills, was under my control." Each item had possible responses of: 1 = "strongly disagree"; 2 = "disagree"; 3 = "uncertain"; 4 = "agree"; and, 5 = "strongly agree." A total score for this portion of the *CLSDQP* was obtained by summing the numerical values for responses across all items. A high score suggested a high level of perception of child-rearing self-efficacy. Cronbach's alpha for this portion of the *CLSDQP*, in this study, was 0.83.

The fifth and final portion of the second major component of the *CLSDQP*, intention to engage in child-rearing skills that support CLSD contained six items. The items measured the extent to which parents perceived they needed to engage in activities that developed their children's life skills. Examples of items were: "Over the past three months, up to now: I have

taught my child about life skills;" and, "I have served as a good role model for my child regarding his/her life skills development." Possible responses to the items were: 1 = "strongly disagree"; 2 = "disagree"; 3 = "uncertain"; 4 = "agree"; and, 5 = "strongly agree". A total score for this portion of the *CLSDQP* was obtained by summing the numerical values of responses across all items. A high score suggested a high perception of intention to engage in child-rearing skills that support CLSD. Cronbach's alpha for this portion of the questionnaire, for this study, was 0.87.

Prior to the use, in this study, of the *LSQSAC* and *CLSDQP,* their content validity was verified by five experts (one educator, one school health nurse and three nursing faculty members with experience and skills in child cognitive behavioral strategies, using the TPB). The item-content validity index (I-CVI) for the *LSQSAC* was found to range from 0.90 - 0.96 and the scale-content validity index (S-CVI), using the averaging approach, was found to be 0.94. The I-CVI of the *CLSDQP* was found to range from 0.90 - 0.96, while the S-CVI, using the averaging approach, was found to be 0.93. Based upon suggestions from the experts and a pilot testing of both instruments (five 5th grade children for *LSQSAC* and five parents for the *CLSDQP*), minor linguistic changes were made to a few items to improve their understandability.

Procedure: Prior to commencement of the research process, two RAs were trained, by the PI, in the protocol of the *LSTPSAC.* After all the student/parent dyads consented to participate and were randomly assigned either to the experimental or comparison group, the students were administered the *LSQSAC,* at the school. It took approximately one hour for the children to complete the questionnaire. One week after administration of the questionnaire, the *LSTPSAC* was implemented (see Table 1). The program was offered to all children (both the experimental group children and the comparison group children) on the same day. Each group was in a separate classroom with each group being directed by one of the two RAs. To assure the RAs were complying with the intervention protocol, the PI randomly observed, on three occasions, what was taking place during implementation of the intervention.

Once a parent/dyad, in both the experimental group and comparison group, consented to be in the study, the *CLSDQP* was sent home, with the respective child, for his/her parents to complete and send back, with the child, to the school. It took parents 45 to 60 minutes to complete the questionnaire. Then, one week before the *LSTPSAC* started, the *PTP* began for the parents assigned to the experimental group (see **Table 1**). The *PTP* was implemented solely by the PI. The rationale for starting the training program for parents, prior to the start of the training program for the children, was so the parents would be able to begin learning about and practicing their child-rearing skills related to their children's life skills development. The parents in the comparison group did not receive the training program.

Table 1 Schedule and Content of Child Life Skills Training Program and Parent Training Program

Child Life Skills Training Program Session/Content	*Time Schedule*	*Parent Training Program* Session/Content
Preparing child training program - Setting up the program schedule with the school. - Preparing the children by introducing the program and conducting an "ice-breaking" activity between the trainers (RAs) and children. Doing baseline (pre-test) datacollection.	**1st Week**	**Session I:** The content consisted of presenting how to support the development of five child life skill: a) self-esteem; b) critical thinking; c) decision-making and problem solving; d) coping with emotions; and, e) honesty. In addition, the program presented guidelines for appropriate parental child-rearing skills for promoting and supporting children's: a) attitudes toward life skills; b) subjective norms; c) self-efficacy; and, d) intention to develop those five life skills.
Session I: Developing Self-esteem Skill: - **Class training:** Conducted to develop the children's abilities to recognize their personal worth/strengths and identify their self-efficacy for promoting self-esteem. - **Homework assignment 1:** Children and their parents recorded, in separate columns on one sheet of paper, their perceptions, feelings, values, and needs regarding self-esteem, and ways to develop and maintain the skill.	**2nd Week**	- Complete homework assignments on self-esteem with children.
Session II: Developing Critical Thinking Skill - **Class training:** Conducted to develop children's abilities to think critically, and analyze beliefs, attitudes, values, and relevant information from the mass media and other sources, based on reasonable evidence or facts. - **Homework assignment 2:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding the skill of critical thinking, and ways to develop and maintain the skill.	**3rd Week**	- Complete homework assignments on critical thinking skill with children.

Table 1 Schedule and Content of Child Life Skills Training Program and Parent Training Program (Continued)

Child Life Skills Training Program	*Time Schedule*	*Parent Training Program*
Session/Content		**Session/Content**
Session III: Developing Decision-making & Problem Solving Skills - **Class training:** Conducted to develop the children's abilities to evaluate information from various sources, make informed decisions based upon advantages/disadvantages, determine the results of decisions made, find constructive solutions to problems, and determine alternative solutions. - **Homework assignment 3:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding decision-making and problem solving skills, and ways to develop and maintain both skills.	**4th Week**	- Complete homework assignments on decision-making & problem-solving skills with children.
Session IV: Developing Coping with Emotions Skill - **Class training:** Conducted to develop children's abilities to handle emotions (i.e., violence and anger) that can negatively influence health. - **Homework assignment 4:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding coping with emotions, skills, and ways to develop and maintain the skill.	**5th Week**	- Complete homework assignment on coping with emotions skill with children, and receive follow-up telephone calls from the PI.
Session V: Developing Honesty Skill - **Class training:** Conducted to develop children's abilities to be honest and truthful based on integrity. - **Homework assignment 5:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding the honesty skill, and ways to develop and maintain the skill.	**6th Week**	**Session II:** The content consisted of presenting how to support the development of five child life skill: a) generosity; b) sufficiency; c) self-responsibility; d) family responsibility; and, e) social responsibility. In addition, the program presented guidelines for appropriate child-rearing skills for promoting the children's: a) attitudes toward life skills; b) subjective norms; c) self-efficacy; and, d) intention to develop those five life skills. - Complete homework assignment on coping with honesty skill with children.

Table 1 Schedule and Content of Child Life Skills Training Program and Parent Training Program (Continued)

Child Life Skills Training Program	*Time Schedule*	*Parent Training Program*
Session/Content		**Session/Content**
Session VI: Developing Generosity Skill - Class training: Conducted to develop children's abilities to perform personal behaviors regarding helping others and showing kindness in one's attitudes about and treatment of others. - Homework assignment 6: Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding the generosity skill, and ways to develop and maintain the skill.	**7th Week**	- Complete homework assignments on generosity skill with children.
	8th Week	
Session VII: Developing Sufficiency Skill - **Class training:** Conducted to develop children's abilities to perform personal behaviors regarding moderation, reasonableness, and self-immunity for sufficient protection from impacts arising from internal and external changes. - **Homework assignment 7:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding the sufficiency skill and ways to develop and maintain the skill.		- Complete homework assignments on sufficiency skill with children.
Session VIII: Developing Self-responsibility Skil - Class training: Conducted to develop children's abilities to respond to personal basic needs and duties in daily life. l - Homework assignment 8: Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding the sufficiency skill and ways to develop and maintain the skill.	**9th Week**	- Complete homework assignment on self-responsibility skill with children, and receive follow-up telephone calls from the PI.

Table 1 Schedule and Content of Child Life Skills Training Program and Parent Training Program (Continued)

Child Life Skills Training Program	*Time Schedule*	*Parent Training Program*
Session/Content		**Session/Content**
Session IX: Developing Family Responsibility Skill - **Class training:** Conducted to develop children's abilities to show concern for, respond positively to, and cooperate with family members, in order to meet the needs of the family. - **Homework assignment 9:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding the family responsibility skill, and ways to develop and maintain the skill.	**10th Week**	**Session III:** This session was conducted for overall reflections and discussions regarding child-life skills and parental child-rearing skills development. - Complete homework assignments on family responsibility skill with children.
Session X: Developing Social Responsibility Skill - **Class training:** Conducted to develop children's abilities to show concern for and respond positively to the needs of one's community and social environment. - **Homework assignment 10:** Children and their parents recorded, in separate columns, on one sheet of paper, their perceptions, feelings, values, and needs regarding social responsibility skill, and ways to develop and maintain the skill.	**11th Week**	- Complete homework assignments on social responsibility skill with children.
	15th Week	- Receive follow-up telephone calls from the PI.

Immediately following completion of the *LSTPSAC*, and one month and three months after program completion, the children, assigned to the experimental group, were administered, at the school, the *LSQSAC*. In addition, immediately following completion of the *PTP*, and one month and three months after program completion, the parents, assigned to the experimental group, were sent, via their children, the *CLSDQP* to complete and return to the school via their children.

Data analysis: Descriptive statistics were used to analyze the participants' demographic characteristics. Chi-square and independent t-test were used to evaluate differences, between the experimental and comparison groups, in regards to: demographic characteristics; CLSD; parents' involvement in child-rearing skills that support CLSD; parents' attitude toward child-rearing skills that support CLSD; parents' subjective norm regarding CLSD; parents' child-rearing self-efficacy toward CLSD; and, parents' intention to engage in child-rearing skills that support CLSD. Analysis of covariance and repeated measures ANOVA were employed to test change, over time, in each group, and the difference between groups regarding all of the variables, with the exception of the demographic variables. Additionally, the standardized difference between means was calculated to determine the effect size of treatment or the magnitude of the treatment effect. A small effect size was defined as 0.20, a moderate effect size as 0.50, and a large effect size as 0.80.[32]

Results

Child life skills: As shown in **Table 2**, after controlling for the covariate (scores at baseline), the two groups did not differ significantly in mean scores at the third month after the intervention. Moreover, there was no significant difference, between groups, in the children's life skills, over time, and no significant interaction between types of parent training and the children's life skills development over time (see **Table 3**). However, the mean scores of the life skills of the experimental group children continuously tended to increase and were significantly higher than those of the comparison group at the third month after the intervention (see **Table 4** and **Figure 1**).

Table 2 Analyses of Covariance of Children's Life Skills and Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development

Source of Variation	SS	df	MS	F[c]	*p*
Children's Life Skills					
Group	24.063	1	24.063	0.700	NS
Error	1719.342	50	34.387		
Parents' Child-rearing Skills					
Group	668.567	1	668.567	0.700	0.005
Error	3906.432	50	78.129		
Parents' Attitude					
Group	1.607	1	1.607	0.153	NS
Error	524.280	50	10.486		
Parents' Subjective Norm					
Group	.030	1	.030	0.014	NS
Error	105.800	50	2.116		
Parents' Child-rearing self-efficacy					
Group	112.584	1	112.584	4.977	0.030
Error	1131.069	50	22.621		
Parents' Intention					
Group	28.841	1	28.841	4.912	0.031
Error	293.587	50	5.872		

Note: [c] = Analysis of covariance; NS = $P > 0.05$

Table 3 Mean Score Differences, Across Time, for Children's Life Skills and Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development

Source of Variation	SS	df	MS	F^r	*p*
Children's Life Skills					
Between subjects					
Groups	1.491	1	1.491	0.008	NS
Error	9434.830	51	184.997		
Within subjects					
Time	608.162	2.64	230.596	4.357	0.008
Group × Time	37.445	2.64	14.198	0.268	NS
Error	7118.083	134.51	52.921		
Parents' Child-rearing Skills					
Between subjects					
Groups	9.057	1	9.057	0.028	NS
Error	16672.971	51	326.921		
Within subjects					
Time	1026.037	2.798	366.733	3.944	0.011
Group × Time	804.528	2.798	287.559	3.093	0.032
Error	13267.406	142.687	92.983		
Parents' Attitude					
Between subjects					
Groups	9.968	1	9.057	0.404	NS
Error	1257.513	51	24.657		
Within subjects					
Time	65.049	3	21.683	3.297	0.022
Group × Time	10.558	3	3.519	0.535	NS
Error	1006.074	153	6.576		
Between subjects					
Groups	0.000	1	0.000	0.000	NS
Error	544.323	51	10.673		
Within subjects					
Time	23.690	3	14.321	2.555	NS
Group × Time	23.576	3	10.846	1.935	NS
Error	660.884	153	5.606		

Table 3 Mean Score Differences, Across Time, for Children's Life Skills and Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development (Continued)

Source of Variation	SS	df	MS	F^r	*p*
Parents' Child-rearing Self-efficacy					
Between subjects					
Groups	121.026	1	121.026	1.409	NS
Error	4382.172	51	85.925		
Within subjects					
Time	26.600	3	8.867	0.445	NS
Group × Time	98.411	3	32.804	1.645	NS
Error	3050.768	153	19.940		
Parents' Intention					
Between subjects					
Groups	51.297	1	51.297	3.820	NS
Error	684.779	51	13.427		
Within subjects					
Time	93.883	3	3.174	5.570	0.001
Group × Time	40.921	3	20.620	2.428	NS
Error	859.607	153	6.084		

Note: ^{r} = Two-way repeated measure ANOVA; NS = $p > 0.05$

Table 4 Comparison of Effect Size and Mean Scores, Across Time, for Children's Life Skills and Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development

Groups	Mean Scores				F^r	*p*	Effect Size
	baseline	Post-test	1st month	3rd month			
Children's Life Skills							
Experimental group	157.654	156.885	160.615	161.961	3.005	0.036	0.24
Comparison group	157.704	157.889	160.222	160.629	1.464	NS	
Parents' Child-rearing Skills							
Experimental group	125.692	130.577	132.962	136.423	5.782	0.001	1.22
Comparison group	129.704	131.370	133.185	129.741	0.895	NS	
Parents' Attitude							
Experimental group	55.808	56.731	56.692	57.615	1.932	NS	0.17
Comparison group	56.037	55.704	56.185	57.185	0.696	NS	

Table 4 Comparison of Effect Size and Mean Scores, Across Time, for Children's Life Skills and Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development (Continued)

Groups	Mean Scores				F^r	*p*	Effect Size
	baseline	Post-test	1st month	3rd month			
Parents' Subjective Norm							
Experimental group	24.500	25.077	25.154	24.423	1.390	NS	0.02
Comparison group	25.296	24.037	25.407	24.407	2.070	NS	
Parents' Child-rearing Self-Efficacy							
Experimental group	46.885	47.269	48.962	49.115	1.521	NS	0.65
Comparison group	47.296	46.407	46.148	46.333	0.403	NS	
Parents' Intention							
Experimental group	26.077	27.923	27.423	28.846	9.290	0.000	0.46
Comparison group	26.481	25.963	26.481	27.407	1.314	NS	

Note: ^{r} = One-way repeated measure ANOVA, NS = $p > 0.05$

Post-test = data were collected immediately after completion of the interventions.

1st month = data were collected one month after completion of the interventions.

3rd month = data were collected three months after completion of the interventions.

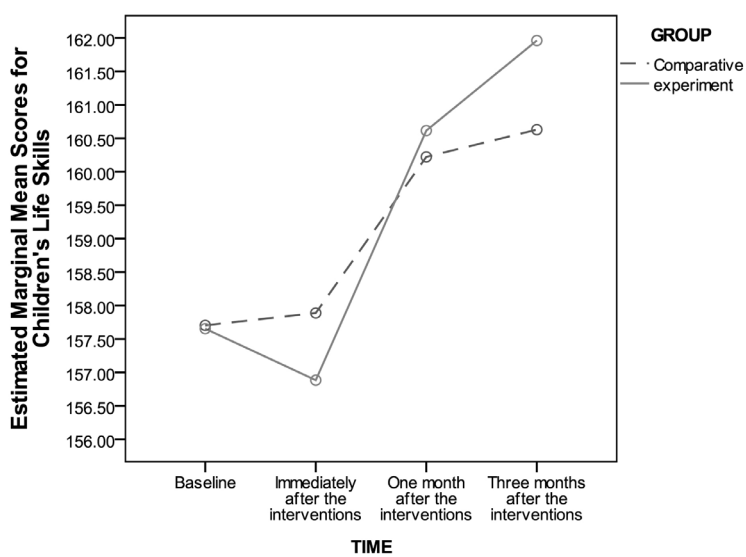

Figure 1 Mean Scores for Children's Life Skills

Child-rearing skills and perceptions of support for child life development skills: As shown in Table 2, after controlling for the covariate (scores at baseline), the results showed significant differences, between the groups, in the scores for parents' child-rearing skills, child-rearing self-efficacy, and intention to engage in child-rearing skills that support CLSD. On the other hand, there was no significant difference, between the groups, regarding the parents' attitude and subjective norm at the third month after the intervention. Consistent with the results in **Table 3**, significant changes, over time, in parents' child-rearing skills, attitude, and intention to engage in child-rearing skills that support CLSD were found between the two groups (see **Table 3**). There was significant interaction between the two types of parent training and PCRS scores, but only over time (see **Table 3** and **Figure 2**). However, there was no significant difference, between the two groups over time, in PCRS, attitude, and intention to engage in child-rearing skills that support CLSD. On the other hand, the parents' attitude increased significantly at each assessment, just as with the parents' intention to engage in child-rearing skills that support CLSD (see **Table 4** and **Figures 3 & 6**). There were no significant changes, over time, between the two groups, regarding parents' subjective norm and child-rearing self-efficacy (see **Table 3**), although the mean scores of the experimental group tended to increase and were higher, over time, than those of the comparison group (see **Table 4** and **Figures 4 & 5**).

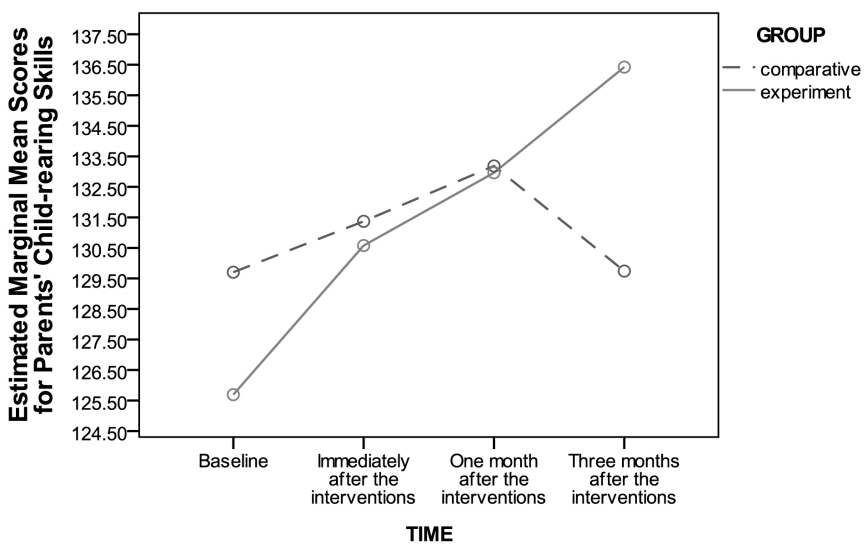

Figure 2 Mean Scores for Children's Life Skills

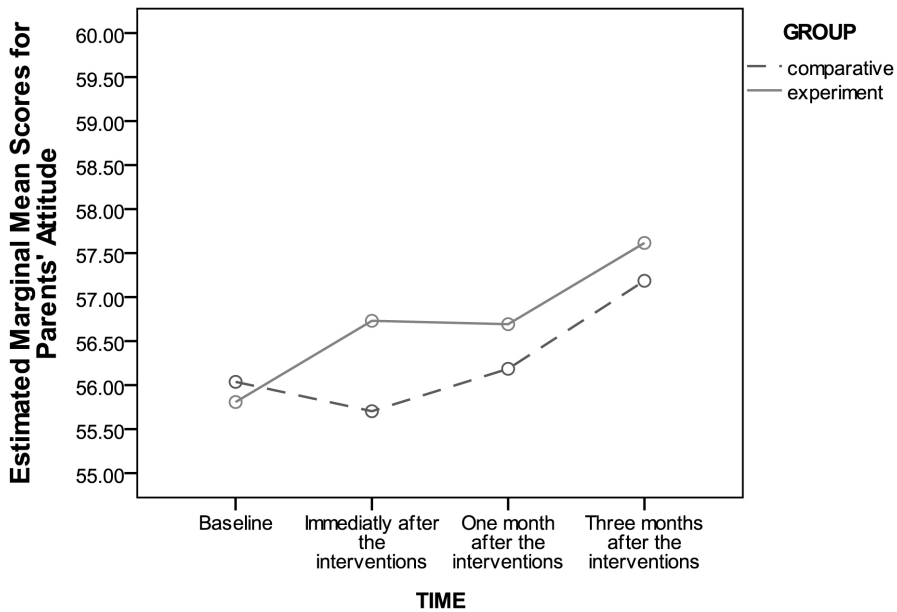

Figure 3 Mean Scores for Parents' Attitude toward Child-rearing Skills for Child Life Skills Development

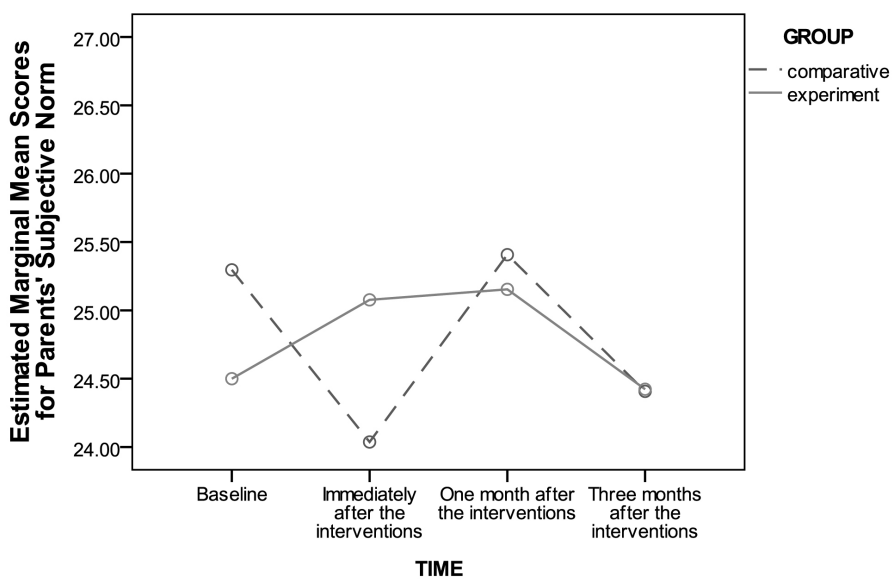

Figure 4 Mean Scores for Parents' Subjective Norm Regarding Child Life Skills Development

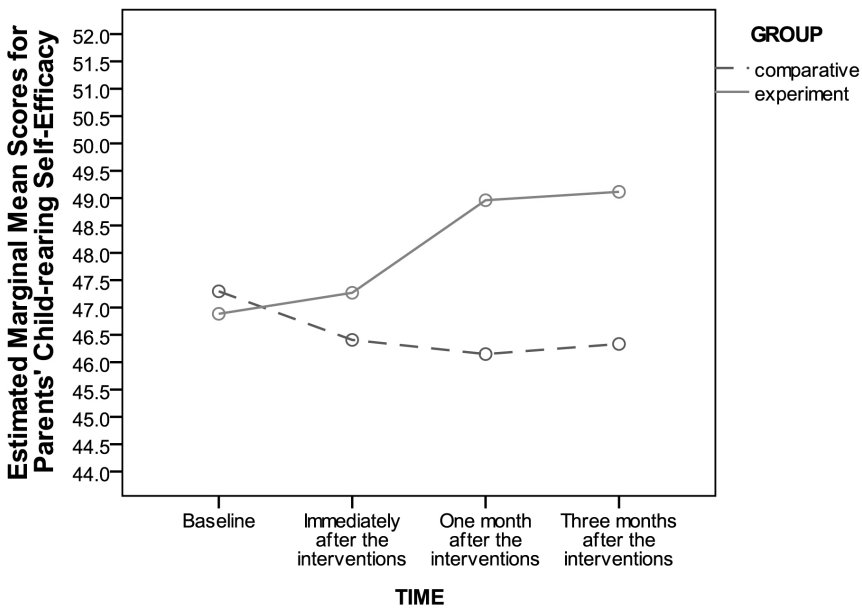

Figure 5 Mean Scores for Parents' Child-rearing Self-Efficacy that Supports Child Life Skills Development

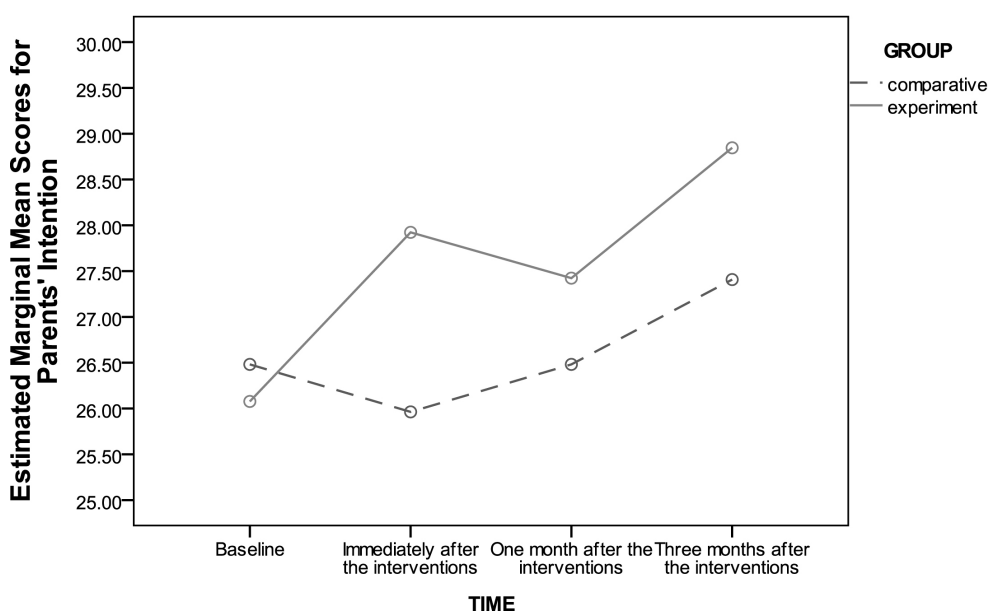

Figure 6 Mean Scores for Parents' Intention to Engage in Child-rearing Skills that Support Child Life Skills Development

As shown in the figures, the trend for the mean scores of the last measurement of the variables (three months after the intervention), for the experimental group, tended to be higher than those for the comparison group, with the exception of the parents' subjective norm. In addition, a comparison of the slope of the mean scores, between the third (one month after the intervention) and last measurement (three months after the intervention), was greater for the experimental group than the comparison group, with the exception of the parents' subjective norm. Such findings suggest the intervention influenced the experimental group parents' child-rearing skills and perceptions of support for CLSD.

Additional analyses on effect size: The effect size of the intervention was calculated, based on the outcome measurements three months after the intervention. The results revealed the effect size was large for the PCRS (1.22), medium for the children's life skills, and the parents' child-rearing self-efficacy and intention to engage in child-rearing skills (0.24, 0.65, and 0.46, respectively), and small for the parents' attitude and subjective norm (0.17 and 0.02, respectively) (see **Table 4**).

Discussion

Effect on the Life Skills of School-Age Children: The results demonstrated no effect of the PTP on the life skills of the children in the experimental group compared to the life skills of the children in the comparison group. However, the results did suggest an increasing trend toward positive effects of the program for children in the experimental group. This study, however, was consistent with other findings that indicated no improvement in child life skills after completion of similar training programs.[34, 35] Three possible explanations exist for explaining the lack of significance.

First, it is possible the interventions, which involved ten child life skills, were carried out over too short a time frame. Therefore, the opportunities for both the children to work on developing and applying the ten life skills were insufficient. In addition, as pointed out in the literature, the intervention effects may have been constrained by less than optimal participation of both parents and children in their respective intervention programs.[36]

Second, the absence of a significant finding may have reflected an insufficient period of time from the end of the intervention to measurement of the outcomes. The detected sleeper effects highlight the importance of measuring long-term effects of preventive interventions, such as the program used with the children in this study. A longer period of time (i.e., 6 months to one year) may have been necessary to adequately assess whether gains had been made and maintained in terms of the program effects.[10, 24, 37, 38]

Third, the fact the children involved in the study were of school age may have been a factor. Several literature reviews have concluded that the school-age period tends to be a time when children engage in health risk behaviors and, thus, are receptive to the positive effects of prevention programs.[1, 39] However, other studies have suggested that the school-age period is a latent time for prevention program implementation and measurement of outcomes.[20, 40] Such studies have demonstrated moderate effect sizes for preventive interventions for school-age children, but large effect sizes for preventive interventions for pre-school children and adolescents.[19]

Effects on the Parents' Child-rearing Skills and Perceptions of Support for Child Life Skills Development: There were no statistically significant results regarding the outcome of the PTP on parents' attitude, subjective norm, and child-rearing efficacy. However, there were positive effects of the program on the parents' child-rearing skills, parents' child-rearing self-efficacy, and intention to engage in child-rearing skills that support CLSD. A large effect size for the intervention was noted regarding parents' child-rearing skills, while a medium effect size was

noted regarding the parents' intention to engage in child-rearing skills that support child life skills and parents' child-rearing self-efficacy. In addition, small effect sizes of the intervention were noted for the parents' attitude and subjective norm. These findings were congruent with prior research that noted parents in an intervention program, similar to the one used in this study, demonstrated a significant effect size (i.e., large) for positive parenting behaviors,[29, 36] as well as medium to small effect sizes in parenting self-efficacy, and parents' attitude, norms, and intention to engage in child-rearing skills that support CLSD.[30, 34]

Two possible explanations exist for explaining why the outcomes of the PTP were limited. First, like the children in the experimental group, parents in the experimental group may have needed a longer period of time to assimilate what they had learned in their training program so they could appropriately assist their children in implementing what they had learned in their training program. As recommended, in the literature, a time frame, from intervention completion to measurement of program outcomes, may need to be 6 months to one year.[10, 37, 41] Second, parents in the comparison group may have experienced the Hawthorne effect. In other words, they were given attention and gained information during the data collection process, from the PI, which may have led to them examining and improving their parenting behaviors. This explanation is consistent with prior research.[29, 30, 36, 37]

Limitations and Recommendations

When examining and applying the findings of this study, several limitations need to be taken into consideration. First, the sample size was small. Thus, future research needs to consider increasing the sample size used. Second, the demographic characteristics of the children and their parents were representative of middle class families living in urban areas. Thus, the findings may not be generalizable to children and their parents who have differing demographic characteristics. Future researchers need to consider obtaining a more diverse demographic sample. Third, as previously pointed out, the length of time the two interventions were implemented was limited (11 weeks for children and 15 weeks for parents), as well as the time frames in which outcome measures were taken. As a result, these time limitations, most likely, had an effect on the outcomes of the two interventions. Studies, in the future, may need to consider developing interventions that are longer in length, with outcomes measures occurring at least 6 months to one year after completion of the intervention. Fourth, only questionnaires were used to measure intervention outcomes. As a result, some subtle changes in the children's behavior may have occurred, but was not detected by the instruments used. Thus, future studies need to consider use of additional sources of data (i.e., observations of children, and interviews of teachers and parents) for determining outcomes of the interventions used.

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ผลของโปรแกรมอบรมพ่อแม่เพื่อพัฒนาทักษะชีวิตในเด็กวัยเรียนร่วมกับโปรแกรมอบรมทักษะชีวิตในเด็กวัยเรียนต่อทักษะชีวิตของเด็กวัยเรียน

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บทคัดย่อ: การศึกษาเชิงทดลองครั้งนี้มีวัตถุประสงค์ เพื่อศึกษาผลของโปรแกรมอบรมพ่อแม่เพื่อพัฒนาทักษะชีวิตร่วมกับโปรแกรมอบรมทักษะชีวิตในเด็กวัยเรียนต่อทักษะชีวิตของเด็กวัยเรียน ทักษะพ่อแม่ และการรับรู้ต่อการพัฒนาทักษะชีวิตในบุตรวัยเรียน โดยศึกษาในกลุ่มเด็กวัยเรียนชั้นประถมศึกษาปีที่ 5 และพ่อแม่ซึ่งอาศัยในกรุงเทพมหานคร กลุ่มตัวอย่างถูกเลือกโดยวิธีการสุ่มอย่างเฉพาะเจาะจงทั้งในระดับโรงเรียนและชั้นเรียน นักเรียนชั้นประถมศึกษาปีที่ 5 พร้อมทั้งพ่อแม่ที่มีคุณสมบัติตรงกับปัจจัยการคัดเข้าและยินยอมเข้าร่วมโปรแกรม ถูกสุ่มเข้ากลุ่มทดลองซึ่งประกอบด้วยนักเรียน 26 คนและพ่อแม่ และกลุ่มเปรียบเทียบจำนวน 27 คนและพ่อแม่ ในระดับห้องเรียน นักเรียนทั้ง 2 กลุ่ม ได้รับการอบรมทักษะชีวิตในขณะที่เฉพาะกลุ่มพ่อแม่ในกลุ่มทดลองเท่านั้นที่ได้รับการอบรมพ่อแม่เพื่อพัฒนาทักษะชีวิตในบุตรวัยเรียน โปรแกรมอบรมพ่อแม่เพื่อพัฒนาทักษะชีวิตในบุตรวัยเรียน และโปรแกรมอบรมทักษะชีวิตในเด็กวัยเรียนถูกสร้างขึ้นบนกรอบแนวคิดของทฤษฎีพฤติกรรมตามแผน และการอบรมให้ความรู้ ฝึกทักษะการปฏิบัติ และการแลกเปลี่ยนประสบการณ์ โดยทำการเก็บข้อมูลในนักเรียนทั้ง 2 กลุ่ม ด้วยแบบสอบถามทักษะชีวิต และในกลุ่มพ่อแม่ทั้งสองกลุ่มด้วยแบบสอบถามการพัฒนาทักษะชีวิตในเด็ก ซึ่งทำการเก็บข้อมูล ก่อนได้รับโปรแกรมและภายหลังโปรแกรมสิ้นสุดแล้วที่ 1 สัปดาห์ 1 เดือน และ 3 เดือน และการวิเคราะห์ข้อมูลส่วนบุคคลด้วยสถิติเชิงพรรณนา และวิเคราะห์ผลของโปรแกรมด้วยสถิติการวิเคราะห์ความแปรปรวนร่วม ความแปรแปรนทางเดียวและสองทางแบบวัดซ้ำ

ผลการวิจัยพบว่า ภายหลังสิ้นสุดการทดลอง คะแนนทักษะชีวิตในนักเรียนทั้งสองกลุ่มไม่แตกต่างกัน ในขณะที่คะแนนทักษะพ่อแม่ (ES=1.22) ความสามารถของพ่อแม่ (ES=0.65) และความตั้งใจในการพัฒนาทักษะชีวิตในบุตรวัยเรียนของพ่อแม่ (ES=0.46) ในกลุ่มทดลองสูงกว่ากลุ่มเปรียบเทียบในการวัดผลเมื่อ 3 เดือนภายหลังโปรแกรมสิ้นสุด ถึงแม้ว่าคะแนนการรับรู้อื่นๆของพ่อแม่รวมถึงคะแนนทักษะชีวิตของนักเรียนจะไม่แตกต่างกันอย่างมีนัยสำคัญระหว่างสองกลุ่มและตลอดเวลา จากผลการศึกษาแสดงให้เห็นว่า โปรแกรมการพัฒนาทักษะชีวิตที่ผนวกรวมโปรมแกรมการอบรมพ่อแม่และโปรแกรมการพัฒนาทักษะชีวิตในเด็กวัยเรียนนี้อาจจะต้องการเวลาที่ยาวนานขึ้นในการปรับพัฒนาทักษะชีวิตในเด็กวัยดังกล่าว ข้อเสนอแนะในการศึกษาครั้งต่อไปคือการใช้จำนวนกลุ่มตัวอย่างที่มากขึ้นและใช้การวัดผลในระยะยาว

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